Human Impact on Environment





### **HUMAN SOCIETIES**

Humans have lived in close contact with the environment ever since they first evolved way back in time between one million to two million years ago. In the beginning they were hunters and gatherers as you have already learnt in lesson-3. Gradually, with time, humans began to lead a settled and well organized life. As humans increased in numbers and progressed culturally, they began to draw more and more from natural resources so much so that environmental degradation has become a matter of serious concern nowadays.

In this lesson you shall learn about the settlements of humans in villages and cities, related characteristics, associated life styles and environmental changes resulting from explosive growth of human population and human settlements.

## **OBJECTIVES**

After completing this lesson, you will be able to:

- define urban settlement and differentiate between rural society and urban society;
- explain the push and pull factors leading to migration of rural population to cities;
- *define rural settlements and list the characteristics of rural settlements;*
- *list the special problems of the rural population pertaining to land availability and land use;*
- *list the effect of modern technology on agriculture and its impact on rural life;*
- *describe the significant features of urban life including facilities as well as its difficulties specially in the Indian context;*
- *list the special problems of urban areas, changes in life style, land availability;*
- list the special problems of urban areas like resource consumption and waste generation;
- describe the slum dwelling areas and mention urban planning.

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Notes

#### **8.1 HUMAN SOCIETIES**

Primitive humans passed the hunter–gatherer stage once they discovered the comforts of food sufficiency through agriculture, convenience of mobility with the discovery of the wheel and the security of living in a group (see lesson-2). Humans felt the need for shelter and settled life.

#### 8.1.1 Temporary and permanent settlements

Settlement refers to an organized colony of humans with dwelling units (kutcha huts or pucca houses) and roads they use for traveling. Hunters, herders, adventurers set up camps for a limited period of time as temporary settlements. Inhabited villages and urban agglomerates are permanent settlements. Few dwelling units forming a settlement is a **hamlet** while large number of people settling in several clusters of buildings may be found in the towns and metropolitan cities.

In the agricultural era (lesson-2), rural settlements predominated. With industrial revolution, urban settlements, got established which are growing today.

#### 8.1.2 Types of settlement: rural and urban

On the basis of size and functions, settlements may be categorized into:

- 1. Rural (villages) settlements
- 2. Urban (towns and cities) settlements

There is however, no characteristic criterion to distinguish between the rural and urban settlements. Rural settlements are chiefly engaged in primary activities such as agriculture, fishing, forestry, mining, artifact (craft) making, cloth weaving etc. Urban settlements indulge in nonagricultural activities e.g. industries and manufacturing, trade and commerce, transport and communication, defence and administration.

### INTEXT QUESTIONS 8.1

- 1. Why did primitive humans decide to lead a settled life?
- 2. Mention the basis on which settlements may be termed:
  - (i) temporary and permanent
  - (ii) rural and urban \_

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#### **8.2 URBAN SETTLEMENTS**

#### 8.2.1 What are urban settlements

Life in cities and towns is urban life. Traditional cities were usually walled. The walls separated them from the villages which were mostly found in the countryside. Markets, dwelling units, brick houses or concrete buildings for administrative bodies, religious institutions (temples, mosques, gurudwaras, churches, synagogues and palaces and courts) are common features of towns and cities. Commoners live towards the edges of cities as they come into cities from villages in search of jobs. Urban people coming from rural areas to large cities for employment settle down in shanties, at the periphery of cities. With time and increase in population urban scenario has undergone a big change. Overcrowding and abundance of concrete structures is a common feature today in most Indian cities.

Villagers are moving into cities in search of jobs, opportunities and better facilities.

The migration of rural population towards towns and cities in a country is leading to a conspicuous chaos. As the villagers mingle with the already swollen urban population, they start facing scarcity of water, sanitation, easily affordable housing, public transport, roads, safe waste supply and clear air. Inspite of such difficulties, the influx of rural population into cities is continuing and growing. It is estimated that by 2020, half of the Indian population will be living in cities.

#### 8.2.2 Occurrence of urban settlements-push and pull factors

The tendency to concentrate in towns and cities is called **urbanization**. In the 20<sup>th</sup> century urbanization has taken place at such a fast pace that there has been an unprecedented increase in urban population in almost all the countries of the world. Some of the important reasons for migration of rural folk towards cities are listed below:

### 1. In search of better opportunities ad to your dreams...

You have already learnt that apart from agriculture and cottage industries for crafts, villages do not offer opportunities for any other vocation whereas cities have many avenues for jobs. Also schools are not well equipped and there are hardly any institutions for higher studies.

#### 2. For better life style

Superstitions, social taboos and criticism hold back forward-looking villagers from improving life style so they rush towards cities. Also cities are consistently into trade and economic expansion as well as territorial expansion. Fifty years ago Delhi was limited to old Delhi and New Delhi fenced by the river Yamuna. Today Delhi has expanded in all the four directions and extends upto a great distance beyond the eastern bank of river Yamuna.



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#### 3. To overcome poverty

Poverty is rampant in most of the villages and villagers come to cities in search of work and jobs. Because of poverty, slavery and prevalence of bonded labour are found in villages. Young villagers run away to cities to break these shackles. Apart from these three major pull factors villagers have also been pushed towards cities in times of war or famine or natural disasters. Religious and political persecution are also common in villages. Racial discrimination forces rural folk to move out of their villages. The factors which push rural folk out of their villages and pull or draw them towards cities or urban areas are tabulated in Table 8.1.

Table 8.1: Push and pull facto	ors responsible for migration of villagers towards
	cities

cirics			
Pull factors	Push factors		
Villagers get attracted to cities for the following.	Villagers are forced to move to cities because of the following.		
<ol> <li>Employment.</li> <li>Better and more opportunities</li> <li>Better social amenities</li> </ol>	1. Overpopulation (often one or more members move out of large families and then invite others to come to cities)		
<ol> <li>Better life style</li> <li>Continuous trade and economic</li> </ol>	<ol> <li>Religious/political persecution</li> <li>Slavery/bonded labour</li> </ol>		
expansion 6. Territorial expansion.	<ol> <li>Lack of food</li> <li>Racial discrimination</li> <li>Natural hazards and climate change</li> <li>Fragmentation of family owned land</li> </ol>		

Sometimes village youth go to cities to visit relatives and friends and stay on and settle down.

More immigrants are attracted to bigger urban settlements.

#### 8.2.3 Characteristics of urban communities

Urban communities are characterized by the following features:

#### (1) Social heterogeneity

People from diverse backgrounds and cultures throng the cities for better prospects and like a "melting pot" get absorbed and live together as urban community. Social amenities such as schools, hospitals, avenues for entertainment become readily available.

#### (2) Freedom from social control

Away from home, loneliness and sense of alienation bring about secondary associations. Such associations flourish in the absence of control, back at home.

#### (3) Voluntary associations

Close proximity, diversity and easy contact among socially diverse people bring them closer. Clubs and associations are established to look into common requirements.

#### (4) Individualism

Multiplicity of opportunities, social diversity, lack of familial and social control over decisionmaking leads to more of self interest and facilitate decision-making by an individual and choose one's career and actions by oneself.

#### (5) Social mobility

In a city no-one is bothered about the status at birth. Status in cities is largely based on achievements, competence, efficiency and novelty.

#### (6) Availability of facilities

Diagnostic clinics, legal services, banks, commercial centres comprising of markets, malls and departmental stores, hotels and guest houses are available to the city dwellers. It is undoubtedly a better life for urban youth though a more stressful life. Based on the above, table 8.3 highlights the major differences between rural and urban settlements.

The impact of migration from village to cities has not been only rosy as shown in table 8.2.

**Type of impact** At origin At destination Social Men leave the Too many people women behind • Cannot always cope with education and health Economic No land for Unemployment farming • Economic insecurity Crops decline No professionalism/ • vocation No personnel for service • Non taxable, low salary, informal work Environmental Pollution • Slums develop ٠ Trash • Contaminated food and water Marginal land

 Table 8.2: Impact of migration from village to cities

The sadness of leaving the village are echoed in the poem given below:



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#### WHAT I LEFT BEHIND, WHAT I HOPE TO FIND

I left home, to come to school I left farm, to come to food I left my cows, my sheep, But did not have time to weep. Now I know why I cry tonight 'Cos I know now what I left behind and today, what I hope to find. Cities full of cars and bikes Restaurants and bars and roaring mikes But I miss the vast sky and my kites to fly And my folks, my friends Seem vanishing trends So I cry tonight but what shall I gain

Bharati Sarkar

### INTEXT QUESTIONS 8.2

- 1. Define urban settlements.
- 2. State any three factors which compel village youth to migrate to cities and towns.
- 3. List any three typical features of urban settlements.

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#### **8.3 RURAL SETTLEMENTS**

#### 8.3.1 What are rural settlements?

Primitive humans began to lead a settled life about 10,000 years ago. The settlements were village habitations comprised of an enlarged primary group. Such village habitations are persistent aggregates of human society. Simple living and compact organization characterises rural societies.

Modern civilization considers urban societies to be superior to the rural societies as, traditionally, common villagers are economically weak and inferior in skills and expertise. Rural societies have low population density and limited opportunities. In India villages are

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significant as Indian culture is still preserved in villages. Most of the villages in different parts of the country have retained their specific cultural and societal features. No wonder India is the best example of 'unity in diversity'.

#### 8.3.2 Characteristics of rural settlements

Rural communities possess special features:

- 1. Agriculture forms the dominant occupation. Even those not directly working in fields, have occupations that are indirectly connected to agriculture. Village economy is based on agricultural economy.
- **2.** Joint family system: Joint family is a social and cultural institution more commonly found in village communities than in cities.
- 3. Caste system: Social stratification based on castes is more pronounced in villages.
- **4. Jajmani system**: Each village is grouped into (i) jajmans and (ii) service provider castes who are paid in cash or kind. Jajmans are land owners. They come from upper castes while service provider castes are at a middle or lower level.
- 5. **Rural calendar**: In Indian villages people understand the Indian *samvat* and the *Hijri* calendars.
- 6. Simple living: God-fearing and tradition bound villagers lead simple lives untouched by glamour of city life.
- 7. Poverty and illiteracy are because of uneconomic land holdings and poor productivity due to fragmented and barren lands. Colleges, medical facilities, transport and civic amenities are not available inspite of several rural development schemes of the government.
  The road to your dreams...
- 8. Averse to mobility and social change: Orthodoxy, illiteracy, superstitions and fear keep back youth from moving out or changing profession, caste and religion. Rural social norms have a big influence in preventing violation of traditional norms of rural society. The punishing authority of panchayats also contributes towards keeping back rural youth from taking new initiatives or adopting any change.

## 8.4 DIFFERENCES BETWEEN RURAL AND URBAN SOCIETIES

The rural life is a world apart from urban life. They are different in many ways as tabulated below:



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Notes

S. No.	Factor	Rural society	Urban society
1.	Environment	Predominance of nature. People directly related to nature.	Human-made environment predominant. Inhabitants isolated from nature.
2.	Occupation	Agriculture- cultivators and their families are in majority. Few in non- agricultural pursuits.	Mostly industrial workers, traders, professional and working in offices. Mostly engaged administration. All non- agricultural occupations.
3.	Community size	Small	Much larger than rural community.
4.	Population density	Comparatively lower density of population	Large population density.
5.	Social differences and stratification	Much less due to similar vocation	Differentiation pronounced due to work related differences in earnings. Different strata of urban society noticeable.
6.	Homogeneity versus heterogeneity	In racial, cultural and psychological traits much homogeneity noticeable.	Much heterogeneity in the same country and same time.
7.	Caste system	Rampant	Much eroded
8.	Mobility	Social mobility low. Migration of population towards cities mainly due to poverty much more.	Social mobility based on achievement. Migration towards villages low.
9.	Social interactions	Primary contacts. More durable and sincere relationships due to simplicity.	Numerous contacts and wide interactions. Casual, short-lived relations-formal and mostly superficial.

Table 8.3: Differences between rural and urban settlements

## INTEXT QUESTIONS 8.3

- 1. What is a rural settlement?
- 2. Why are villages suffering from poverty?
- 3. Why are rural-folk more homogeneous socially?

## 8.5 AVAILABILITY OF LAND AND LAND USE IN VILLAGES

Agriculture is the only major vocation in villages. Village community has (1) land owners and (2) landless agricultural workers. The formers own land and grow crops with the help of the latter.

As a consequence of rapid growth in population of a country, need arises for building roads, dams, railway tracks, houses and industries. Land required for these developmental activities is acquired from villagers by paying them monetary compensation. This has caused colossal shrinkage of agricultural land and has also led to change in landscape.

#### 8.5.1 Effect of modern technology on agriculture and rural life

The objective of agriculture, whether traditional or modern is to produce more crops by providing factors necessary for increased crop production. Modern agricultural technology has helped to achieve this objective, through the use of mechanised tools and implements, expansion of irrigation facilities and use of agrochemicals such as fertilizers and pesticides. Since most crop fields are in the countryside where farmers live in villages, modern agriculture has had an adverse impact.

Intensive agriculture, which means enhancing crop productivity of the land with the use of agricultural implements and agrochemicals, along with unplanned urbanization, deforestation and industrialization have severely polluted the fresh water bodies and ground water sources.

- (1) Runoffs from crop fields carry soil, and chemicals used and pesticides and fertilizers to water sources. This causes eutrophication and algal blooms about which you will have learn in lesson 10. Eutrophication kills aquatic life including fish which are an important source of food for villages.
- (2) Excessive irrigation leads to water logging and salinisation of soil (excessive accumulation of salt content in the soil which in turn adversely affects fertility).
- (3) Excessive withdrawal of water from wells for irrigation generally deplete ground water in many areas resulting in serious water scarcity. Pollution of lakes, rivers and other water bodies, has deteriorated water quality in many areas leading to acute shortage of safe drinking water. So has continued use of fertilizers and pesticides which pollute ground water sources and deteriorate the water quality.
- (4) Soil erosion, caused by the strike of sharp modern agricultural implements causes siltation of rivers. Silt is the mud or soil that gets washed into water bodies as it gets loosened (soil erosion). Siltation of rivers and lakes reduces their water retention capacity and lead to flooding.
- (5) Continuous cropping on the same land or on marginal lands for increasing food production leaves no time for soil to revive through the natural processes. Cultivation of mountain slopes also causes soil erosion. All this causes loss of mineral nutrients.

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#### 8.5.2 Urban life provides facilities as well as difficulties: The Indian context

Urban life has its blessings and curses. India has a population of over 1.2 billion. Lack of opportunities, poverty, conservative life style and orthodoxy force youth from villages to migrate to cities and towns. The comparatively easier modes of travel in developing India today, is another reason for the rural in villages. The job opportunities are limited in villages and youth no longer wish to continue the occupation of their parents and forefathers. With better exposure through radio, television and mobile phones providing easy connectivity young villagers are lured towards cities and towns. Once they reach the cities they encounter both facilities and difficulties. These are listed below:

#### **Facilities**

- (i) Batter job opportunities.
- (ii) Urban opportunities to about small bussiness.
- (iii) Higher wages even unskilled labour is able to save money for sending home.
- (iv) Easy availability of various kinds of goods and consumables.
- (v) Better means of transport and communication.
- (vi) Easily available electricity and tap water. In villages women have to walk long distances to procure water. Time thus saved provides an opportunity to devote more time to take care of children and adults can earn money through odd jobs.
- (vii) Qualified doctors in hospitals and medical facilities are available.
- (viii) Better educational facilities for adults and children are available.

#### Difficulties

- (i) Lack of greenery and of open spaces.
- (ii) Poor air quality. Villages are largely pollution free, while in urban areas, air is polluted due to industries, automobiles, thermal power plants etc.
- (iii) Scarcity of water and acute shortage lead to the growth of cheap lead to slums.
- (iv) Lack of sanitation and hygiene.
- (v) Overcrowding also causes several social problems.

#### 8.5.3 Special problems of urban areas: Changes in life style and land availability

Rapid increase of urban population has necessitated expansion of urban limits. The requirements of housing, construction of roads, industries and dams has led to encroachment on agricultural fields and forests. Growing townships invade productive crop fields and luxuriant forests. Concrete buildings come up on agricultural fields, grazing land and

deforested areas. Land use changes irreversibly, land is degraded and affecting agricultural fields on the benefit fringes of urban areas.

In most developing nations high rise condominiums (multistoried flats) are surrounded by squatters and neighborhood slums which attracts new migrants to cities but inadequate living space, lack potable water and light, unhygienic conditions from inadequate sanitation and safe waste disposal causes suffering.

Migrants from villages take no time to adopt urban life style which shows up in their manner of dressing up, feeding habits and interaction with others.

## 8.6 INCREASED RESOURCE CONSUMPTION IN URBAN AREAS

As large number of people permanently settle in small areas to form cities and towns, this leads to increase in the consumption of natural resources. Land availability dwindles as buildings for housing purposes come up. Increased water requirement of the growing urban population causes a sharp decline in water availability. Excessive withdrawal of ground water leads to ground water depletion. To meet the growing requirement of water, result is drawn from distant areas thus disturbing the routes of natural water bodies and affecting ecosystems.

#### 8.7 WASTE GENERATION IN URBAN AREAS

Urbanization and industrialization produces colossal quantities of waste. Quantity of Solid waste form domestic and industrial sources is growing problem. They may be biodegradable when they may be used for generation of biogas. The nonbiodegradable waste is dumped in land fills.

Liquid wastes such sewage from domestic sector and industrial effluents are usually discharged without any treatment causing pollution of rivers and lakes. Sewage treatment may help but is either lacking or seriously inadequate.

Urbanization leads to economic development. Increasing number of motor vehicles on the road cause air pollution leading to congestion and traffic jams, apart from causing serious problem of air pollution.

With rapid advancing urbanization, there is growing shortage of housing. This has led to formation of large slums which lack basic facilities and infrastructure in cities. In fact, slums represent the worst form of environmental degradation as they not only contribute towards environmental pollution but also suffer from crime social problems. A large slum "Dharavi" in Mumbai is the largest slum in Asia.

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#### 8.8 SLUMS AND URBAN PLANNING

- Migrant from villages coming to cities in search of jobs are generally poor and landless. After reaching the city, they squat on vacant lands ultimately develops into a slum which are also known as "**Jhuggi Jhonpri**". Slums are a common feature of the cities in developing countries.
- These are self constructed shelters from scrap materials as plastic, wooden planks, bamboos, jute, straw, plywood, bricks and mud etc. Often slums proliferate rapidly in unplanned manner.
- Slums are clusters of huts or homes in parts of cities. Kutcha or pucca houses, built back to back and edge to edge often lack inadequate sun light, or fresh air due to poor ventilation. Usually they are one- room tenements occupied by several inmates.
- Absence of safe disposal of garbage and solid waste, lack of piped water supply and drainages, electricity creates very precarious situation. Slums are squatter settlements.
- Slums suffer from fire hazards particularly during summer due to short circuit and carelessness of residents.

### INTEXT QUESTIONS 8.4

- 1. What is intensive agriculture?
- 2. State two major problems emerging from use of modern technology in farming.
- 3. What are slums?

# WHAT YOU HAVE LEARNT

- Society formation resulted when humans discovered the security that living in a group provides. They discarded the hunting gathering culture and created human settlements.
- Based on size, settlements may be rural and urban.
- Life in cities and towns is urban life.
- There are several factors which push rural fold out of villages and pull or attract them to lead life in cities.
- Social heterogeneity, individualistic life style, voluntary group formation, social mobility and availability of facilities are characteristics of urban life.

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- But migration from villages to cities has had social, economic and environmental implications.
- Rural or village settlements have characteristics such as agriculture as vocation, joint family system, caste system.
- Poverty and illiteracy of villages makes them orthodox and superstitions.
- Rural world and urban world differ with regard to environment, occupation, community size, population density, social activities etc.
- Modern technology has reached the farmers living in villages. Intentive agriculture has helped in growing more food but use of chemical fertilizers and pesticides has degraded not only agricultural fields but also environment per se.
- Urban life in India has had is benefits like work opportunist, higher wages, availability of consumables, comfortable day to day living.
- Difficulties of urban life are lack of greenery, air pollution, overcrowding social problems.
- Urbanisation has led to increased environmental resource consumption and excessive waste generation.
- Slums and squatter settlements are a reality in cities. These upset urban planning and have specific environmental and social problems.
  - TERMINAL EXERCISE
- 1. What are the types of human settlements?
- 2. List the reasons for which humans move from villages to cities
- 3. State the differences between rural and urban settlements.
- 4. What are the facilities that rural youth come across when they migrate to urban areas?
- 5. Mention the difficulties faced by villagers who migrate to cities.
- 6. In what ways has the environment been degraded due to modern technology used in agriculture?
- 7. Justify the following statement: "Urbanization has led to increased resource consumption and waste generations".
- 8. Write a short article on 'slums'.
- 9. How has land use undergone changes with progressive urbanization.
- 10. Write an essay on 'problems of urban living'.

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ANSW

## **ANSWER TO INTEXT QUESTIONS**

- Notes
- 1. It gave them protection from dangers of hunting gathering life/security.
- 2. (i) Duration of settlement
  - (ii) Size

#### 8.2

- 1. Living in cities and towns
- 2. Poverty/illiteracy/job opportunity/facilities/better social (any other)
- 3. Social heterogeneity/lack of social control/voluntary associations/individualism/ any other

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#### 8.3

- 1. Living in villages
- 2. Illiteracy/lack of job opportunities/agriculture only vocation/ superstition/ bonded labour/ any other
- 3. Bound together by language/ caste system/same vocation/ similar life style/ any other

#### 8.4

- 1. Growing more crops on a small piece of land.
- 2. Depletion of natural resources/waste generation/ adverse effect of use of chemical fertilizers/chemical pesticides use.
- 3. Clusters of huts or houses in parts of cities.

## The road to your dreams...