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## Environmental degradation and its impact on human health

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### ABSTRACT

Environmental degradation is a phrase that refers to the effect on the climate of human actions, in particular the on fire of fossil fuels (coal, oil and gas) and large-scale deforestation, which cause emissions to the atmosphere of large amounts of 'greenhouse gases', of which the most important is carbon dioxide. Such gases take up infra red radiation emitted by the Earth's Surface and act as blankets over the surface keeping it warmer than it would otherwise be. Connected with this warming are changes of climate. When natural habitats are destroyed or natural resources are depleted the environment is degraded. Environmental degradation results from factors such as urbanization, population growth, intensification of agriculture, rising energy use and transportation, climate change, pollutions arising from many sources such as technological activities. It is explored that as a result of the dynamic interplay of socio-economic factors and technological activities amongst many other factors, these have devastating consequences on human health. Thus environmental degradation consequences affect the health and the right to health of the people. Using the doctrinal method of research, one examine the confluence of environmental degradation and health from a rights perspective. An unhealthy environment possess health hazards consequently a violation of the right to health. Human beings are entitled to right to health even as the environment needs to be protected from activities which cause environmental degradation. This paper provides the insight view about the effects of environmental degradation and its impact on human health. Study finds that these kinds of Problems are not only seriously affecting the human by diseases and problems but also the animals and trees/ plants.

**Keywords :** *Environment, Environmental degradation, pollution, climate, remedies*

### 1. Introduction

The environment plays a central role in the life of human beings. The environment directly affects the health status and well-being of human population whether in the urban cities or in hinterlands. It has been established that the potential adverse effects of climate change have been characterized as changes in the physical environment of biota which have significant deleterious effects on the composition, resilience or productivity of natural or managed

ecosystems or on the operation of socio- economic systems or on human health and welfare [5]. Furthermore, it has also been established that a contaminated environment due to human activities could cause malnutrition and diseases, morbidity and shortening of life span [8].

Environmental problems which cause environmental degradation are multidisciplinary in nature and the scale of problems varies [9]. Some of these problems are global which some are local. Problems



like acid rain, climate change, forest fires, depletion of ozone layer, loss of biodiversity, global warming and extinction of endangered species are global problems in nature and require international co-operation for their solution on the other hand, problems such as land degradation, water pollution and contamination, vehicular and air pollution, domestic solid waste, industrial hazardous waste, soil degradation, deforestation and loss of biodiversity are local environmental degradation problems and require policies at national or regional level [10,11,8]. The environment affects our health in a variety of ways. The interaction between human health and the environment has been extensively studied and environmental risks have been proven to significantly impact human health, either directly by exposing people to harmful agents, or indirectly, by disrupting life-sustaining ecosystems. Environmental degradation is the deterioration of the environment through depletion of natural resources such as air, water and soil; the destruction of ecosystems and the extinction of wildlife. Environmental degradation may be defined as any change or disturbance to the environment perceived to be deleterious or undesirable. The primary cause of environmental degradation is human disturbance. The degree of the environmental impact varies with the cause, the habitat, and the plants and animals that inhabit it. Humans and their activities are a major source of environmental degradation. Worldwide the greatest effects on the health of individuals and populations result from environmental degradation and social injustice. The two operate in consort. Causes include overpopulation, air and water pollution, deforestation, global warming, unsustainable agricultural and fishing practices, overconsumption (“affluenza”), unequal distribution of wealth, the rise of the corporation, the Third World debt crisis, and militarization and wars. Mining is also a destructive development activity where ecology suffers at the altar of economy. Scientific mining operations accompanied by ecological restoration and regeneration of mined wastelands and judicious use of geological resources, with search for eco-friendly substitutes and alternatives

must provide sensational revelation to the impact of mining on human ecosystem.

**1.2 Impacts of environmental degradation on human health**

Many factors influence the health of a population, including diet, sanitation, socio-economic status, literacy, and lifestyle. These factors have changed significantly during the economic transitions that have shaped present society and resulted in a considerable increase of life expectancy in OECD regions [7]. However, they also indicate that during the same period the negative impacts of air pollution on human health increased in OECD countries [6]. Clearly, the loss of health due to environmental degradation is substantial and calls for interventions. These environmental policy interventions can in turn save money in health care costs. The cost-benefit ratio for any given policy intervention will depend on the state of the environment and the pattern of disease of the affected population, Since these factors can differ between OECD countries and even within countries, there are only few recommendations that can be generally applied. However, certain priority issues for intervention common to almost all OECD countries can be identified (summarized in Table-1).

**Table 1. Priority environment-related diseases, Issues and sectors in OECD countries**

	High-Income OECD countries	Middle-Income OECD countries
<b>Discases</b>	Cardiopulmonary diseases Cancer Depression	Communicable diseases Cardiopulmonary diseases Cancer
<b>Issues</b>	Air pollution Chemicals Noise/liveability	Sanitation/food/housing Air pollution Chemicals
<b>Sectors</b>	Transport Industry/ agriculture Housing	Public hygiene Transport/ energy Industry/ agriculture



The most urgent issues to be addressed in OECD countries in relation to limiting health loss from environmental degradation are air pollution and exposure to chemicals. The issue of air quality and especially urban air quality emphasizes the need for policies resulting in less volume, and cleaner means, of transport. The problems related to exposure to chemicals call for policy interventions to limit industry, energy and transport emissions, and agricultural chemical use to promote food safety.

## **2. Passion, Policy and Science in Environment and Health**

Scientists are trained in dispassionate enquiry, an essential tool of the trade. At the same time, in the policy process, there is a need to frame compelling objective evidence on environment and health issues in terms valued by the public- and decision-makers. Appreciating the complexities of the policy process and how scientific evidence is used, and might be used better, in the process has been a theme of HELI. The passion of politics must be harnessed to the scientific passion for knowledge about the root environmental causes of disease.

HELI's approach was designed around four key issues identified in the Needs Assessment Workshop (April 2003) involving both developed and developing country policy-makers, and refined further in the global review of decision- making.

- More effective impact assessment procedures are needed in developing countries. This can facilitate political and scientific exchange within a systematic and transparent framework. Impact assessment is a forum where science and policy interact- producing a synergy between scientific evidence and policy agendas.

- Analysis of environment and health costs and benefits is important to improved utility of assessment frameworks. Both economic and socioeconomic valuation put issues into monetary terms relevant to many policy-makers. Non-monetary measures, including death and disease burden and the rate/degree of environmental degradation, also are powerful indicators.
- Interactive exchange between scientists, policy-makers and stakeholders is critical to improving access to knowledge about health and environment problems and solutions. Such exchanges can range from technical workshops to inter-sectoral government meeting and ministerial-level encounters. Participatory research allows policy-makers and stakeholders to “see” and “touch” the evidence for them.
- Building decision-maker and stakeholder awareness about environment and health problems, tools and policy options requires sustained and comprehensive communication strategies. Such strategies should describe potential “solutions” alongside the “problems,” and relate to successful experiences elsewhere. Potential economic and poverty reduction gains should be communicated together with the health and environment gains. Policy-relevant briefing and training materials should be refined and adapted to local needs and issue.

## **3. The DPSEEA framework**

The DPSEEA framework illustrates how socioeconomic driving forces can generate environmental pressures, leading to altered ecosystem states, personal exposure to risks, and eventual health impacts. Actions can be taken at each step in the causal chain, to help manage the driving forces and reduce negative effects.



**Table 2. DPSEEA framework flowchart**

<b>Action</b> Mainstream environment and health into economic development.	→	<b>Driving forces</b> e.g. Economic, political, social & institutional
		↓
Promote sustainable & equitable patters of product or / consumption.	→	<b>Pressure</b> e.g. Resource depletion, waste release
		↓
Build capacity to monitor & manage waste & resources.	→	<b>State</b> e.g. Degraded ecosystem services, pollution
		↓
Monitor health; improve personal protection from pollution and infections.	→	<b>Exposure</b> e.g. Exposure and susceptibility to pollution & infections
		↓
Treatment; rehabilitation	→	<b>Effect</b> e.g. Morbidity & mortality

**4. Solutions to the problem and hope for the future**

A multi-faceted approach to the problems of environmental degradation and social injustice would include a shift from a throw-away economy to a reuse/ recycle economy. Stronger clean air and water standards and the elimination of fossil fuel industry tax breaks and subsidies could save billions of dollars and thousands of lives each year. Tax breaks and subsidies for research and development of renewable energy should be increased, and the tax system

restructured to decrease taxes on work and savings and increase taxes on destructive activities, such as carbon emissions and toxic waste generation. Alternatives to electrical, coal, oil, nuclear, and natural gas-based power include solar energy, wind turbines, geothermal power, tidal/wave power, hydropower and co-generation (harnessing waste heat), all of which would decrease air pollution and the risk of accidental or deliberate catastrophes. Safer storage of nuclear wastes, promotion of bio-prospecting and ecotourism, and vigorous prosecution of environmental scofflaws are all part of the solution [1,3]. Streamlining the EPA could save approximately three billion dollars per year.

**5. Conclusion**

This paper has established that a degraded environment arising from factors such as water pollution, air pollution, climate change as a consequence of global warming because of greenhouse gases among so many other factors constitute grave human health. These could lead to premature deaths and hence increase in morbidity. International law has developed rapidly in recent years with regard to the normative definition of the right to health. This amongst many other things includes both health care and healthy conditions. It therefore means the environment should be clean and healthy. A healthy environment is fundamental in the protection of the health of the people. Thus there is a link between the environment and how well it is managed and the health and right to health of humankind. The environment affects the lives of humans in so many ways including health of the people. The international norms relating to the right to health have made standard provisions for evaluating states obligations and also their degree of accountability. It is therefore necessary that governments, international organizations and communities should and must work together at all levels to combat the health risks to human kind associated with environmental degradation and its contributing factors, such as climate change. Government must endeavor to ensure that activities of companies, organizations and individuals must be in conformity with environmental protection towards



healthy environment. If this is done human health will be protected. The most urgent need is to develop appropriate policy instruments and compensatory mechanisms for the best results. The growing recognition that greenhouse gas reductions are not the only option one has to slow and ultimately reverse global warming. Restoring and expanding global forests can also cool the planet.

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