ISBN: 978-93-90847-57-0

2. Environmental Degradation: Basis, Impacts and Possible Alleviation

Anirban Majumder, Angsuman Das Chaudhuri, Dibyendu Giri, Rimpa Malakar, Surya Kanta Dey, Tamanna Roy, Ananya Pradhan, Sujata Maiti Choudhury

Biochemistry, Molecular Endocrinology and
Reproductive Physiology Laboratory,
Department of Human Physiology,
Vidyasagar University, Midnapore, West Bengal, India.

Abstract:

Environmental degradation means the disintegration or deterioration of the environment and its components affecting through the consumption or destruction of the valuable assets of the earth due to scarcity of resources, accelerated soil erosion, landslides, droughts, floods, declines of forest cover, decline in agricultural yields, siltation problem, shrinking of bio-diversity etc. These results in the destruction of environment along with the abolition of wildlife and then environment become unsupportive to its living components. The major causes behind the environmental degradation are urbanization, industrialization, over-population, deforestation etc. Environmental pollution refers to the degradation of both the quality and quantity of natural resources.

Some undesirable and detrimental human activities are responsible for the environmental degradation producing different types of degrading particles and substances in the environment. The exposure of these degrading particles and substances affect air, water and soil throughout the world making the earth environment unsuitable for the living species.

Deterioration of the agricultural land is being affected by the quality of soil and climate change and these factors are facilitating this incident. The overall impacts of environmental degradation are forcing to destabilize the ecosystem as well as the global climate. Environmental degradation can be prevented by framing effective relevant policies related to the use of renewable sources of energy instead of non-renewable sources, protection of species from their extinction, conservation of water resources from the polluted materials and chemicals from industries, factories, formulation of energy saving plan for community.

Though the government has launched many programmes and policies but still there are more needs for drastic interventions from national and international levels as well as individual awareness which are necessary to maintain and continue the ecological balance and sustainability.

Keywords: Environmental degradation, Deterioration of natural resources, Environmental pollution, Ecological balance and sustainability.

2.1 Introduction:

Over the last few decades, environmental degradation has come to be a "common concern" for humankind. Excessive consumerism and economic growth have started to exhibit malicious effects on our Mother Nature. Environmental degradation is the result of past and present generations using up or degrading natural resources more rapidly than nature can reinstate them. The interaction between human health and the environment has been extensively studied by the environmental researchers. Environmental risks significantly affect human health, either directly by exposing people to harmful agents, or indirectly, by disrupting life-sustaining ecosystems (Tyagi et al, 2014).

Environmental degradation is the disintegration or deterioration of the environment through consumption of assets, like, air, water and soil due to human intervention and it is considered as one of the most significant threats for the mankind. Environmental degradation might be a consequence of socio-economical, innovative and institutional mal-exercises.

Degradation happens when Earth's normal resources are exhausted. These resources comprise water, air, soil, wildlife, plants, animals, micro-organisms. During the last decades, deforestation, rapid urbanization, industrialization, massive agricultural expansion etc. are responsible for the rapid changes and disruptions in our environment.

Environment also degrades due to the attempts of the developing countries to achieve their sustained economic growth for poverty reduction (Rani, 2016) as well as for the high energy use by the developed countries for the maintenance of their affluent lifestyle.

2.2 Causes of Environmental Degradation:

The causes of environmental degradation and habitat eradication could be desertification, deforestation, population explosion, pollution, climate change etc. The primary explanation behind the environmental degradation is manmade disturbance or mal practices of humans. The degree of the impact varies with the effect on habitats of the plants and animals that inhabit into it. Here we will emphasize our discussion on some related significant factors.

2.2.1 Desertification:

Desertification is the loss of biological productivity of land due to natural processes such as climate change (particularly due to the global warming) or by human activities. It is important to distinguish between anthropologically created ecosystem stress affecting the components of environment and natural disturbances (environmental factors beyond the reach of ecosystem evolutionary history) as drought, flood, fire and wind storms that produce desertification.

Grazing and overgrazing of livestock decreases coverage of vegetation and stimulates the unwanted changes on the bio-geophysical ecosystem and weather patterns of the arid and semi-arid regions. The rise in the size of bare soil patches resulting from overgrazing contributes to an increase in albedo. A higher range of albedo, reflected from the earth's crust increases the soil radiation and has an effect on ambient temperatures and humidity.

Human operations which alter the atmospheric conditions by changing the chemical compositions of air, soil and water have significant effects on desertification. Dust, storms and airborne dust particles mainly coming from wind driven salt particles affect the ground's surface and release into the airway fine particles (Okine et al., 2006).

Dust emissions from arid and semi-arid areas can be transported worldwide by wind. The effect of dust on light dispersion and light absorption produce atmospheric dust or mineral aerosols that impact on the global environment. Erosion by wind of any of the land degradation will increase the risk of wind erosion in dry-lands.

The growth of biosphere around water sources exposes land to wind erosion, including the areas with fair grass cover. The clearance of areas for urban and urban development opens wind erosion to the soils and exposes urban residents to atmospheric pollution. Sand dunes are also a wind-erosion type of land (Mirzabaev et al., 2019).

The relationship between the biodiversity in habitats and their long term behaviour is one of the main biological challenges in the 21st century. There are four hypotheses about this relationship, namely the hypothesis of diversity and consistency, the hypothesis of riveting, the hypothesis of redundancy and the hypothesis of an idiosyncratic response (Johnson et al., 1996). The hypothesis of diversity and consistency predicts that the productivity of ecosystems and their potential will increase with growing species number within the system (Mirzabaev et al., 2019).

2.2.2 Environmental Pollution:

Environmental pollution refers to the degradation of the standard and quantity of environmental natural resources. Different sorts of human activities are the most reasons for environmental degradation. The key reasons of environmental pollution are the expansion of human population and agriculture modernization (Maurya and Malik: 2016, Maurya et al., 2019) as well as industrialization, unplanned urbanization (Olorodeet et al., 2015).

Various pollutants from natural and man-made sources enter the atmosphere continuously and these create disturbances in the dynamic equilibrium of the atmosphere which leads to air pollution producing hazards to living and non-living components of environment. Industries and automobiles are the first and secondary contributing factors of pollution worldwide. The car and industries increase the amount of poisonous gases like SOx, NOx, CO, and smoke within the atmosphere.

Automobiles use gallons of fuel, then CO2, carbon monoxides, sulphide, dioxide and particulate matters are produced resulting in rising heat (Alexander and Kannanr, 1995; Maurya et al., 2020). Burning fuel wood, agriwaste and biomass cake releases annually over 165 million plenty of combustion products into the indoor and outdoor air of India. These biomass-based household ovens in India also are a number one cause for global climate change and greenhouse emissions (Chopra, 2016; Das, 2020). In case of water pollution, microbial contamination of groundwater due to sewage outfalls and high concentration of these in marine and river water due to agricultural runoff are among the most serious threats.

Unsafe drinking or bathing water can impose serious health risks (both acute and delayed) to human health. Toxic pollutants, fertilizers and pesticides used in agriculture have been found in rivers, lakes and ground water. The decomposers generally use solvent oxygen (O2) as they decrease breathes for the necessity of biologic oxygen demand (BOD). Flora and wildlife within the rivers are evolving and reduced by suffocation induced death (Maurya and Malik, 2016).

The high incidence of oil leaks and incidents within the environment is gigantic and a failure to preserve pipeline integrity causes environmental contamination. After discovery of oil at Olobiri within the eastern Niger Delta of Nigeria by Shell British Petroleum, oil mining began in 1958 (NNPC, 2016). Nine oil-producing states and 185 local authorities currently exist in Nigeria.

There are over 800 Niger Delta oil-producing villages, with over 900 oil wells and lots of associated facilities (Osuji & Onojake, 2004). It is approximately a network of 7,000 km of oil and gas pipelines (Anifowose, 2008; Onuoha, 2007) which are causes of oil pollution. The destruction of a greater area of the terrestrial ecosystem is important to watch the pipeline beginning with the clearing of seismic lines for oil investigations to the development of pipelines those are laid within the mangrove and rainforest regions.

The poor growth of the seedlings was thanks to the suffocation of plants due to the exclusion of air from oil which affected the soil water relationships of the plants. This will flow from to the unregulated and unsustainable gas flaring during oil extraction that has adversely affected the region's terrestrial ecosystem.

Ukaybou and Okeke (1987) stated that the air / soil temperature of the gas flaring, contributed to a 20% decreased microbial load by 61% soil (Chukwuka et al., 2020). The geographical position of the individual delta and its watershed gives rise to different spatial patterns for distribution of the hydrological and ecological indicators for every delta, but the principal biophysical degradation processes altogether deltas are identical and have an equal effect on the dynasty of the ecosystem and therefore the organic phenomenon (Chen, 2019).

Soil salination is additionally a crucial cause for land loss that the majority countries have with an area of roughly 1 billion hectors (FAO, 2015) and land salination creates drought (Tewari and Arora, 2013).

The key explanation for salinization of land is unskilled agriculture with inappropriate irrigation process. Inadequate water irrigation contributes to the deposition of salt in soils, and therefore the improper water drainage exacerbates the scenario (Drew et al., 1999; Mishra et al. 2018).

The abundance, diversity and function of beneficial soils microbes also are impeded by salt poisoning. Within the current situation over 50 percent land would become salty by 2050 if it persists at the present pace (Bartels et al., 2005). From the figure-2.1, the distribution is shown salt affected degradation of soils assessment in dry-lands of various regions of the planet (FAO, 2013).

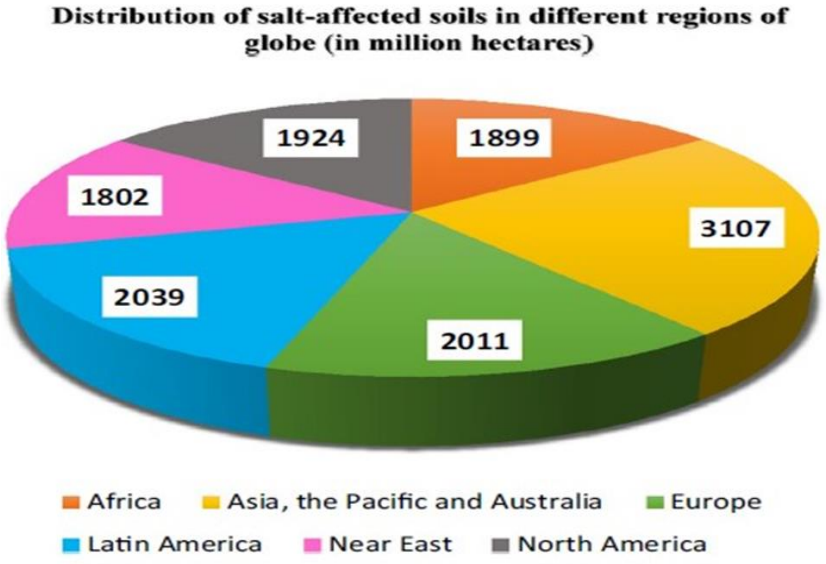


Figure 2.1: Distribution of Salt-Affected Soil in different Regions of Globe

2.2.3 Acid Rain:

Acid rain is another cause of environmental degradation and occurs when nitrogen oxides (NOx) and sulphur oxides (SOx) etc from coal plant and industrial emissions combine or react with water droplets or moisture present in the air. Rain fall cause this acidic precipitation. Acid rain decreases the pH and pollutes the water of lakes and streams. It causes similar effects to the soil also resulting environmental degradation.

2.2.4 Ozone Layer Depletion:

In the stratosphere, the second layer of the atmosphere, ozone is present in small quantities as a protective shield for the earth. Ozone strongly absorbs ultraviolet radiation from the sun (295–320 nm) which is injurious to the life on earth. The most important reason for ozonosphere depletion is that the production and emission of chlorofluorocarbons (CFCs) which consume ozone and reduce its concentration which results in almost 80 percent of the entire ozonosphere depletion resulting penetration of ultraviolate rays to the earth causing environmental degradation. There are many other substances that cause ozonosphere depletion like hydro chlorofluorocarbons (HCFCs) and volatile organic compounds (VOCs) (Das, 2020).

2.2.5 Landfills:

Landfills degrade the environment by the massive amount of waste that gets generated by households, industries, factories and hospitals. Landfills pose risk factors to environment and therefore affect the people that live there. Landfills produce foul smell when burned and sometimes cause leaching of toxic substances leading groundwater pollution creating huge environmental risks.

2.2.6 Deforestation:

Farming, mining, and grazing of livestock account for a major cause of deforestation. Wildfires, forestry practices and urbanization contribute the rest. About 80% of land animals and plants of earth live in forests, and deforestation intimidates species including the Sumatran tiger, orang-utan, and many bird species. Regional and perhaps the global water cycles are influenced by the South American rainforest. In relation to climate change, deforestation both adds CO2 to the air and eliminates the chances to absorb existing carbon dioxide. According to the World Resources Institute, tropical deforestation would rank third in carbon dioxide-equivalent emissions, behind China and the U.S. (Nunez, 2017). Deforestation costs between $2 trillion and $4.5 trillion each year through the loss of biodiversity (Sukhdev, 2010). Deforestation causes environmental degradation by raising rates of soil erosion and also increases river sediment and leads to droughts. The reduction in forest size brings carbon back to the atmosphere results in heating (Maurya et al., 2020).

2.2.7 Climate Change:

Climate change is any long-standing noteworthy changes within the climate over time, created naturally or human activities. Global climate change can't be expressed in separation from environmental degradation as both are very closely interrelated. Anthropogenic activities like industrialization, urban growth, deforestation, new agricultural practices, shifting patterns of land use are the main causes of earth global climate change (Mahato, 2014). In terms of variables including pre-capitation, winds and temperature, global climate change usually refers to vary over time (Parry et al., 2007). According to the fourth Assessment report of the UN Intergovernmental Panel on global climate change (IPCC), global agricultural land is believed to be deteriorated dramatically (Arora, 2018).

Climate change could also be an enormous factor for land loss, land clearing and deforestation, soil nutrients degradation by poor agriculture overgrazing and over grafting activities. The rising population dynamics and subsequent demand for food, energy and housing, land use policies have changed drastically and thus the climate in south Asian countries are seriously damaged. The world is facing a couple of noticeable changes - arbitrary droughts, unanticipated weather arrays and unexpected rainfall and snowfall. There's endless temperature fluctuation leading to disasters and therefore the weather is not any longer foreseeable enough.

In late 2019, lockdown thanks to a completely unique communicable disease, COVID-19 has some encouraging effect on natural environment. NASA (National Aeronautics and Space Administration) and ESA (European Space Agency) acknowledged that in some epicentres (Wuhan, Italy, Spain and USA etc.) of COVID-19 infection environmental pollution in has decreased up to 30% (Mohammad et al., 2020).

2.2.8 Population Explosion:

In the developing world, rapid increase displayed a critical global crisis. Environmental degradation during a country mainly is attributed to fast growth of population, which unfavorably upsets the natural resources and environment.

Sustainable development of a rustic is challenged by the insurgence of population and therefore the consequent environmental degradation (Kutting & Rose, 2006). The presence or the nonexistence of favorable natural resources can promote or impede the method of socio-economic development (Ray and Ray, 2011).

The three elementary demographic factors - birth and mortality and human migration and immigration create modifications in population and increase can upraise many grave environmental consequences including land degradation, forests, habitat obliteration and impairment of biodiversity. The ultimate results of those are pollution, heating, climatic change, and water shortage pollution.

Deforestation, desalination, desertification, and erosion all are resultant of population explosion. FAO estimate the use of biomass for daily energy consumption by about 2 billion peoples is gigantic (Kumar et al., 2020). The rising population (Akbulut et al., 2014) and subsequent demand of food, energy and housing, the land-use policies also are changing dramatically (Maurya et al., 2020; Chopra, 2016; Das, 2020).

So, the results of high increase rates are increasing population density, increasing number of individuals below poverty level and pressure on natural resources which contributes to environmental degradation through over exploitation of natural resources (Ray and Ray, 2011; Richmond et al., 2019).

2.2.9 Poverty:

Poverty is claimed to be the cause and effect of environmental degradation. Inequality may foster unsustainability because the poor, who believe natural resources are quite a budget, deplete natural resources faster as they have no real prospects of gaining access to other kinds of resources. Moreover, the degraded environment can accelerate the tactic of impoverishment again because the poor depend directly on natural assets.

2.2.10 Technology:

The application of technology has unavoidable environmental impacts. The many technologies aim to take advantage of, control, or otherwise "improve" upon nature for the perceived advantage of humanity while at an equivalent time the myriad of processes in nature are optimized and are continually adjusted by evolution, and any disturbance of those natural processes by technology is probably going to end in negative environmental consequences.

2.2.11 Natural Causes:

Natural calamities like avalanches, tremors, tsunami, floods, and fires will completely crush adjacent biodiversity and groups of animals and plants to the degree of survival. This will be accomplished by physically demolishing a specific catastrophe or by long-term asset depletion by the presentation to the planet of an obturator's species (Maurya et al., 2020; Das, 2020). Things like landslides, earthquakes, tsunamis, hurricanes, and wildfires can destroy local plant and animal communities to the purpose where they will not function.

This will either happen through physical destruction via natural disaster or by the future degradation of resources by the introduction of an invasive alien species to a replacement habitat. The latter often occurs after hurricanes, when lizards and insects are washed across small stretches of water to foreign environments.

2.3 Impact of Environmental Degradation:

Environmental degradation affects human quality of life by showing symptom of biotic indigence. Food availability depends on environmental conditions and is an elementary determinant of quality of life.

In 2020, worldwide 149 million children under 5 were assessed to be stunted (too short for age), 45 million were evaluated to be wasted (too thin for height), and 38.9 million were overweight or obese (WHO, 2021).

Even with unequivocal legal requirements that industries publicize information on their toxic emissions, globally many people still have dearth of both information and the decision-making power that control the quality of their lives. Environmental degradation obstructs many basic human rights, including the rights to health, livelihood, property, culture and privacy (Chu and Karr, 2013).

2.3.1 Impact on Socio-Economic Status:

Societies everywhere are closely and intricately interconnected to the natural environment in which they are belonging to. Environmental degradation which includes diminution of renewable and non-renewable resources and air, water and soil pollution can create a substantial stress upon societies.

It can affect social integration indirectly, through putting constraints on productive activities, and it can also exhibit direct social impacts.

Environmental deterioration may persuade changes in settlement patterns and thus interrupt established social relations. It may enhance social stratification or stimulate social solidarity and motivate collective action. (UNRISD, 1994).

2.3.2 Impact on Human Health:

Environmental degradation effects on the health of individuals and populations. Areas exposed to toxic air pollutants can cause respiratory problems like pneumonia, lung diseases, and asthma. According to the World Health Organization (WHO), air pollution kills an estimated seven million people worldwide every year.

Within the last ten years, the pollution level in Indian cities has risen alarmingly with strongest pollutants contamination like residual suspended particulate matters(RSPM), suspended particulate matter(SPM), nitrogen dioxides (NO2), carbon monoxide gas (CO), lead, etc (Chopra, 2016).

Table 2.1: Table shows the urban Air Pollution Concentration-Response Coefficients (Pope et al., 2002; Ostro, 2004) for the mortality coefficients.

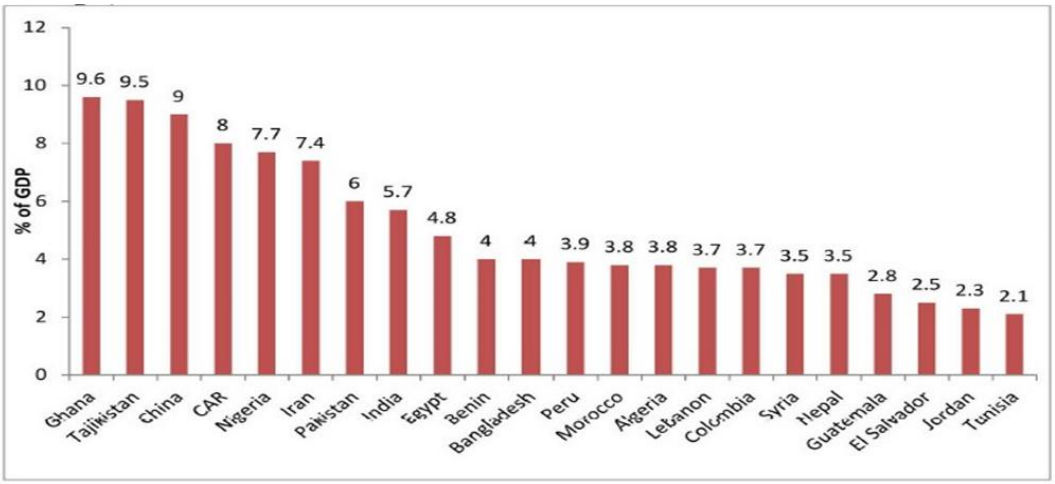
Annual Health Effect	Concentration-response Coefficient	Per 1 ug/m^3 annual average ambient concentration of
Long term mortality (% change in cardiopulmonary and lung cancer mortality)	0.8% *	PM 2.5
Acute mortality children under five (% change in ARI death)	0.166%	PM10
Chronic bronchitis (% change in annual incidence)	0.9%	PM10
Respiratory hospital admissions (% per 100,000 population)	1.2%	PM10
Emergency room visits (per 100,000 population)	24	PM10
Restricted activity day (% change in annual incidence)	0.475%	PM10
Lower respiratory illness in children (per 100,000 children)	169	PM10
Respiratory symptoms (per 100,000 adults)	18,300	PM10

It is estimated that about 2 million premature deaths in developing countries result from indoor air pollution (Srinivasan, 2013), where almost half of these deaths are due to pneumonia in children below 5 years of age and from contaminated drinking water mainly in developing countries (Afroza et al., 2015). Water pollution also provokes the process of transformation of heavy toxic metals through the food chain and deposit these in plants tissues when they absorb it. These plants and animals are in turn consumed by man and hence their health became affected (Afroza et al., 2015; Jeevanantham et al., 2019). These heavy metals commonly affect human heart (carcinogenic and teratogenic impacts), kidneys, nervous system, liver, pancreas, skin, and reproductive system (Jeevanantham et al., 2019). Diseases such as typhoid, cholera, vomiting, skin lesions, and nervous system problems can spread as a result of consumption of polluted water include (Afroza et al., 2015; Ghafoor et al. (1994).

2.3.3 On the Economic Growth and Development:

The hostile effects of environmental degradation on the environment and economic growth include loss of biodiversity and diminished food and agricultural production levels. In some cases, for instance, Nigeria that are usually challenged with oil spillage, lost their occupation such as fishing, canoe carving, and forestry, which account for about 70% of the total employment in the region; this often leads to dropping out of school by children of most families who can no longer pay their wards' school fees (Ipingbemi, 2009).

In comparison with other countries, India has approximately equivalent costs for environmental degradation with others. According figure-2.2, it shows that price of increased morbidity, mortality and natural resources degradation typically costs 4 to 10 per cent of GDP, compared to 7 percent of GDP in India (World Bank and MOEF, 2013).



Source: Bank (2012): Green Growth: Path to Sustainable Development.

Figure 2.2: Cost of Environmental Degradation (Health and Natural Resources Damages)

2.3.4 On Ecology, Biodiversity and Environmental Resources:

The frequent penetration of the environmental pollutants into the soil or lithosphere affects the organisms living therein. Environmental degradation is helping to boost the accumulation of these noxious pollutants in the food chain and thereby destroying the ecosystem stability. A large range of contaminants are released annually within the atmosphere by pollution from industry. There are over 1,40,000 new chemicals and pesticides that have been synthesized since 1950 (Landrigan et al.; 2017) and only a couple of them such as polychlorinated biphenyls (PCBs), dichlorodiphenyltrichloroethane (DDT), hydro chlorofluorocarbons (HCFCs), and chlorofluorocarbons carbons (CFCs) are tested clinically for toxicity. The role of CFCs within the depletion of the ozonosphere is extremely reported and fortunately, the CFCs that caused ozonosphere trouble were expelled by the protocol of Montreal (https:/www.nasa.gov) in 2018. There are many other substances such as hydro chlorofluorocarbons (HCFCs) and volatile organic compounds (VOCs) that lead to ozone layer depletion (Arora et al., 2018).

Biodiversity is vital for maintaining a balance of the ecosystem within the sort of combating pollution, restoring nutrients, protecting water sources, and stabilizing climate. The most explanation for loss of biodiversity are deforestation, overpopulation, global warming and pollution are a few of the main causes for loss of biodiversity. Actually, the citizens have deeply altered the environment, and have modified the territory, exploiting the species directly, for instance by fishing and hunting, changing the biogeochemical cycles, and transferring species from one area to a different. (Chopra, 2016).

One major component of environmental degradation is the depletion of the resource of fresh water on earth. Water scarcity is an increasing problem due to many foreseen issues in the future, including population growth, increased urbanization, higher standards of living, and climate change. The deterioration of the environment can be a huge setback for the tourism industry that relies on tourists for their daily livelihood. Environmental damage in the form of loss of green cover, loss of biodiversity, losing earth's beauty, huge landfills, increased air and water pollution can be a big turn off for most of the tourists.

2.4 Mitigation Measures:

In the SDG report (UN, 2018) which projects the agenda for 2030, it is clear that the major cities have problems of extreme air, soil, and water contamination and problems need to be discussed very urgently. There is a need for swift action from nations, international organizations, and even individual levels in order to execute ecological solutions and policies. There are considerable bad effects to anthropogenic activities, so and we need to turn to the earth and thus turns towards green alternatives to heal the habitats and get them back to normalcy. Biological instruments and bodies, such as microorganisms and plants, may play an important role in the regeneration of contaminated habitats and in mitigating the effects of global warming and climate change. These must, however, be enforced at the global level (Maurya et al., 2020; Chukwuka et al., 2020; Chopra, 2016). In terms of solving its environmental concerns and improving the environmental standard, it is estimated that, between 1994 and 2010 India also made one of the world's fastest advancements. However, India still has a long way to go to achieve environmental quality close to that of advanced economies.

General and environmental education and climate training is a crucial tool in preserving the environment. Training increases one's ability to acquire, decode and comprehend information and the effects on learning and changes in behaviour. Education has been seen in recent years as a tool of sustainable development and hence of pollution control (Akbulut, 2014; Maurya et al., 2020). Education is ‘a continuous learning mechanism that helps to educate people whose purpose is the development of knowledge, soft skills and experience and good manners”. Maurya et al. (2020) reported how human interaction with the environment is influenced by education strategy (Figure- 2.3).

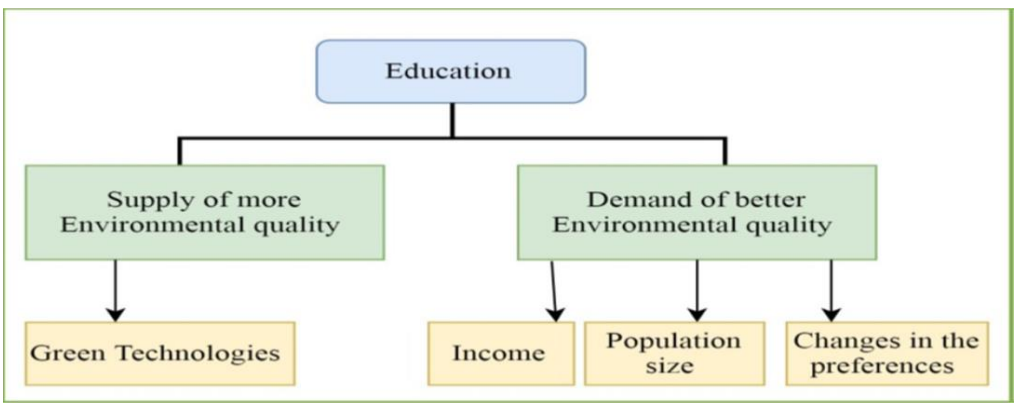


Figure 2.3: Impact of Education on Environmental Quality. (Maurya et al., 2020)

There are many ways which can help to decrease environment degradation. Some of these include:

- Recyclable goods should be bought and used.
- Frequent water quality monitoring as the issue of river pollution is rising. Sustainable development would not be feasible without a sufficient amount and quality of freshwater which has limited sources with limited amount left. So, it is necessary to preserve them for agriculture, industry and to nourish and flourish human lives.
- Demand for drinking water preservation should be raised.
- By improving the standard of potable water quality and its appropriate use alongside enhancing accessibility and domestic supply.
- Waste products should be dumped in a specific and suitable place, far from the human habitats, or should be destroyed accordingly.
- Awareness should be promoted in the community by making small groups to arouse consciousness about the consequences of environmental degradation and limited nonrenewable sources of energy.
- Lack of 'environmental values' has encouraged us to extensive use of ‘free’ natural resources abundantly. So, these thoughts need to be changed and here the educational and awareness campaigns can help.
- The overproduction of use and throw items that are commercially cheap also has led to allow people to voluntarily discard them after a single use in the ecosystem and this ongoing cycle is creating harmful impacts in the ecosystem and should be regulated.
- Institutional productivity needs to be directed to check and control the economic productivity and for engineering involvements with mandatory environment educations.
- Plastic wastes are serious physical hazards to the environment that leads to significant plastic pollution and the degradation of our planet. Usage of disposable plastic bags, cups, plates, containers, cutlery, etc. should be refrained.
- In order to mitigate the adverse effects of environmental degradation, deforestation needs to be stopped. It is crucial for a healthy and sustainable ecosystem and also the environment. We should not cut or burn trees down as trees are providing us oxygen by replacing or absorbing greenhouse gases for the healthy living of the natural habitats, animals, and plants that may become endangered if these forests are destroyed.
- Conservation of natural resources needs to be done by direct action such as declaration of reserved forests, biosphere, wetlands, mangroves, and protection of endangered species.
- There should be strict legal actions for illegal dumping to reduce the adverse ecological consequences.
- Environmental Impact Assessment Studies should be done and monitored.
- The Environment (Protection) Act has been established in 1986 to protect the environment. The Forest (Conservation) Act 1980 and the Act on Wildlife (Protection), 1972 are both significant legislation within the region.
- Authorities not only in politics but also authorities for the implementation and evaluation of progress should be moved properly in order to achieve the long-term national environmental objective contributing to sustainable growth. (Maurya et al., 2020).

- To promote forestation the government should use the economic incentive and penalty scheme.
- People should be aware by proper programme about the consequences of environmental degradation.

The UN-2018 SDG Study, projects the agendas up to 2030 during which 17 goals of the UN have been report and therefore the 2030 is that the target, out of which 13 are specifically aimed toward the sustainable environment and must be accomplished through biological or natural alternatives for food production as well as for the protection of green fuel, sustainable management of water resources and treatment of contaminated water, renewable and green energy, sustainable economic development and job opportunities, and sustainable industries (Arora et al., 2018). Maurya et al. (2020) proposed the flow chart for the mitigation strategies and remediation of soil for the development of quality of soil shown in Figure: 2.4.

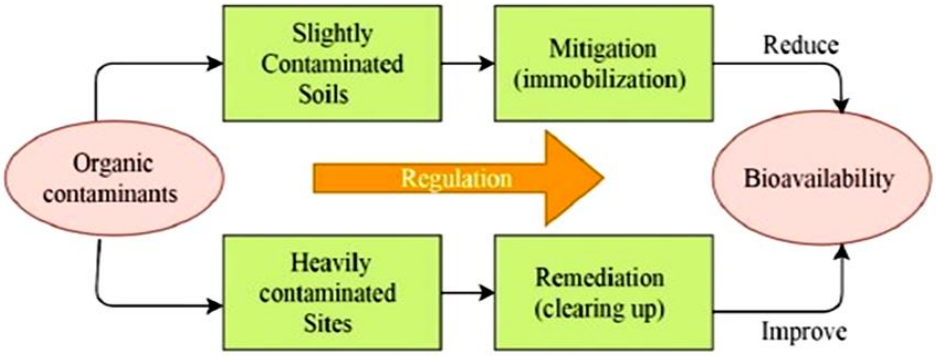


Figure 2.4: Strategies of Mitigation and Remediation for Slightly and Heavily Contaminated Soil (Maurya et al., 2020)

Maurya et al. (2020), also explained the sustainability components of human environment (Figure- 2.5).

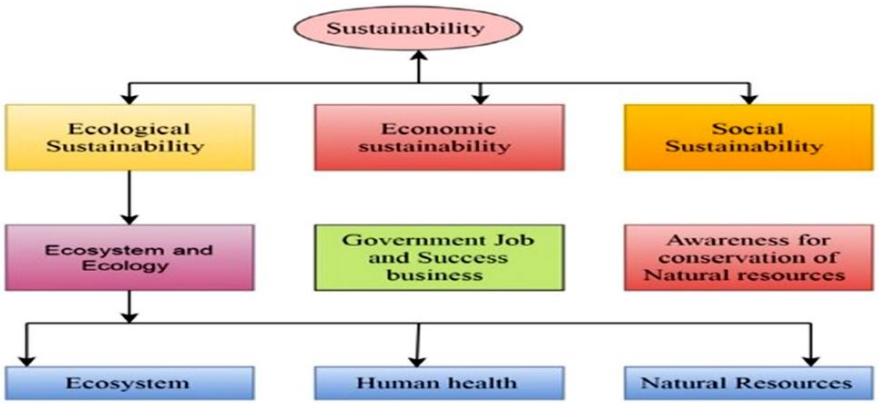


Figure 2.5: Sustainability Components of Human Environment (Maurya et al., 2020)

2.5 Conclusion:

Environmental degradation is one of the most challenging environmental issues in 21st century. The main causes of environmental degradation are attributed to the rapid growth of population, excessive use of natural resources along with land degradation, deforestation, soil erosion, habitat destruction, and loss of biodiversity.

Besides these, air, water, and noise pollution together with water scarcity enhance the environmental issues in combination with environmental degradation.

As a result, the plants and animals inhabiting in this earth are going to be in trouble. So city planners, industry, and resource managers must consider the future effects of unplanned and harmful so-called development in the environment. With appropriate planning, increase in public awareness, and community supports, environmental degradation may be get prevented in future. It is the responsibility of every individual to become conscious about the environment ethically or morally. Thus it is very much essential to improve the quality of the environment by increasing our awareness through large-scale participation of people for the development of the environment.

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