

# **Chapter 12**

## **Geographical Perspective on Selected Issues and Problems**

**1. Choose the right answers of the following from the given options:**

**Question 1.(i)**

**Which one of the following river is highly polluted?**

- (a) Brahmaputra**
- (b) Satluj**
- (c) Yamuna**
- (d) Godavari**

**Answer:**

- (c) Yamuna**

**Question 1.(ii)**

**Which one of the following diseases is caused by water pollution?**

- (a) Conjunctivitis**
- (b) Diarrhea**
- (c) Respiratory infections**

**(d) Bronchitis**

**Answer:**

**(b) Diarrhea**

**Question 1.(iii)**

**Which one of the following is the cause of acid rain?**

**(a) Water pollution**

**(b) Land pollution**

**(c) Noise pollution**

**(d) Air pollution**

**Answer:**

**(d) Air pollution**

**Question 1.(iv)**

**Push and pull factors are responsible for-**

**(a) Migration**

**(b) Land degradation**

**(c) Slums**

**(d) Air pollution**

**Answer:**

(a) Migration

**2. Answer the following questions in about 30 words:**

**Question 2.(i)**

**What is the difference between pollution and pollutants?**

**Answer:**

Pollution	Pollutant
(i) Pollution is the addition of unwanted, harmful substances in the atmosphere in substantial amount over a considerable period of time.	(i) Pollutants are the substances which are unwanted, and harmful. They make the environment polluted.
(ii) It is the degradation of the quality of environment.	(ii) They degrade the quality of the environment.
(iii) Pollution is caused by pollutants.	(iii) Addition of pollutants is the cause of pollution.

**Question 2.(ii)**

**Describe the major source of air pollution.**

**Answer:**

Combustion of coal, petrol and diesel, industrial processes, solid waste disposal, sewage disposal, etc. are the major sources of air pollution because they add oxides of sulfur, oxides of nitrogen, carbon monoxide, hydro-carbons, ammonia, lead aldehydes, asbestos and helium in the atmosphere.

**Question 2.(iii)**

**Mention major problems associated with urban waste disposal in India.**

**Answer:**

Solid waste refers to a variety of old and used articles, For example stained small pieces of metals, broken glasswares, plastic containers, polythene bags, ashes, floppies, CD's, etc. dumped at different places. Environmental pollution by solid wastes has now got significance because of enormous growth in the quantity of wastes generated from various sources. The huge turn out of ashes and debris from industries, thermal power houses and building constructions or demolitions have posed problems of serious consequences. Solid wastes cause health hazard through creation of obnoxious smell, and harbouring of flies and rodents, which act as carriers of diseases like typhoid, diphtheria, diarrhoea, malaria and cholera, etc.

These wastes cause frequent nuisance as and when these are carelessly handled, spread by wind and splattered through rain water. Concentration of industrial units in and around urban centres gives rise to disposal of industrial wastes. The dumping of industrial waste into rivers leads to water pollution. River pollution from city-based industries and untreated sewage leads to serious health problems downstream. 50 per cent of the waste generated are left uncollected which accumulate on streets, in open spaces between houses and in wastelands leading to serious health hazards. Untreated wastes ferment slowly and release toxic biogas to the atmosphere, including methane. Land is limited in urban centres so looking for landfill to dump the waste generated in urban centres is a major problem.

#### **Question 2.(iv)**

**What are the effects of air pollution on human health?**

**Answer:**

Air pollution is taken as addition of contaminants like dust, fumes, gas, fog, odour, smoke or vapour to the air in substantial proportion and duration that may be harmful to flora and fauna and to property. It causes various diseases related to respiratory, nervous and circulatory systems. Smoky fog over cities called as urban smog is caused by atmospheric pollution. It proves very harmful to human health. It can also cause acid rain.

**3. Answer the following questions in about 150 words:**

#### **Question 3.(i)**

**Describe the nature of water pollution in India.**

**Answer:**

Water pollution is addition of unwanted and harmful material in the water which renders it harmful for the use of human and degrades the flora and fauna around it. Indiscriminate use of water by increasing population and industrial expansion has led degradation of the quality of water considerably. Surface water available from rivers, canals, lakes, etc. is never pure. It contains small quantities of suspended particles, organic and inorganic substances. When concentration of these substances increases, the water becomes polluted, and hence becomes unfit for use. In such a situation, the self-purifying capacity of water is unable to purify the water.

Although water pollutants are also created from natural sources (erosion, landslides, decay and decomposition of plants and animals, etc.). Pollutants from human sources are the real causes of concern. Human beings pollute the water through industrial, agricultural and cultural activities. Among these activities, industry is the most significant contributor. Industries produce several undesirable products including industrial wastes, polluted waste water, poisonous gases, chemical residuals, numerous heavy metals, dust, smoke, etc. Most of the industrial wastes are disposed off in running water or lakes. Consequently, poisonous elements reach the reservoirs, rivers and other water bodies, which destroy the bio-system of these waters. Major water polluting industries are leather, pulp and paper, textiles and chemicals.

Various types of chemicals used in modern agriculture such as inorganic fertilisers, pesticides and herbicides are also pollution generating components. These chemicals are washed down to rivers, lakes and tanks. These chemicals also infiltrate the soil to reach the ground water. Fertiliser induces an increase in the nitrate content of surface waters. Cultural activities such as pilgrimage, religious fairs, tourism, etc. also cause water pollution. In India, almost all surface water sources are contaminated and unfit for human consumption. Also the overutilization of groundwater resources in India has led to groundwater depletion and also increased concentration of Arsenic in many parts of West Bengal and Bihar.

Domestic waste which includes sewage and other household waste also adds on to the pollution of water. Water pollution is a source of various water borne diseases. The diseases commonly caused due to contaminated water are diarrhea, intestinal worms, hepatitis, etc. World Health Organisation shows that about one-fourth of the communicable diseases in India are water-borne.

### **Question 3.(ii)**

**Describe the problem of slums in India.**

**Answer:**

Urban centers in India are more differentiated in terms of the social-economic, politico-cultural and other indicators of development than any other areas. They represent social-economic disparities of highest order. On one hand are the highly posh areas with huge farm houses, wide roads, entertainment center and all amenities required for leading a luxurious life, on the other hand are the slum clusters, generally referred to as "jhuggi- jhopris-clusters and colonies of shanty structures. Those people who were forced to migrate from the rural areas to these urban centers in search of livelihood but could not afford proper housing due to high rent and high costs of land inhabit these slums. They occupy environmentally incompatible and degraded areas.

Slums are residential areas of the least choice, dilapidated houses, poor hygienic conditions, poor ventilation, lack of basic amenities like drinking water, light and toilet facilities, etc. These areas are overcrowded having narrow street pattern prone to serious hazards from fire. Moreover, most of the slum population works in low paid, high risk-prone, unorganised sectors of the urban economy. Consequently, they are the undernourished, prone to different types of diseases and illness and can ill afford to give proper education to their children. The poverty makes them vulnerable to drug abuse, alcoholism, crime, vandalism, escapism, apathy and ultimately social exclusion.

Dharavi, which is the second largest slum of Asia, shows the extreme miserable and unhygienic conditions of existence. The area is devoid of sanitation and is infested by pests such as rats, causing miserable health conditions of the residents. The lanes of the slum are not wide enough to let a bicycle pass through them. People inhabiting the slum face chronic diseases- both communicable and the ones caused by deficiencies.

The lack of employment opportunities in the rural as well as urban areas of developing nations consistently push the population to urban areas.

The enormous migrant population generates a pool of unskilled and semi skilled labour force, which is already saturated in urban areas. People coming to the slums are affected by the several ills which cities of developing countries face. The available social and economic infrastructure is unable to absorb the additional population. Lack of education, employment and male selective migration tends to increase the crime rates. Due to failing infrastructure, people living in slums are devoid of minimum required quantity of potable water. An improper sewage system creates unhealthy conditions. Massive use of traditional fuel severely pollutes the air.

### **Question 3.(iii)**

**Suggest measures for reduction of land degradation.**

**Answer:**

The pressure on agricultural land increases not only due to the limited availability but also by deterioration of quality of agricultural land. Soil erosion, water-logging, salinisation and alkalinisation of land lead to land degradation. Though all degraded land may not be wasteland, but unchecked process of degradation may lead to the conversion to wasteland. There are two processes that induce land degradation. These are natural and created by human beings. National Remote Sensing Agency (NRSA) has classified wastelands by using remote sensing techniques and it is possible to categorizes these wastelands according to the processes that have created them. Some degradation which is caused by natural agents cannot be stopped altogether, but the degraded land can be revived through reclamation processes.

Land degradation like gullied/ ravenous land, desertic or coastal sands, barren rocky areas, steep sloping land, and glacial areas are primarily caused by natural agents. There are other type of degraded land such as waterlogged and marshy areas, land affected by salinity and alkalinity and land with or without scrub, which have largely been caused by natural as well as human factors. There are some other types of wastelands such as degraded shifting cultivation area, degraded land under plantation crops, degraded forests, degraded pastures, and mining and industrial wastelands, are caused by human actions.

Land degradation caused by human activities can be controlled by regulating and improving land use practices. Shifting agriculture and open grazing causes a large area of land to be degraded, therefore shifting cultivation and open grazing should be strictly banned. Regulations on use of fertilizers and other chemicals on the agricultural land should be strengthened. Mining activities, deforestation all leads to land degradation, therefore government needs to put strict checks on these practices. The best way to put a check on the land degradation and land revival is by educating the inhabitants of the area and having community based programmes aimed at checking land degradation and reviving the degraded land. Under the various schemes of governments, and aid of NGOs the community is organized in such a way to use sustainable and organic agricultural practices.



Common property resource is revitalized, and its use is promoted. Planting patches of fodder grass so as to limit open grazing is a crucial step to curtail land degradation. Social fencing of the land leads to feeling of responsibility among the people and therefore protection of land. Therefore community participation with public- government participation is. the best method to contain land degradation. The best example from India for revival of degraded land is of the Jhabua district in the westernmost agro-climatic zone of Madhya Pradesh.