

ENVIRONMENTAL HAZARDS AND CONTROL POLICIES***Dr. Ranjeet Kaur Bajwa**

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Corresponding Author*Dr. Ranjeet Kaur Bajwa**G.N. Khalsa College,
Matunga, Mumbai-19.**ABSTRACT**

Man is one of the species who inhabit the earth. He is the only one who has interfered with various natural processes for use of both biological & physical resources to meet his multiple demands, man has polluted all the three realms of the earth-lithosphere, hydrosphere & atmosphere. it is essential for us to know about environment & its pollution. Today, almost every aspect of modern living possesses potential health risk. Natural resources like air, water, land etc. are getting contaminated with toxic substances or chemical additives. It is possible that ultimately man may become a victim of self-created

pollution. The global environmental changes are influencing not only air, water and land resources but also biological diversity and human health. Different Types of environmental hazards are: 1. Air Pollution 2. Greenhouse gases 3. Water Pollution 4. Household chemicals & pharmaceutical byproducts & wastes 5. Radiation.

Indian Government and Judiciary System has taken tough stand but that is also not enough The need of the hour is to: Acknowledge and respond to ignorance, as well as uncertainty and risk, in technology appraisal and public policy-making.

- Provide adequate long-term environmental & health monitoring and research into early warnings.
- Expanding renewable energy & Strengthening environmental enforcement.
- Improving environmental regulation of natural gas development Trimming energy waste in many sectors.

KEYWORDS: Environmental Hazards, Health effects, Indian Government, Judiciary System.

INTRODUCTION

Man is one of the species who inhabit the earth. He is the only one who has interfered with various natural processes for use of both biological & physical resources to meet his multiple demands, man has polluted all the three realms of the earth-lithosphere, hydrosphere & atmosphere. Today, almost every aspect of modern living possesses potential health risk. It is possible that ultimately man may become a victim of self-created pollution. The global environmental changes are influencing not only air, water and land resources but also biological diversity and human health.

A clean environment is essential for human health and well-being. However, the interactions between the environment and human health are highly complex and difficult to assess. This makes the use of the precautionary principle particularly useful.

The best-known health impacts are related to ambient air pollution, poor water quality and insufficient sanitation. Much less is known about the health impacts of hazardous chemicals. Human health has always been threatened by natural hazards such as storms, floods, fires, landslides and droughts. Their consequences are being worsened by a lack of preparedness and by human actions such as deforestation, climate change and biodiversity loss.

The related health impacts include respiratory and cardiovascular diseases, cancer, asthma and allergies, as well as reproductive and neurodevelopmental disorders.

Environmental Aspect	Environmental Impact(s)
Emissions of volatile organic compounds (VOCs)	Air pollution, smog
Discharges to streams	Degradation of aquatic habitat and drinking water supply
Spills and leaks	Soil and groundwater contamination
Use of recycled paper	Conservation of natural resources

TYPES OF ENVIRONMENTAL HAZARDS

1. Air Pollution
2. Greenhouse gases
3. Water Pollution
4. Household chemicals & pharmaceutical by products and wastes
5. Radiation.

1. Air

Air pollution may be found in large cities throughout the world; its sources are often attributed to automobile exhaust and industrial emissions and may be aggravated by climate and geography.

Fine particulate matter and ground-level ozone are the main threats to human health from air pollution. The EU's Clean Air for Europe (CAFE) program estimated a total of 348,000 premature deaths per year due to exposure to fine particles (PM_{2.5}). At this level of exposure, average life expectancy is reduced by approximately one year.

The EU Green Paper on noise exposure states that around 20% of EU's population suffer from noise levels that health experts consider to be unacceptable, i.e. which can lead to annoyance, sleep disturbance and adverse health effects.

Transport, especially in urban areas, is one of the key contributors to human exposure to air pollution and noise.

Natural disasters often lead to wide-ranging air pollution in large cities. For example, uncontrolled forest fires have caused widespread pollution over vast expanses. Natural or manmade disasters resulting in massive structural collapse or dust clouds can cause the release of chemical or biologic contaminants (such as asbestos or the arthrospores that lead to coccidioidomycosis).

Much less is known about the health impacts of chemicals. There is growing concern about the effects of exposure to mixtures of chemicals at low levels and for long periods over our lifetime, in particular during early childhood and pregnancy.

Persistent chemicals with long-term effects, such as polychlorinated biphenyls (PCBs) and chlorofluorocarbons (CFCs), and those used in long-life structures — for example construction materials — may present risks even after their production has been phased out. Many pollutants known to affect human health are gradually coming under regulatory control. However, there are emerging issues for which environmental pathways and effects on health are as yet poorly understood. Examples are electromagnetic fields (EMF), pharmaceuticals in the environment and some infectious diseases (the spreading of which may be affected by climate change). The development of 'early warning' systems should be

encouraged to shorten the time between detection of a potential hazard and a policy action or intervention.

2. Greenhouse gases

Clearing forests also releases large amounts of CO₂. On top of that, plants and trees use CO₂ to grow. Worldwide deforestation means we don't have as many trees to absorb the extra CO₂.

This means more CO₂ stays in the atmosphere, trapping more heat. Fossil fuels such as coal or petroleum, when burned cause the release of carbon dioxide (CO₂) and other heat-trapping "greenhouse gases" into the atmosphere. Though natural amounts of CO₂ have varied from 180 to 300 parts per million (ppm), today's CO₂ levels are around *400 ppm*. That's 40% more than the highest natural levels over the past 800,000 years. The unprecedented soot and smog levels are triggering a cascade of damaging health and economic effects. They're also contributing to an equally sinister, yet under-reported problem: **climate change**. Excess UV rays causes sunburn, which in turn damages skin cells, impairment of sweating, alters the cell's DNA, making it divide indefinitely, causing **skin cancer**.

3. Water

Aquatic pollution is the degradation of the quality of water that makes it unsafe or harmful to human beings, animals and aquatic life.

Sources

Human sewage, Animal, plant waste, Decaying organic matter, Industrial waste, Natural land and urban run off.

Types of aquatic Pollution

1. Ground water pollution

Ground water gets polluted by human activities(industrial, domestic and agricultural).

2. Surface water pollution

water of rivers, lake streams are surface water.

Sources	Contaminants Discharged
Agricultural run-offs	Agrochemicals (Pesticides, herbicides, fungicides)
Accidental Spills of Chemicals	Different Chemicals
Leaks from Surface, Storage tanks or Pipelines	Gasoline, Oil
Run off from Industrial site like factories, Mines etc.	Solvents, Chemicals
Radioactive Materials processing plants	Radioactive materials

4. Household chemicals & pharmaceuticals byproducts and wastes

Chemicals which disrupt the hormone system – also known as 'endocrine disrupting chemicals' (EDCs) – may be a contributing factor behind the significant increases in cancers, diabetes and obesity, falling fertility, and an increased number of neurological development problems in both humans and animals, according to a review of recent scientific literature commissioned by the European Environment Agency (EEA).

Chemicals which can potentially disrupt the endocrine system can be found in food, pharmaceuticals, pesticides, household products and cosmetics. In recent decades, there has been a significant growth in many human diseases and disorders. Many scientists think that this growth is connected to the rising levels of exposure to mixtures of some chemicals.

The link between some diseases and EDCs is now accepted. For example, exposure to estrogen or to estrogenic EDCs is an accepted risk factor for breast cancer, endometriosis, fibroids and polycystic ovarian syndrome (PCOS) in women.

Breast cancer rates are increasing in almost all industrialized countries. The majority of these cases are due to lifestyles and environmental exposures, rather than specific genetic factors.

Some EDCs may also cause low quality semen. Detailed reviews of current knowledge show clearly that human male reproductive problems are increasing in many countries. There are large regional differences in semen quality. In some European regions approximately 40% of men suffer from reduced fertility while in others it is less than 10%.

Laboratory studies show that the reproductive systems of a broad range of vertebrate species, for example polar bears and fish, and some invertebrate species such as some snails and oysters are susceptible to EDCs.

Some studies have linked EDCs to thyroid disease. Thyroid cancer rates have increased by between 5 % (Switzerland) and 155 % (France), particularly in women, children and young adults.

Several studies have also linked exposure to some EDCs with neurodevelopmental disorders such as autism, attention deficit disorder and diminished cognitive function in children. However, more work is needed in this area to confirm or refute theories involving the wider sphere of EDCs in modern commerce.

There is a trend towards the earlier onset of puberty in girls, which may be influenced by EDCs.

Some persistent endocrine disrupting substances, such as DDT, TBT and PCBs - now banned or restricted in their use - have been shown to cause catastrophic declines in mollusc, seal and bird populations in some parts of the world as a result of their effects on reproduction. Scientists are concerned that many chemicals that are still in modern commerce also affect the human reproductive system.

5. Radiation

Natural background radiation levels can vary substantially from region to region. Example, The Chernobyl plant located 100 km (62 miles) northwest of Kiev in 1986 accident contaminated regions in 3 republics—Ukraine, Belarus, and Russia—with the highest radioactive ground contamination within 30 km (19 miles) of Chernobyl.

The Fukushima Daiichi plant is located 240 km (150 miles) north of Tokyo. The area within a 20-km (32-mile) radius of the plant is restricted, and Japanese authorities also advised evacuation from locations farther away to the northwest of the plant. This incident occurred in 2011, and as Japanese authorities continue to clean the affected areas and monitor the situation, travel advisories may change.

In most countries, known areas of radioactive contamination are fenced or marked with signs. Natural disasters (such as floods) may also displace industrial or clinical radioactive sources.

Radiation risk from everyday devices assessed

A new report raising concerns about the effects of electromagnetic fields (EMF) on human health calls for tougher safety standards to regulate radiation from mobile phones, power

lines and many other sources of exposure in daily life. The report, 'Bio initiative: A Rationale for a Biologically-Based Public Exposure Standard for Electromagnetic Fields' was compiled by the Bio Initiative Working Group, an international group of scientists, researchers and public health policy professionals. The EEA has contributed to this new report with a chapter drawn from the EEA study 'Late lessons from early warnings: the precautionary principle 1896–2000' published in 2001.

The EEA study reviews the histories of a selection of public and environmental hazards, such as asbestos, benzene and PCBs, from the first scientifically based early warnings about potential harm, to subsequent precautionary and preventive measures.

Although the EEA does not have specific expertise in EMF, the case studies of public hazards analyzed in the 'Late lessons' publication show that harmful exposures can be widespread before there is both 'convincing' evidence of harm from long-term exposures, and biological understanding of how that harm is caused.

There are many examples of the failure to use the precautionary principle in the past, which have resulted in serious and often irreversible damage to health and environments. Appropriate, precautionary and proportionate actions taken now to avoid plausible and potentially serious threats to health from EMF are likely to be seen as prudent and wise from future perspectives.

Environmental Policy In India and the Role of Judiciary in Imparting Environmental Justice

1. National Environment Policy, 2006

It the first initiative in strategy-formulation for nvironmental protection in a comprehensive manner. It undertakes a diagnosis of the causative factors of land degradation with a view to flagging the remedial measures required in this direction. ³It recognizes that the relevant fiscal, tariffs and sectoral sectoral policies policies need to take explicit explicit account account of their unintentional impacts on land degradation.

2. Legislative Framework

- Water (Prevention and Control of Pollution) Act, 1974.
- Water (Prevention and Control of Pollution) Act, 1977.
- Air (Prevention and Control of Pollution) Act, 1981.

- Atomic Energy Act of 1982 ¾Motor Vehicles Act, 1988.
- The Wildlife (Protection) Act, 1972.
- The Forest (Conservation) Act, 1980.
- Environment (Protection) Act, 1986 (EPA).
- The National Environment Appellate Authority Act, 1997.
- Public Liability Insurance Act (PLIA) 1991.
- National Environment Tribunal Act, 1995.

ENVIRONMENT IMPACT ASSESMENT (EIA)

There are two types of EIA models- the statutory model which makes the assessment of impact compulsory under an enacted law, or a delegated legislation, and the administrative model under which an administration exercises its discretion to find out whether an impact study is necessary. Till 1992, India was following the administrative model of EIA.

On 27th January, 1994 a notification was issued dealing with mandatory EIA. The notification requires project proponent to submit an EIA report and environment management plan details of the public hearing and a project report to the impact assessment agency for clearance, further review by a committee of experts in certain cases. By the amendment in the year 1997, public hearing was made compulsory before impact assessment was finalized.

ROLE OF JUDICIARY IN IMPARTING ENVIRONMENTAL JUSTICE

- Disputes relating to environment are treated as cases related to violation of fundamental rights.
- It has been held that the Supreme Court and the High Courts can be directly approached under Article 32 and Article 226 of the Constitution of India in case of matters relating to environment.
- The orders of the Supreme Court and the High Courts cover a wide range of areas including air, water, solid waste, hazardous wastes, forests, mining activities, and architectural treasures.
- Policy Statements of the government, which otherwise are not enforceable in Courts have been used as aids by the Judges for interpreting environmental statutes and for spelling out obligations of the Government.

New environmental policies and programs which may help in future

- Acknowledge and respond to ignorance, as well as uncertainty and risk, in technology appraisal and public policy-making.
- Provide adequate long-term environmental and health monitoring and research into early warnings.
- Expanding renewable energy.
- Strengthening environmental enforcement.
- Improving environmental regulation of natural gas development.
- Trimming energy waste in many sectors.

CONCLUSION

As it has been said-we do not inherit the environment from our forefathers, we borrow it from future generation.

Stockholm conference of 1972 proclaims that. The protection & improvement of human environment is a major issue which affects the well being of people & economic development throughout the world & it is duty of all governments & people to common efforts for the preservation & improvement of environment for the benefit of all people & their prosperity.

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