LAWS, REGULATION, POLISIES, STRATEGIES FOR ENVIRONMENTAL PROTECTION and NATURAL HAZARDS MANAGEMENT

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ABSTRACT

*In general, **environment** refers to the surroundings of an object. **Environmental law** is a complex and interlocking body of treaties, conventions, statutes, regulations, and common law that, very broadly, operate to regulate the interaction of humanity and the rest of the biophysical or natural environment, toward the purpose of reducing the impacts of human activity, both on the natural environment and on humanity itself. The topic may be divided into two major subjects: (1) pollution control and remediation, (2) resource conservation and management. Laws dealing with pollution are often media-limited - i.e., pertain only to a single environmental medium, such as air, soil, etc. - and control both emissions of pollutants into the medium, as well as liability for exceeding permitted emissions and responsibility for cleanup. India having 18% of the world's population on 2.4% of world's total area has greatly increased the pressure on its natural resources. Water shortages, soil exhaustion and erosion, deforestation, air and water pollution afflicts many areas. India's water supply and sanitation issues are related to many environmental issues. Environmental degradation seriously threatens economic and social progress even at the global level. Increasing craze for mega cities and high tower buildings without considering the width of the roads and parking areas have been causing further congestion and damages to the environment thereby degrading the environment much faster than economic growth. Environment and economic growth are complimentary for developing countries and competitive for developed countries. Hence environmental protection has become a continuous crisis of the nation. The Environment (Protection) Act, 1986 was introduced as an umbrella legislation that provides a holistic framework for the protection and improvement to the environment. Laws regarding resource conservation and management generally focus on a single resource - e.g., natural resources such as forests, mineral deposits or animal species, or more intangible resources such as especially scenic areas or sites of high archeologically value - and provide guidelines for and limitations on the conservation, disturbance and use of those resources. These areas are not mutually exclusive - for example, laws governing water pollution in lakes and rivers may also conserve the recreational value of such water bodies. Environmental law draws from and is influenced by principles of environmentalism, including ecology, conservation, stewardship, responsibility and sustainability. Pollution control laws generally are intended to protect and preserve both the natural environment and human health. Resource conservation and management laws generally balance the benefits of preservation and economic exploitation of resources. From an economic perspective environmental laws may be understood as concerned with the prevention of present and future externalities, and preservation of common resources from individual exhaustion.*

Key Words: - Environment, Humanity, Intangible, Ecology, Unquantifiable.

LAWS, REGULATION, POLISIES, STRATEGIES FOR ENVIRONMENTAL PROTECTION and NATURAL HAZARDS MANAGEMENT

In general, **environment** refers to the surroundings of an object. Our Environment is our surrounding. This includes living and non-living things around us. The non-living components of environment are land, water and air. The living components are germs, plants, animals and people. All plants and animals adjust to the environment in which they are born and live. The "Environment" comprises all entities, living and non-living, natural or manmade, external to oneself, and their interrelationships, which provide value, now or perhaps in the future, to humankind. Environmental concerns relate to their degradation through actions of humans. We the human species and all our activities are also an integral part of the dynamic environment. Our biological survival is totally dependent upon the stability of our surroundings which is nothing but a complex set of processes in dynamic equilibrium. Hence automatically all our developmental activities if they are to be beneficial and sustainable must be anchored on the environmental and ecological precepts. On the other hand, if our interventions are destabilizing and disturbing the dynamic equilibrium, we as a species will fail and will vanish. Currently our developmental activities are becoming more and more environmentally disruptive. With each step in our current development we are creating a more and more fragile top-heavy system sensitive to all shocks including those triggered by us. Simultaneously we are also irreparably undermining our ecological foundations, i.e., the processes that sustain the primary productivity through green plants which is at the base of our biological energy source. It is the stability of the environmental processes that has been sustaining the availability of food, water and a healthy environment we have been accustomed to so far. Major environmental issues are Forest and Agricultural land degradation, Resource depletion (water, mineral, forest, sand, rocks etc.,), Environmental degradation, Public Health, Loss of Biodiversity, Loss of resilience in ecosystems, Livelihood Security for the Poor. A charge in any component of the environment may cause discomfort and affect normal life. Any unfavorable change or degeneration in the environment is known as 'Environmental Pollution. We need to protect our environment to live happily.

NATURAL HAZARDS:-

Natural Hazards is threat of naturally occurring event that will have negative effect on people or the environment. Many natural hazards are interrelated, e.g. earthquakes can cause tsunamis and drought can lead directly to famine or population displacement. It relates with water shortages, soil exhaustion and erosion, deforestation, air and water. India's water supply and sanitation issues are related to many environmental issues. Environmental degradation seriously threatens economic and social progress even at the global level. Increasing craze for mega cities and high tower buildings without considering

the width of the roads and parking areas have been causing further congestion and damages to the environment thereby degrading the environment much faster than economic growth. Environment and economic growth are complimentary for developing countries and competitive for developed countries. Hence environmental protection has become a continuous crisis of the nation. The complex growth of environmental pressures due to the rapid population growth, mush rooming growth of industrialization and the unprecedented rate of urbanization insists upon the urgent need to pursue economic development at any cost. As sustainable development is the need of the hour, which is possible only by promoting awareness about the need to protect environment the Government has taken several initiatives.

A variety of environmental problems now affect our entire world. As globalization continues and the earth's natural processes transform local problems into international issues, few societies are being left untouched by major environmental problems. Some of the largest problems now affecting the world are Acid Rain, Air Pollution, Global Warming, Hazardous Waste, Ozone Depletion, Smog, Water Pollution, Overpopulation, and Destruction.

Global worming:-In present scenario Global warming is most important problem. On June 23, 1988, James Hansen, the director of the Goddard Institute at NASA, told the Senate Committee on Energy and Natural Resources that global warming was a reality and that is was extremely dangerous. Global warming, also known as the greenhouse effect, immediately received international attention. Scientists, environmentalists, and governments around the world took an interest in the subject. Global warming is called the greenhouse effect because the gases that are gathering above the earth make the planet comparable to a greenhouse. By trapping heat near the surface of the earth, the greenhouse effect is warming the planet and threatening the environment. Many scientists criticized Mr. Hansen's report, and the debate over global warming continues today. Current fears stem largely from the fact that global warming is occurring at such a rapid pace. Models are predicting that over the next century, the global temperature will rise by several degrees. Some scientists still do not think that the effects of global warming are as severe as some people say. They think that droughts, hurricanes, and floods often blamed on global warming might actually have other causes.

Hazardous waste: - In addition to releasing gases and particles into the atmosphere, humans produce waste that is dumped on the environment. Often, this waste is hazardous and dangerous to both nature and human life. The levels of dangerous wastes continue to grow. Industries and individuals continue to be largely unaware of this major environmental problem. As a result, many people and industries are failing to prevent the creation of hazardous waste or to limit the negative effects it produces. Individuals often throw out goods without realizing that they are headed for a landfill and could be dangerous for the environment. No matter where people put these hazardous waste materials, there is always a chance that they could find their way into the ground, and eventually into our bodies.

Corporations usually want to avoid the costs associated with having to limit creation of hazardous waste. Consequently, they build landfills on site and fill them with waste, or sometimes pay to have their waste removed. Often, hazardous materials are transported to areas that accept money to take the waste. It may prove very difficult to reduce hazardous waste in the future. Unlike many other environmental problems, waste creation is something people do not often think about. In the future, people may have to reduce not only their generation of hazardous waste, but also their consumption of many products that end up in landfills.

Ozone Depletion:-The ozone layer protects the Earth from the ultraviolet rays sent down by the sun. If the ozone layer is depleted by human action, the effects on the planet could be catastrophic. Ozone is present in the stratosphere. The stratosphere reaches 30 miles above the Earth, and at the very top it contains ozone. The sun's rays are absorbed by the ozone in the stratosphere and thus do not reach the Earth. Ozone is a bluish gas that is formed by three atoms of oxygen. The form of oxygen that humans breathe in consists of two oxygen atoms, O_2. When found on the surface of the planet, ozone is considered a dangerous pollutant and is one substance responsible for producing the greenhouse effect. The highest regions of the stratosphere contain about 90% of all ozone. In recent years, the ozone layer has been the subject of much discussion. The fact that the ozone layer was being depleted was discovered in the mid-1980s. The main cause of this is the release of CFCs, chlorofluorocarbons. Antarctica was an early victim of ozone destruction. A massive hole in the ozone layer right above Antarctica now threatens not only that continent, but many others that could be the victims of Antarctica's melting icecaps. In the future, the ozone problem will have to be solved so that the protective layer.

Smog: - In many areas around the word, smog has reached extraordinary levels. Some governments have quickly reacted with severe measures in response to the problem. The word smog is a combination of the words smoke and fog. The term was invented by a Glasgow public health official, Des Voeux. Smog causes a smoky dark atmosphere to arise over cities. It decreases visibility, and creates a haze throughout the area. Numerous studies have monitored smog throughout the world. Some of the world's dirtiest cities have millions of inhabitants, all of whom are threatened by the smog. Modern Los Angeles suffers severely from smog, as London did in the 19th century. These two areas released certain chemicals into the air and created a foggy atmosphere. In London, where fog levels have now fallen far below those of years ago, people were often unable to see their hands and sometimes could not walk around. It took a long time for governments to act to control smog. The Clean Air Act of 1970 in the United States limited legal smog levels. The Environmental Protection Agency now measures levels of smog and regulates smog producers. Despite government action to reduce them, smog levels remain very high in many cities. Even those areas that do successfully reduce smog may be the victims of smog blown in from other locations.

Pollution:-Pollution is the beginning of a waste into the atmosphere making it impossible to make life on earth possible to sustain. Pollution harms the Earth's environment and its people in many ways. With Pollution in life, Earth is becoming disturbed; sooner or later causing dramatic changes in its surface. Nevertheless, Pollution is simultaneously endangering life in Earth. Pollution is becoming closer to put life on the threshold of death. These harmful actions have changed Earth, and they continue to do so today. Although pollution has harmful effects, it has provided us the life we have today; without it, we would not be here where we are. Pollution is a life killer, but also a life saver. There are various forms of pollution.

- **Water pollution:-Water is the most important factor in earth for surviving the life. Water** is a chemical substance with the chemical formula H_2O**.** Attention for water pollution exploded in the 1980s. The oil spill of the *Exxon Valdez* showed many around the world just how horrible the effects of water pollution could be. However, even the *Exxon Valdez* spill barely touched the surface of the problem of water pollution. The ship spilt only 5% of the oil spilt that year, and oil is just one of many pollutants that people dump into the water every year. Every year, 14 billion pounds of sewage, sludge, and garbage are dumped into the world's oceans. 19 trillion gallons of waste also enter the water annually. The problem of ocean pollution affects every nation around the world. This is especially true because water is able to transport pollution from one location to another. For many years, chemicals were dumped into bodies of water without concern. While many countries have now banned such behavior, it continues to go on today. As the world has industrialized and its population has grown, the problem of water pollution has intensified. The simple fact that millions of people live along coastlines and near rivers means that these bodies of water are likely candidates for heavy and destructive pollution. It is hard to know now what our oceans will look like in the future.
- Air pollution, the release of chemicals and particulates into the atmosphere. Common gaseous air pollutants include carbon monoxide, sulfur dioxide, chlorofluorocarbons (CFCs) and nitrogen oxides produced by industry and motor vehicles. Photochemical ozone and smog are created as nitrogen oxides and hydrocarbons react to sunlight.
- Light pollution, includes light trespass, over-illumination and astronomical interference.
- Noise pollution, which encompasses roadway noise, aircraft noise, industrial noise as well as high-intensity sonar.
- Soil contamination occurs when chemicals are released by spill or underground leakage. Among the most significant soil contaminants are hydrocarbons, heavy metals, MTBE,[9]herbicides, pesticides and chlorinated hydrocarbons.
- Thermal pollution, is a temperature change in natural water bodies caused by human influence, such as use of water as coolant in a power plant.

- Visual pollution, which can refer to the presence of overhead power lines, motorway billboards, scarred landforms, open storage of trash or municipal solid waste.

Rain Forest Destruction:-The atmosphere and oceans are not the only parts of the environment being damaged. Rain forests are being quickly destroyed as well, and their survival is questionable. E.O. Wilson, a biologist at Harvard, called the depletion of rain forest areas "the greatest extinction since the end of the age of dinosaurs." Unlike some environmental issues, rain forest depletion has fortunately received significant public and media attention. Despite the opposition to the cutting down of rain forests, the problem continues. Every year, Brazil chops down an area of forest the size of the state of Nebraska. In addition to the Amazon's rain forests, many other forests are being cut down as well. In Indonesia, Zaire, Papua-New Guinea, Malaysia, Burma, the Philippines, Peru, Colombia, Bolivia, and Venezuela, rain forests that were once great have been lost. According to some estimates, 50 million acres of rain forest are cut down every year. The United Nations says the figure is closer to 17 million acres. The World Wildlife Fund says that every minute, 25 to 50 acres are cut or burned to the ground. The world's growing population has been a primary cause of rain forest destruction. More people need land to live on and wood products to consume. Limiting population growth may be the first in a series of steps that would limit the destruction of the rain forests.

ENVIRONMENTAL PROTECTION IN INDIA INTRODUCTION:-

On the basis of population India is the second largest country in the world. It is estimated that the country's population will increase to about 1.26 billion by the year 2016. The projected population indicates that India will be the first most populous country in the world and China will be ranking second in the year 2050.India having 18% of the world's population on 2.4% of world's total area has greatly increased the pressure on its natural resources. Over the years, together with a spreading of environmental consciousness, there has been a change in the traditionally-held perception that there is a trade-off between environmental quality and economic growth as people have come to believe that the two are necessarily complementary. The current focus on environment is not new environmental considerations have been an integral part of the Indian culture. The need for conservation and sustainable use of natural resources has been expressed in Indian scriptures, more than three thousand years old and is reflected in the constitutional, legislative and policy framework as also in the international commitments of the country. Even before India's independence in 1947, several environmental legislation existed but the real impetus for bringing about a well-developed framework came only after the UN Conference on the Human Environment (Stockholm, 1972). Under the influence of this declaration, the National Council for Environmental Policy and Planning within the Department of Science and Technology was set up in 1972. This Council later evolved into a full-fledged Ministry of Environment and Forests in 1985 which today is the apex administrative body in the country for regulating and ensuring environmental protection. After the Stockholm Conference, in

1976, constitutional sanction was given to environmental concerns through the 42nd Amendment, which incorporated them into the Directive Principles of State Policy and Fundamental Rights and Duties. Since the 1970s an extensive network of environmental legislation has grown in the country. A policy framework has also been developed to complement the legislative provisions. The Policy Statement for Abatement of Pollution and the National Conservation Strategy and Policy Statement on Environment and Development were brought out by the Ministry of Environment and Forests in 1992, to develop and promote initiatives for the protection and improvement of the environment. The Environmental Action Programme was formulated in 1993 with the objective of improving environmental services and integrating environmental considerations in to development programmes. Other measures have also been taken by the government to protect and preserve the environment.

THE LEGAL AND REGULATORY FRAMEWORK FOR ENVIRONMENT PROTECTION:-

Water

- ***The Water (Prevention and Control of Pollution) Act*** was enacted in 1974 to provide for the prevention and control of water pollution, and for the maintaining or restoring of wholesomeness of water in the country. The Act was amended in 1988.
- ***The Water (Prevention and Control of Pollution) Cess Act*** was enacted in 1977, to provide for the levy and collection of a cess on water consumed by persons operating and carrying on certain types of industrial activities. This cess is collected with a view to augment the resources of the Central Board and the State Boards for the prevention and control of water pollution constituted under the Water (Prevention and Control of Pollution) Act, 1974. The Act was last amended in 2003.

Air

- ***The Air (Prevention and Control of Pollution) Act*** was enacted in 1981 and amended in 1987 to provide for the prevention, control and abatement of air pollution in India.
- Environment Protection
- ***The Environment (Protection) Act*** was enacted in 1986 with the objective of providing for the protection and improvement of the environment. It empowers the Central Government to establish authorities [under section 3(3)] charged with the mandate of preventing environmental pollution in all its forms and to tackle specific environmental problems that are peculiar to different parts of the country. The Act was last amended in 1991.

Biodiversity

The ***Biological Diversity Act 2002*** was born out of India attempt to realize the objectives enshrined in the United Nations Convention on Biological Diversity (CBD) 1992 which recognizes the sovereign rights of states to use their own Biological Resources. The Act aims at the conservation of biological resources and associated knowledge as well as facilitating access to them in a sustainable manner and

through a just process for purposes of implementing the objects of the Act it establishes the National Biodiversity Authority in Chennai.

Wildlife

- The Government of India enacted ***Wild Life (Protection) Act 1972*** with the objective of effectively protecting the wild life of this country and to control poaching, smuggling and illegal trade in wildlife and its derivatives. The Act was amended in January 2003 and punishment and penalty for offences under the Act have been made more stringent. The Ministry has proposed further amendments in the law by introducing more rigid measures to strengthen the Act. The objective is to provide protection to the listed endangered flora and fauna and ecologically important protected areas.

Animal Welfare

- The ***Prevention of Cruelty to Animals Act*** was enacted in 1960 to prevent the infliction of unnecessary pain or suffering on animals and to amend the laws relating to the prevention of cruelty to animals. After the enactment of this Act, the Animal Board of India was formed for the promotion of animal welfare.

National Environment Tribunal

- In 1995 the Central Government established the National Environment Tribunal [through the ***National Environment Tribunal Act 1995***] to provide for strict liability for damage arising out of accidents caused from the handling of hazardous substances. The Tribunal shall become defunct and the Act shall stand repealed upon the enactment of the ***National Green Tribunal Bill 2009*** currently pending in Parliament.

National Environment Appellate Authority

- The National Environment Appellate Authority (NEAA) was set up by the Ministry of Environment and Forests to address cases in which environment clearances are required in certain restricted areas. It was established by the ***National Environment Appellate Authority Act 1997*** to hear appeals with respect to restriction of areas in which any industries, operations or processes or class of industries, operations or processes shall or shall not be carried out, subject to certain safeguards under the Environment (Protection) Act, 1986. The Authority shall become defunct and the Act shall stand repealed upon the enactment of the ***National Green Tribunal Bill 2009*** currently pending in Parliament

Public Liability Insurance

- The main objective of the ***Public Liability Insurance Act 1991*** is to provide for damages to victims of an accident which occurs as a result of handling any hazardous substance. The Act applies to all owners associated with the production or handling of any hazardous chemicals.

Forest Conservation

- The ***Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006,*** recognizes the rights of forest-dwelling Scheduled Tribes and other traditional forest dwellers over the forest areas inhabited by them and provides a framework for according the same.
- The ***Forest Conservation Act 1980*** was enacted to help conserve the country's forests. It strictly restricts and regulates the de-reservation of forests or use of forest land for non-forest purposes without the prior approval of Central Government. To this end the Act lays down the pre-requisites for the diversion of forest land for non-forest purposes.
- The ***Indian Forest Act, 1927*** consolidates the law relating to forests, the transit of forest-produce and the duty livable on timber and other forest-produce.
- Public Liability Insurance Act (PLIA), 1991:-The Act covers accidents involving hazardous substances and insurance coverage for these. Where death or injury results from an accident, this Act makes the owner liable to provide relief as is specified in the Schedule of the Act. The PLIA was amended in 1992, and the Central Government was Legal and regulatory framework authorized to establish the Environmental Relief Fund, for making relief Payments.
- National Environment Tribunal Act, 1995 The Act provided strict liability for damages arising out of any accident occurring while handling any hazardous substance and for the establishment of a National Environment Tribunal for effective and expeditious disposal of cases arising from such accident, with a view to give relief and compensation for damages to persons, property and the environment and for the matters connected therewith or incidental thereto.

GENERAL STRATEGY'S RELATED TO ENVIRONMENTAL PROTECTION: -There following important strategies related to environmental protection -

- The Environment Department create effective and realistic program.
- The Environment Department shall co-ordinate the activities of different departments' local bodies' institutions relating to the environment.
- The department shall recommend the State's views and suggestions for projects that need Central Government clearance.
- Efforts shall be made to minimize waste generation, appropriate ecofriendly methodologies shall be adopted for waste management.
- Ecotourism shall be encouraged and necessary administrative legislative measures shall be taken to keep the natural ecosystem of tourist places undisturbed.

- Sustainable agricultural patterns shall be encouraged and research projects pertaining to this aspect shall be given priority.

- The department shall take appropriate action to prepare an inventory of heritage resources of India (both natural and cultural).
- Agro-forestry shall be encouraged with assistance from the Department of Forests and local bodies, and shall be implemented through people's participation at local levels.

- Bench mark data on biodiversity will be collected based on People's Biodiversity Registers prepared in each local body.

- Relevance of renewable energy resources shall be emphasized and research projects based on this shall be encouraged.

- The ill effects of sand mining shall be publicized widely among the people. People shall be made aware of the available alternate construction materials and eco-friendly construction models and methods.

- Reclamation of the wetlands should be prohibited.

- Land filling and tree planting shall be made compulsory in the mined areas.

- Quarrying shall be regulated by adopting strict compliance of pollution control mechanisms.

- For the effective implementation of the policy, a comprehensive legislation will be made.

- An environment fund shall be raised separately by introducing "Polluter pays principlefines" and the amount shall be used for environmental protection purposes.

- Use of pesticides and chemical fertilizers will be regulated and phased out.

- Phasing out pesticides

Conclusion

Our Environment is our surrounding. This includes living and non-living things around us. The Indian constitution is one of the first in the world to recognize the importance of environmental conservation.

The "Environment" comprises all entities, living and non-living, natural or manmade, external to oneself, and their interrelationships, which provide value, now or perhaps in the future, to humankind. A variety of environmental problems now affect our entire world. As globalization continues and the earth's natural processes transform local problems into international issues, few societies are being left untouched by major environmental problems. Some of the largest problems now affecting the world are Acid Rain, Air Pollution, Global Warming, Hazardous Waste, Ozone Depletion, Smog, Water Pollution, Overpopulation, and Destruction. On the basis of population India is the second largest country in the world. The Constitution directs the "State to take measures to protect and improve the environment and to safeguard the environmental quality". It also makes it a fundamental duty of every citizen to protect and improve the natural environment including forests, lakes, rivers and wildlife. As the Constitution provides the framework for creating a welfare state, it is necessary that the finite natural resources of the country be optimally utilized without adversely affecting either the health of the people or the environment. This is the essence of the term sustainable development. We must make conservation oriented developmental choices to avert pressure on natural resources and life-support systems. The initiatives highlighted in the preceding paragraphs are expected to resolve the conflicts that often arise between the environmental concerns and development pursuits that have a direct bearing on the very fabric of our society and life styles. There are a number of general strategies related to environmental protection which effective implementation is necessary for proper result.

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