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# Textbook of **Environmental Hygiene** for Nursing Students

*As per the Revised INC Syllabus (2021-22) for BSc Nursing*

**2nd  
Edition**

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# CHAPTER 3

## Community Organization to Promote Environmental Health

### Chapter Outline

- Introduction
- Environmental Health Risk
- Protection of Environment
- National Level Voluntary Organizations
- Environmental Pollution and Laws in India
- Major Areas of Activities for Pollution Control
- The Air (Prevention and Control of Pollution) Act, 1981
- The Water (Prevention and Control of Pollution) Act, 1974
- Noise Pollution and Legislative Measures
- Summary
- Assess Yourself

### Learning Objectives

On completion of this chapter the reader should be able to:

- Define environment health risk.
- Describe the national level organization to protect environment.
- Explain the state level and local level organization to protect environment.
- Enlist the national level voluntary organizations.
- Enumerate the legislation and acts regulating environment.
- State the major areas of activities for pollution control.

### Key Terms

- **BOD:** Biomedical oxygen demand.
- **Emission:** To release or discharge.
- **Penalty:** Punishment.
- **Violation:** Contrary to the rules.

### INTRODUCTION

Environmental health is a global concern. Environmental health problems play important role in the health status of man, family and community. There is a growing awareness about these problems in the minds of people. Environmental factors such as lack of safe water supply, inadequate sanitation, indoor pollution resulting from the use of biomass fuels, air pollution and noise pollution are responsible for many diseases which can be prevented by controlling these environmental pollutant factors. The greater portion of environmental burden of ill health is born by the rural population in rural areas

due to lack of facilities of safe water supply, proper disposal of refuse and waste and unavailability of commercial fuel. By improving the environmental sanitation inside and outside the house such as safe water supply, sanitation, smokeless vehicles and clean cooking fuels can reduce the mortality and morbidity rate. Premature death and illness due to major environmental health risks account 20% of total burden of the disease in India.

## ENVIRONMENTAL HEALTH RISK

Environmental health risks fall into two categories:

1. **Traditional hazards:** These are related to poverty and lack of development such as lack of safe water, inadequate sanitation and waste disposal of indoor air pollution and vector borne disease.
2. **Modern hazards:** These are caused by development that lacks environmental safeguards such as urban air pollution and exposure to agro industrial chemicals and waste.

## PROTECTION OF ENVIRONMENT

Environmental pollution is protected at national and state level. Voluntary and social agencies also participate to reduce the environmental pollution.

### National Level Organizations

- Ministry of Environment and Forest
- Department of Environment
- Central Pollution Control Board
- National Museum of Natural Sciences
- Central Ganga Authority
- Ecological Department Board
- Indian National Human, Animal Kingdom and Environmental Research Society
- Environmental Protection Authority
- **Ministry of Environment and Forest:** As there is a strong need for the conservation of environment and forest. Due to cutting of forest for housing constructions, setting up of industries and for the developments of urbanizations and widening of the roads for the purpose of fuel, lacs of trees and forests are taxed and new implantation of the trees is very less as compared to the destruction. As a result not only the wild life is being distinguished but the environment is also getting polluted day by day so to conserve the environment and forests, central government has set up a separate ministry of environment and forest in 1985 to conserve the environmental health and forests. The departments working under this ministry are environment, forest and wildlife.
- **Department of Environment:** This department has central authority to plan, encourage and coordinate environmental programs. The success of environmental conservation depends on environmental programs to create awareness and making people conscious about environmental hazards. A national environmental awareness campaign has been launched to sensitize people to the environmental problems through audio-visual programs, seminars, symposia and training program, etc. "*Paryavaran Vahini*" has been constituted in 184 districts involving the local people to play an active role in preventing *poaching*, deforestation and environmental pollution. An environmental information system network has been set up to disseminate information on environmental issues. India has a large network of NGOs which are involved in spreading message of sustainable development to the public.



**Institutions involved in environmental activities:**

- **Environmental Training Institute:** The environmental training institute was established in 1994. Over the years, the institute has conducted 124 technical programs involving 1965 participants and 36 special environmental awareness programs have been conducted for NGOs, Government officials, professionals, universities and educational institutions. The similar environmental training institutes have been established by the government in various states.
- **Tata Research Institute:** Tata research institute has launched “Growth with resource”, Enhancement of environment and nature (Green India 2047) project. The major cause of indoor pollution is that the weaker section of the society is dependent on low grade biomass energy source. This emits harmful gases which pollutes the atmosphere as well as the residents of the houses, specially the women, children and old population who stays at house are exposed to the smoke. This causes various respiratory problems, heart diseases, pregnancy related problems and eye diseases. These problems can be solved by making good quality of fuel available. Currently, efforts to produce methane gas or other gases from organic matter are emphasized so that they can lead to clean combustion for cooking purposes.
- **Central Pollution Control Board:** Central Pollution Control Board is an autonomous body affiliated to the ministry of environment and forests. This was set up in September 1974 under water pollution prevention and control ordinance 1974. This is the highest national authority to control environmental pollution. Central pollution control board has the responsibility to implement the laws, rules related to state pollution control board and societies. This board develops the rules, which describe the standard of pollution discharged in air and water and the degree of noise. It advises central government on all issues related to prevention and control of air, water and noise pollution and it provides technical services to the Ministry of Environment and Forest for the implementation of the environment (Conservation Act 1986).  
Functions and activities of CPCB are:
  - Assessing and monitoring the quality of water, evaluating the quality of Ganga, Yamuna and Kaveri river water is included in this.
  - Assessing and monitoring the quality of air.
  - National air quality monitoring program.
  - Assessing the quality of air in National Command Authority (NCA) Delhi.
  - Assessing and monitoring the traffic pollution.
  - Setting up authorized pollution checkup center.
  - Assessment of carbon dioxide emitted from catalytic converter and noncatalytic converter vehicles and taking remedial steps for it.
  - Discovering nontraditional sources of energy.
  - Monitoring generation and disposal of solid waste.
  - Providing technical advice, research publications, water testing kits, etc.
  - Running public awareness programs.
  - Providing help to nongovernmental organization, etc.
- **National Museum of Natural Sciences New Delhi:** This museum was established to educate the public and make them aware of the environment-related issues.
- **Central Ganga Authority:** It was set up in 1985 to make Ganga pollution free by implementing Ganga work plan.
- **Ecological Development Board:** This board encourages and creates awareness among students, youth and women for conservation of environment.

- **Indian National Human, Animal Kingdom and Environment Research Society:** This society encourages environment-related education and research. Central public health engineering research institute is also working in this directions.
- **Environment Protection Authority:** This Authority looks after all the environment-related aspects of national capital region (NCR). It was established in 1998. Other than these many central government organization and departments of family welfare, town planning, urban housing and transport departments are responsible for health and conservation of environment.

### State Level Organizations

Forest and environment departments of state governments are conducting, coordinating and directing the programs related to conservation of environment. State pollution control board give environment certificate to industries or factories. Departments of health, energy, mine, transport and housing, etc. also carry the responsibility of maintaining environment health and its conservation. Formation of environmental corps or wings is also an important step.

### Local Level Organizations

Panchayats, municipal corporation, Town development authorities, urban improvement trust, municipal committees and other autonomous societies encourage the conservation of environment at local level.

### NATIONAL LEVEL VOLUNTARY ORGANIZATIONS

- The Bombay Natural History Society (BNHS)
- World Wide Fund (WWF) for Nature India
- Center for Science and Environment (CSE)
- Center for Environment Education (CEE)
- Bharatiya Vidya Bhavan Institute of Environmental Education and Research (BVIEER), Pune
- The Wildlife of India, Dehradun
- Botanical Survey of India, Kolkata
- Uttarakhand Seva Nidhi, Almora
- Ranthambhore Foundation—*Sawai Madhopur* (Rajasthan), etc.

### ENVIRONMENTAL POLLUTION AND LAWS IN INDIA

The actual awareness about environmental protection was recognized at global level at the UN Conference on Human Environment held at Stockholm (Sweden) in June 1972. The late Prime Minister Mrs. Indira Gandhi took keen interest and initiative to take appropriate steps for protection and improvement in human environment and formulate the Indian laws to Control Environment Pollution in India. These are:

- Indian Forest Act, 1972
- Wildlife Protection Act, 1972
- Water Act, 1974
- Forest (Conservation) Act, 1980
- Air (Protection and Control of Pollution) Act, 1981
- Environment Protection Act, 1986

- The National Environmental Tribunal Act, 1995
- Public Liability Insurance Act, 1991.

### Legislation Related to Environment (Table 3.1 and Box 3.1)

**TABLE 3.1:** Legislation related to environment

Legislation Act	Provisions
Forest Act, 1972	This act stipulates that no forest land or any portion there may be used for non-forest purpose. It provides for the constitution of an advisory committee to advise the government on cutting the trees.
Forest (Conservation) Act, 1980	This act has been passed to control deforestation which causes ecological imbalance and results in environmental degradation. It has provision to put restrictions on the use of forest land for non-forest purpose.
Wildlife Protection Act, 1972	This act provides the constitution of a wild life advisory board, regulations of hunting of wild animals and birds, laying down procedures for declaring the area of sanctuaries and national parks and regulations of trade in wild animals.
Water (Protection and Control of Pollution) Act, 1974	Provides for the establishment of central and state pollution control boards for the prevention and control of water pollution. The act seeks to control pollution primarily through standards to be laid down by the boards and the consent orders issued by them. Stiff penalties are imposed for violation. The boards are given ample powers for investigations and inspection and to take samples and establish laboratories for analyzing the samples.
Air (Protection and Control of Pollution) Act, 1981	Air pollution is to be controlled primarily through standards laid down (1981) by the boards and the consent orders issued by them. For contravening the standards laid down by the boards and for violating the provision relating to consent by the board, stiff penalties have been provided.
Environment Protection Act, 1986	This Act provides for: <ul style="list-style-type: none"> <li>• Covering some of the major areas of environmental hazards not covered by the existing laws.</li> <li>• Linkages in handling matters of industrial and environmental safety and control mechanism to guard slow insidious build up of hazardous substances especially of new chemical in the environment.</li> <li>• An authority not only to coordinate the activities of the various regulatory agencies but to assume the role for studying, planning and implementing long-term requirement of environmental safety.</li> </ul>
National Environmental Tribunal Act, 1995	The tribunal shall consist of Judicial as well as technical member with appropriate knowledge and experience of legal administration, scientific and technical aspect of the problem related to environment and wildlife. In addition to provide compensation to the people for death, injury or damage to the property or to the environment.
Public Liability Insurance Act, 1991	This act provides liability insurance for persons injured by accidents with hazardous materials. The measure mandates that business owners operating with hazardous will take out insurance policies. An environmental relief fund was established and is maintained by industry operators.

#### Box 3.1: Legislations and acts regulating the environmental hygiene

- The environmental conservation and control of pollution is about 150-year-old in India. Some of the Indian laws on environment are:
  - 1853: Shore Bombay Nuisance Act
  - 1860: Indian Penal Code give some Provisions to Control Nuisance (Pollution)
  - Indian Fisheries Act, 1897

Contd...

- Indian Ports Act, 1907
- Bengal Smoke Nuisance Act, 1905
- The Motor Vehicle Act, 1938
- Factory Act, 1948
- The Maharashtra Prevention of Water Pollution Act, 1953
- Orissa River Pollution and Prevention Act, 1954
- The Prevention of food Adulteration Act, 1954
- The River Boards Act, 1960
- The Atomic Energy Act, (Radiation Protection Rules) 1962
- The Gujarat Smoke Nuisance Act, 1963
- The Insecticides Act, 1968.

The Government of India has taken the following steps to Control Environmental Pollution:

- **Formation of Ministry of Environment and Forest:** The Central Department of Environment was established in November 1980 under the Control of Ministry of Environment on the recommendation of N D Tiwari committee. It was renamed ministry of environment and forest on 4th April 1985. This ministry handles the affairs of environment, forests and wildlife. Central Pollution Control Boards have been formed for this purpose.
- **National environment awareness campaign:** Under this campaign the important programs started by the Government of India to create awareness among the people are:
  - **Environmental education:** The supreme court has directed university grants commission (UGC) to prescribe a course on “Man and Environment”. UGC has insured circulars to various universities to introduce the course on “Environmental Education”. The main focus of environmental education is the following:
    - ◆ Over population and ways to check its rapid growth
    - ◆ Afforestation as a preventive measure to soil erosion and water pollution
    - ◆ Afforestation to prevent air pollution insisting on smokeless cooking
    - ◆ Discipline in playing radio and TV and a ban on use of loudspeaker
    - ◆ Elementary knowledge of the scientific and philosophical basis of man and the environment
    - ◆ Rules regarding the disposal of household waste
    - ◆ General Principles of Sanitation.
  - **National environmental campaign:** This campaign was started in 1986 through the mass media of TV, various TV channels, national geographic channels, Animal planet, etc. Telecast of regular program on environment, e.g., Hum zameen, earth file, wildlife, living on edge, etc.
  - **Paryavaran Vahini:** The ministry of environment and forests has started a scheme called *Paryavaran Vahini* or Environment Brigade in 1992 to create awareness among common people. The people’s program extends over 168 districts of India with objective of involvement of people through active participation. Each *Vahini* has 20 members like students, teachers, doctors, engineers NGOs, etc. belonging to different fields.
  - **Special drive for rural areas:** Special awareness program regarding environmental sanitation and use of nonconventional energy resources have been launched in rural areas.
  - **Environmental friendly product scheme (1991):** Under the environmental friendly scheme, the environmentally safe (from pollution point of view) products will be tested before marketing and will bear a Label ‘ECO MARK’ (with earthen pot logo). A notification regarding this was issued on February 21, 1991 covering four articles of soaps, detergents, paper and paints.



- **Celebration of important days:** By celebrating important days, awareness is created through media by seminars, lectures, public meetings, TV films, audio and video cassettes, puppet shows, etc. The important days concerning environment are:
  - World Environment Day: 5th June was declared in 1972 at Stockholm conference (Sweden)
  - Earth Day: 22nd April, 'save earth' from greenhouse gases (GHGs) and ozone depletion
  - World Population Day: 11th July
  - World Health Day: 7th April
  - Anti-Tobacco Day: 31st May
  - World Forest Day: 21st March
  - World Nature Day: 3rd October
  - National Science Day: 28th February
  - World Food Day: 16th October
  - United Nations Day: 24th October
  - United Nations (UN) International Day: 13th October
  - For lessening natural disasters:
    - Wildlife Week: 1 to 7 October
    - National Environmental Awareness Month: 19th November to 18th December

The first national environment awareness program was started in 1986 at environmental education center Ahmedabad on "Save Water".

- **Important national level awards:** Some national level awards for individuals and organizations with outstanding work in the field of environment protection has been instituted by the Ministry of Environment and Forest. The main aim of these awards is to motivate people for active participation in environment protection programs. Some of these awards are listed as under:
  - Pitambar Pant National Environment Fellowship Awards, 1978
  - Indira Priyadarshini Vrikshamitra Award, 1986
  - Indira Gandhi Paryavaran Puraskar, 1987
  - Incentive on Hindi Books of Environment, 1987
  - National Award for prevention and control of pollution, 1991
  - The "Sultan Qaboos" Prize for environment preservation". This prize has been instituted by United Nations Educational Scientific and Cultural Organization (UNESCO).
  - Paryavaran Evam Van Mantralaya Vaigyanik Puraskar, 1992
  - Mahavriksha Puraskar, 1993
  - Rajiv Gandhi Wildlife Conservation Award, 1998

## MAJOR AREAS OF ACTIVITIES FOR POLLUTION CONTROL

- **Air quality monitoring:** A national network of ambient air quality monitoring stations was initiated in 1984 and was set up in cities and towns in India. The parameter to be measured are sulfur dioxide, carbon monoxide, oxides of nitrogen. Suspended particulate matter (SPM), temperature humidity, wind speed and directions.
- **Assessment of water quality:** Under the national water quality monitoring program, the water quality of rivers are being monitored. The stations covering all major rivers of country monitor in respect of 19 parameters such as total dissolved solids (TDS) biomedical oxygen demand (BOD), metals and nitrates.
- **Assessment of coastal water quality:** The central pollution control board (CPCB) in collaboration with the department of ocean development has identified 173 monitoring stations all along the



Indian coast to assess the water quality. Four state pollution control board (SPCB) have also been involved. 25 parameters are being processed to formulate schemes to control and monitor pollution of the wasted water.

- **Preparation of environmental standards:** These are based on the standard prepared by CPCB and the bureau of Indian standards (BIS), Effluent and emission standards for different kinds of industries including thermal power plants have been notified under Environmental Protection Act, 1986.
- **Enforcement of standards:** This is very helpful to control pollution at source. Minimum national standards (MINAS) have been evolved by CPCB for major categories of water and air polluting industries respectively. These standards refer to the minimum limit of effluents and emissions that an industry may discharge into any water body or the atmosphere. The SPCBS can stipulate same or more stringent standards for effluent and emission of discharges.
- **Ganga Action Plan:** There are 27 stations along the river at Rishikesh, Kanpur, Allahabad, Varanasi, Patna and Rajmahal, biochemical oxygen demand (BOD) values and other parameters have been recorded to assess the pollution.
- **The Environmental (Protection) Act, 1986:** It was formulated in 1986 to provide protection and improvement of environment and matters connected here with. The Act consists of 26 sections and extends to the whole of India and came into force on November 19, 1986.
  - **Objectives of (Section 1)**
    - ◆ The environment quality has been declining since 1960s. This has resulted in increasing pollution, loss of vegetal cover, excessive concentrations of harmful chemicals in atmosphere and threat to life support system. The concern over the state of environment has grown.
    - ◆ There are many laws existing which concern directly or indirectly for protection of environment but it is necessary to have general legislation for environmental protection.
    - ◆ There is an urgent need for enforcement and making general legislation on environmental protection, speedy response in the event of accidents, threatening environment and deterrents punishment to those who endanger human environment, safety and health.
  - **Definitions (Section 2)**
    - ◆ Environment includes water, air, land and the interrelationship which exists among and between water, air land and human being, other living creatures, plants, microorganisms and property.
    - ◆ Environment pollutant means any solid, liquid or gaseous substance present in such concentration as may be injurious to environment.
    - ◆ Environment pollution means the presence of any environmental pollutant in the environment.
    - ◆ Hazardous substance means any substance or preparation which by reason of its chemical or physical properties is liable to cause harm to human life, plant life or property.
  - **Powers and measures of the law**
    - ◆ Central Government has the power to take all necessary measures for the purpose of protecting and improving the quality of environment and preventing, controlling and abating environmental pollution. Central Government shall have power to take measures:
      - It must coordinate with State Government
      - To execute nationwide programs
      - To lay down standards for the quality of environment
      - To lay standards for emission or discharge of environmental pollutants

- Restriction of location of industry in certain area
- To lay down procedures and safeguards for the handling of hazardous substances
- To examine manufacturing processes as they are likely to cause environmental pollution
- To prepare manuals, codes and guidelines relating to Prevention and Control of Environmental Pollution
- To establish environmental laboratories
- For collection and dissemination of informations on environmental pollution.
- ◆ **Central Government can issue directions and it can order:**
  - Closure of an industry
  - Stoppage of the supply of water, electricity or any other service.
  - **The rules of Central Government for the protection of environmental quality:** The rules may provide
    - Standard of quality of air, water and soil.
    - Maximum permissible limit of concentrations of various environmental pollutants (Including noise and dust).
    - The procedure and safeguard for handling hazardous substances.
    - Restrictions on the location of industry.
    - Procedures and safeguards for preventing accidents.
  - **Measures to Control Environmental Pollution**
    - The act prohibits every person carrying on any industry from discharging or emitting any environmental pollutant in excess of prescribed standard.
    - Hazardous substances shall be handled only in accordance with prescribed safeguards.
    - The person in-charge of premises (industry) from where excess emission occurs is bound to inform the board. He is also bound to render all assistance, if called upon.
    - Any authorized officer of the board has the right to enter any place for performing his duty or to examine and test any equipment and industrial point or to determine whether rules are being followed or not.
    - Any authorized person of the board can take samples.
    - For the analysis of samples, government has set up environmental laboratories and appointed analysts.

#### **Punishment or penalties:**

- Any authorized person of the board can lodge a complaint in the court.
- Any person can lodge a complaint in the court after a notice of at least 60 days.
- The Central Government has powers to make rules regarding various matters.
- If a person is found guilty, does offence again and again then additional fine up to ₹5000/- and an imprisonment of 7 years can be extended in this case.

### **THE AIR (PREVENTION AND CONTROL OF POLLUTION) ACT, 1981**

The Air Act was framed in the year 1981 but came into force on 29th march 1982 for the effective preventions control and abatement of air pollution in the country. The Air Act extends to whole of India and is a welfare legislation dealing with the special evil of pollution. Therefore it is considered a Modern Act or Special Act. Central and State Pollution Control Board (Constituted under Water

Act, 1974) shall exercise the power and perform functions for the Prevention and Control of Air Pollution to improve the quality of air.

### Measures to Control Air Pollution

The Air Act was amended in 1987 to remove the difficulties encountered during implementation, to confer more powers on the implementing agencies and to impose more stringent penalties for violation of the provision of the Act. Definitions of air pollutant was amended to include noise. Also section 19 was added (Air Pollution Control area can be declared).

#### **The State Government after Consultation with State Board can:**

- Declare any area within the state as a “Pollution Control Area.” This power provides measures which are preventive in nature, particularly use of only approved appliances in the premises.
- Prohibit the use of any fuel other than the approved fuel in any air Pollution Control Area.
- Prohibit the burning of any material (other than fuel) in any air Pollution Control Area.
- The State Government has to notify this declaration in the official gazette:
  - No person without the previous consent of the state board in writing can operate any industrial plant in air Pollution Control Area.
  - No person operating an industrial plant in any Air Pollution Control (APC) area shall discharge the emission of any air pollutant in excess of the standard laid down by the state board.
  - Emission of air pollutant in excess of the standard laid down by the state board is an offence and punishable under section 37 of Air Act. In such cases board can lodge an application to the court.
  - On receipt of application, the court can order the person to check the emission of air pollutants or can authorize board to implement the directions. All expenses incurred by the board shall be recoverable from the person concerned.
  - Any person authorized by the board has the right to enter any place:
    - ◆ For the purpose of performing his duty.
    - ◆ For the purpose of determining whether the provisions and directions under this Act are being complied with.
    - ◆ For the purpose of examining or testing and control equipment, industrial plant, record register or any other document.
    - ◆ Any obstruction or willful delay is offence which is punishable.
    - ◆ State board has the power to obtain any information from a person carrying on any industry.
    - ◆ State board has the power to take samples of air emission. The board has set a procedure to be followed in this connection.

### Penalties

- Violation of act under any circumstances may lead to imprisonment from 1½ years to 6 years and fine (no limit).
- Whosoever damages the property of board leads to imprisonment up to 3 months or fine up to ₹10,000/- or both.
- Offence by a company or government department may lead to punishment to the director of company or head of government department according to the offence.
- Court shall take cognizance of any offence if the complaint is made by:
  - Board or its authorized officer.
  - Any person who has given notice of not less than 60 days.



- State Government has the powers to supersede state board of the board persistently makes default in the performance of its functions.
- Central Government has the power to make rules.

## THE WATER (PREVENTION AND CONTROL OF POLLUTION) ACT, 1974

Water act was enacted on 23rd March 1974 to implement the decision reached at Stockholm conference under article 252 section-1 of Indian constitution. It is a social welfare legislation enacted for the purpose of:

- Prevention and control of water pollution
- Maintaining and restoring the wholesomeness of water
- Establishing pollution control boards
- Assigning powers and functions relating water pollution to boards.

The Act has been adopted by states of Assam, Bihar, Gujarat, Haryana, HP, J&K, Karnataka, Kerala, MP, Rajasthan, Tripura and West Bengal and all union territories with effect from (w.e.f.) 23rd March 1974, the state of UP adopted it on February 3, 1975.

### Definition of Water Pollution

Contamination of water or alteration of physical, chemical and biological properties of water.

Discharge of sewage or trade effluent discharge of gaseous substances which may likely to:

- (a) Create nuisance
- (b) Render the water harmful or injurious to public health, safety, domestic or commercial, industrial or agricultural uses or the life
- (c) Health of animals or plants or aquatic life.

### Legislation regarding prevention and control of water pollution are:

State Pollution Control Board is powered to prevent and control water pollution

The powers of the state board are:

- To make survey of any area of industry.
- To take samples of water of any sewage or trade effluent for the purpose of analysis.
- To enter any building to examine any plant or record.
- To order closure of any industry or stoppage of supply of electricity and water.

### Punishment or Penalties

- Failure to comply with the directions of the board to give information results into imprisonment up to 3 months or fine up to ₹10,000/-.
- If anybody destroys property of the board, will be fined ₹10,000/ or imprisonment or both.
- Anybody who pollutes water will be fined up to ₹5000/- and imprisonment from 1½ year to 6 years.
- Anybody who interferes with monitoring devices (Meter or gauze) will be awarded imprisonment up to 3 months or fine of ₹10,000/-.
- If any offence is committed by company, the director or manager of the company will be punished.
- Court shall take cognizance of any offence under this act if the complaint is made by:
  - Board or any authorized officer
  - Any person who has given notice of not less than 60 days
- Parliament amended the Water Act in 1988 to make it more effective and also to deal with air pollution.

**NOISE POLLUTION AND LEGISLATIVE MEASURES (TABLE 3.2)**

Noise is defined as a loud, unpleasant or unwanted sound that disturbs unwilling ears. It adversely affects our physiological and mental health.

Noise is measured in units called decibels. A sound above 80 dB causes noise pollution.

**TABLE 3.2:** Permissible noise level in different area

	Day time (6 am to 9 pm)	Night time (9 pm to 6 am)
Industrial area	75 dB	65 dB
Commercial area	65 dB	55 dB
Residential area	55 dB	45 dB
Silence zone	50 dB	45 dB

**Legislative Measures**

- Excessive noise has been recognized as a crime under section 268 of Indian penal code (Nuisance Act 1860).
- Noise has been recognized as a pollutant under section 6 to 26 of Environment Protection Act 1986. This act has been amended in 1989 to prescribe day and night limits of noise level. An area with 100 meters radius around a hospital or institution or court can be declared a 'silence zone'. The use of vehicular horns, loud speakers and burning of crackers is banned in area of a silence zone under this Act.
- Under section 133 of Indian Penal Code (IPC), the use of loud speaker is a public nuisance.
- Making loud noise is punishable with imprisonment up to 5 years or fine up to one lakh or both. In case it continues, and additional fine may be extended to five thousand rupees per day. If the above contravention continued beyond a period of 1 year after the date of conviction, imprisonment may be extended to seven years.

**SUMMARY**

Environmental factors such as air pollution, water pollution, noise pollution, etc. are responsible for environmental health risk. The environmental pollution is protected at national and state level. The voluntary and social agencies also participate to reduce environment pollution. A comprehensive approach to pollution control based on principles such as to prevent pollution at source, encourage, develop and apply best available practicable, technical solutions has been undertaken.

To prevent and control environmental pollution, *Paryavaran Vahinis* have been constituted. There are some institutions which are involved in controlling environmental activities such as environmental training institute and Tata research center. To control environmental pollution the Government of India has formulated various laws and Acts. Any violation of these laws result into penalties. These laws are:

- Indian Forest Act, 1972
- Wildlife Protection Act, 1972
- Water Act, 1974
- Forest (Conservation) Act, 1980
- Air (Protection and Control of Pollution) Act, 1981
- Environment Protection Act, 1986

- The National Environmental Tribunal Act, 1995
- Public Liability Insurance Act, 1991

The Government of India started programs to create awareness among the people to protect environment are environmental education, national environmental campaign, *Paryavaran Vahini*, environmental friendly product scheme and celebration of important days to create awareness among people about environmental protection.



## ASSESS YOURSELF

### Short and Long Answers Type Questions

1. State the principles of pollution control.
2. Enlist various acts to prevent environmental pollution and briefly describe each.
3. Discuss the role of NGOs in pollution control.
4. Write about the following:
  - a. *Paryavaran Vahini*
  - b. Environmental agencies at national level categories of environmental health risk

### Multiple Choice Questions

1. **Forest Conservation Act was enacted in the year:**
  - a. 1984
  - b. 1976
  - c. 1972
  - d. 1980
2. **The Prevention of Food Adulteration Act was enacted in:**
  - a. 1953
  - b. 1954
  - c. 1950
  - d. 1963
3. **The Insecticide Act was enacted in:**
  - a. 1948
  - b. 1978
  - c. 1958
  - d. 1968
4. **The Motor Vehicle Act was enacted in:**
  - a. 1948
  - b. 1953
  - c. 1938
  - d. 1928
5. **Shore (Bombay) Nuisance Act was formed in:**
  - a. 1963
  - b. 1853
  - c. 1933
  - d. 1973
6. **Which of the following Act was made in 1972:**
  - a. Water Act
  - b. Indian Forest Act
  - c. Wildlife Protection Act
  - d. Both (b) and (c)

### ANSWER KEY

1. a      2. b      3. b      4. c      5. b      6. d



# Textbook of Environmental Hygiene

## for Nursing Students

### Salient Features

- This book has been developed in accordance with the revised syllabus of the Indian Nursing Council.
- It has been written in an easy-to-understand language and the presentation is well-organized and systematic.
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### About the Author

**Lt. Col. KK Gill**, RN, RM, DNE, BSc (N) PB, MSc (CHN), has served as Principal at the State Institute of Nursing and Paramedical Sciences, Badal, Punjab and Amar Professional College of Nursing, Mohali, Punjab. She completed her graduation from Army School of Nursing, AFMS Examining Board, New Delhi, India. She holds a Master's degree in Community Health Nursing from Teerthanker Mahaveer University, Moradabad, Uttar Pradesh. She has been engaged in teaching profession for the last 34 years, which included 23 years service in the army and 11 years in the civil sector.



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