

GE 2211 Environmental Science and Engineering

Unit – IV

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# Environmental Legislations

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# Stockholm Conference

- The United Nations Conference on the Human Environment held at Stockholm in June 5<sup>th</sup> -16<sup>th</sup>, 1972, was the first major conference on international environmental issues
- It marked a turning point in the development of international environmental politics
- All most all the countries of the world have undertaken to monitor the quality of air, water and other natural resources of the world

# Montreal Protocol

- **Montreal Protocol on Substances That Deplete the Ozone Layer** is an international treaty designed to protect the ozone layer by phasing out the production of a number of substances believed to be responsible for ozone depletion.
- The treaty was opened for signature on September 16, 1987, and entered into force on January 1, 1989, followed by a first meeting in Helsinki, May 1989. Since then, it has undergone seven revisions, in 1990 (London), 1991 (Nairobi), 1992 (Copenhagen), 1993 (Bangkok), 1995 (Vienna), 1997 (Montreal), and 1999 (Beijing).
- It is believed that if the international agreement is adhered to, the ozone layer is expected to recover by 2050

# Phase-out of Ozone depleting substances

- Ozone depleting substances contain either chlorine or bromine (substances containing only fluorine do not harm the ozone layer)
- Phase out of CFCs and other ozone depleting substances (halon, CFC - 13, 111, 113 and others)
- The HCFCs are transitional CFCs replacements, used as refrigerants, solvents, blowing agents for plastic foam manufacture, and fire extinguishers.
- Unfortunately, the HCFCs, and hydrofluorocarbons, or HFCs, are now thought to contribute to anthropogenic global warming. On a molecule-for-molecule basis, these compounds are up to 10,000 times more potent greenhouse gases than carbon dioxide.
- The Montreal Protocol currently calls for a complete phase-out of HCFCs by 2030

# Kyoto Protocol

- The **Kyoto Protocol** is a protocol to the United Nations Framework Convention on Climate Change (UNFCCC or FCCC), an international environmental treaty with the goal of achieving "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system"
- The Kyoto Protocol establishes legally binding commitment for the reduction of four greenhouse gases (carbon dioxide, methane, nitrous oxide, sulphur hexafluoride), and two groups of gases (hydrofluorocarbons and perfluorocarbons) produced by "annex I" (industrialized) nations, as well as general commitments for all member countries.
- As of January 2009, 183 parties have ratified the protocol, which was initially adopted for use on 11 December 1997 in Kyoto, Japan and which entered into force on 16 February 2005

# Control of Global Warming

- Under the Kyoto Protocol, industrialized countries agreed to reduce their collective green house gas (GHG) emissions by 5.2% from the level in 1990. National limitations range from the reduction of 8% for the European Union and others to 7% for the United States, 6% for Japan, and 0% for Russia. The treaty permitted the emission increases of 8% for Australia and 10% for Iceland
- Kyoto includes defined "flexible mechanisms" such as Emissions Trading, the Clean Development Mechanism and Joint Implementation to allow annex I economies to meet their GHG emission limitations by purchasing GHG emission reductions credits from elsewhere, through financial exchanges, projects that reduce emissions in non-annex I economies, from other annex I countries, or from annex I countries with excess allowances

# Evolution of Environmental Legislations in India

- Though, the **Wild Life (Protection Act), 1972** came into existence in the month of September, after the UN General Assembly Conference on Human Environment in June 1972, it is not in compliance with the principles laid down at the conference
- After the conference (Stockholm, 1972), several laws came into force - Water (Prevention and Control of Pollution) Act, Water Cess Act and ultimately the Environment Protection Act
- Degradation of wetlands, flood plains, sea grass beds and coral reef led to the evolution of the concept of *Man and Biosphere* (MAB) concept. As a result the Indian National Man and Biosphere Reserve Committee is constituted.

# Wild Life (Protection Act), 1972

- Certain areas are to be declared as sanctuaries and National Parks. This Act is basically for the protection of animals, plants and birds which live in forests.
- Hunting of the wild animals is permitted only when such animals become dangerous to the human beings or it becomes diseased beyond recovery. This is to be done with the permission of wild life warden in writing.
- The same Act prohibits picking and uprooting of specified plants and cultivation of some other specified plants.



# Water (Prevention and Control of Pollution) Act, 1974

- One of the first legislations, after the UN Conference on Human Environment that came into existence was **Water (Prevention and Control of Pollution) Act, 1974**
- The objective of the Act was to provide for the prevention and control of water pollution and the maintaining or restoring of wholesomeness of water and establishing Boards for the Prevention and Control of Water Pollution for carrying out these purposes and conferring on and assigning to such Boards powers and functions relating thereto and for matters connected therewith.
- The Water (Prevention and Control of Pollution) Rules, 1975 and Central Board for the Prevention and Control of Water Pollution (Procedure for Transaction of Business) Rules, 1975 amended 1976 came into existence

# Air (Prevention and Control of Pollution) Act, 1981

- The objective of the Act was to provide prevention, control and abatement of air pollution.
- For carrying out this function, the Act further provided the establishment of Boards and conferred powers related to the objectives of the Act.
- This Act basically aimed at the industrial pollution and automobile pollution.
- Without establishing separate Boards to carryout the functions envisaged in the Act, the already established Boards under Water (Prevention & Control of Pollution) Act, 1974 are conferred with the powers specified in this Act.
- The Air (Prevention and Control of Pollution) Rules and the Air (Prevention and Control of Pollution) (Union Territories) Rules came into existence in, 1982 and 1983 respectively



# Environment (Protection) Act, 1986

- This act came in to existence in 1986- after 14 years of Stockholm Conference on Human Environment
- The objectives of the enactment are three fold.
  1. Protection of the environment
  2. Improvement of environment
  3. Prevention of hazards to
    - a) human beings
    - b) other living creatures,
    - c) plants and
    - d) property.
- This is an umbrella legislation, which covers from Radio- Active Substances disposal to use of plastic bags.
- All the notifications, rules and regulations dealing with the environmental protection are the subsidiaries of this Act

# Rules

- Hazardous Waste (Management and Handling) Rules, 1989
- The Bio-Medical Waste (Handling and Disposal) Rules, 1998
- Plastic Manufacture, Sale & Usage Rules, 1999
- The Noise Pollution (Regulation and Control) Rules, 2000

# MoEF

- The Ministry of Environment and Forests (MoEF) is the nodal agency at the Central level for planning, promoting and coordinating the environmental programmes, apart from policy formulation.
- A number of enforcement agencies assist the Ministry of Environment and Forests, in executing the assigned responsibilities
- It is known fact that in the economic development of any country industries play a pivotal role. It is also an equally known fact that the industries are the major contributors to the pollution of environment
- In Indian the Central Pollution Control Board monitors the industrial pollution prevention and control at the central level, which is a statutory authority attached to the Ministry of Environment and Forests.
- At the State level, the State Departments of Environment and State Pollution Control Boards are the designated agencies to perform these functions

# Environmental Standards by CBCB

- National Ambient Air Quality standards (different emission levels for industrial, residential, and sensitive areas)
- Water quality criteria – according to the specific end use (drinking, bathing, irrigation, and industrial uses)
- Vehicle exhausts – amounts of pollutants per km emissions
- Auto fuel quality – octane / cetane numbers, sulphur and lead contents
- Noise limits for industries, vehicles
- Industry specific standards: CPCB has stipulated the maximum allowable effluent (liquid, and solids) and emission (gaseous) standards in terms of discharge volume per day per ton of production and concentration of wastes, specific to various industries and capacity of productions

# Environmental Activists in India

- **M C Mehta** - The role played by him is laudable in bringing several issues such as Taj Mahal Case and River Ganges Pollution case to the notice of the Supreme Court. The 1997 Magsaysay Award Winner for Public Service, MC Mehta- who used PIL (Public Interest Litigations) to protect the environment in India very wisely
- **Traffic Ramaswamy** - Much of his focus is on controlling the city's chaotic traffic. He has successfully obtained: the demolition of illegally constructed buildings in Chennai; restrictions on motorised fish carts; the decongestion of major bus routes by banning auto rickshaws from them