

Social Science

Contemporary
India II

Textbook in Geography
for Class X



1068



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NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

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FOREWORD

The National Curriculum Framework (NCF), 2005, recommends that children's life at school must be linked to their life outside the school. This principle marks a departure from the legacy of bookish learning which continues to shape our system and causes a gap between the school, home and community. The syllabi and textbooks developed on the basis of NCF signify an attempt to implement this basic idea. They also attempt to discourage rote learning and the maintenance of sharp boundaries between different subject areas. We hope these measures will take us significantly further in the direction of a child-centred system of education outlined in the National Policy on Education (1986).

The success of this effort depends on the steps that school principals and teachers will take to encourage children to reflect on their own learning and to pursue imaginative activities and questions. We must recognise that, given space, time and freedom, children generate new knowledge by engaging with the information passed on to them by adults. Treating the prescribed textbook as the sole basis of examination is one of the key reasons why other resources and sites of learning are ignored. Inculcating creativity and initiative is possible if we perceive and treat children as participants in learning, not as receivers of a fixed body of knowledge.

These aims imply considerable change in school routines and mode of functioning. Flexibility in the daily time-table is as necessary as rigour in implementing the annual calendar so that the required number of teaching days are actually devoted to teaching. The methods used for teaching and evaluation will also determine how effective this textbook proves for making children's life at school a happy experience, rather than a source of stress or boredom. Syllabus designers have tried to address the problem of curricular burden by restructuring and reorienting knowledge at different stages with greater consideration for child psychology and the time available for teaching. The textbook attempts to enhance this endeavour by giving higher priority and space to opportunities for contemplation and wondering, discussion in small groups, and activities requiring hands-on experience.

The National Council of Educational Research and Training (NCERT) appreciates the hard work done by the textbook development committee responsible for this book. We wish to thank the Chairperson of the advisory committee for textbooks in Social Sciences, at the higher secondary level, Professor Hari Vasudevan and the Chief Advisor for this book, Professor M.H. Qureshi for guiding the work of this committee. Several teachers contributed to the development of this textbook; we are grateful to their principals for making this possible. We are indebted to

the institutions and organisations which have generously permitted us to draw upon their resources, material and personnel. We are especially grateful to the members of the National Monitoring Committee, appointed by the Department of Secondary and Higher Education, Ministry of Human Resource Development under the Chairpersonship of Professor Mrinal Miri and Professor G.P. Deshpande, for their valuable time and contribution. As an organisation committed to systemic reform and continuous improvement in the quality of its products, NCERT welcomes comments and suggestions which will enable us to undertake further revision and refinement.

New Delhi
20 November 2006

Director
National Council of Educational
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RATIONALISATION OF CONTENT IN THE TEXTBOOK

In view of the COVID-19 pandemic, it is imperative to reduce content load on students. The National Education Policy 2020, also emphasises reducing the content load and providing opportunities for experiential learning with creative mindset. In this background, the NCERT has undertaken the exercise to rationalise the textbooks across all classes. Learning Outcomes already developed by the NCERT across classes have been taken into consideration in this exercise.

Contents of the textbooks have been rationalised in view of the following:

- Overlapping with similar content included in other subject areas in the same class
- Similar content included in the lower or higher class in the same subject
- Difficulty level
- Content, which is easily accessible to students without much interventions from teachers and can be learned by children through self-learning or peer-learning
- Content, which is irrelevant in the present context

This present edition, is a reformatted version after carrying out the changes given above.

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THE CONSTITUTION OF INDIA

PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a **¹[SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC]** and to secure to all its citizens :

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all

FRATERNITY assuring the dignity of the individual and the **²[unity and integrity of the Nation];**

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949 do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

1. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
2. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Unity of the Nation" (w.e.f. 3.1.1977)

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The Council also gratefully acknowledges the contributions of Ishwar Singh, *DTP Operator*; Ajay Singh, *Copy Editor*; Dinesh Kumar, *Computer Incharge*, who have helped in giving a final shape to this book. The contribution of the Publication Department, NCERT are also duly acknowledged.

The following are applicable to all the maps of India used in this textbook

1. © Government of India, Copyright 2006
2. The responsibility for the correctness of internal details rests with the publisher.
3. The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.

4. The administrative headquarters of Chandigarh, Haryana and Punjab are at Chandigarh.
5. The interstate boundaries amongst Arunachal Pradesh, Assam and Meghalaya shown on this map are as interpreted from the “North-Eastern Areas (Reorganisation) Act.1971,” but have yet to be verified.
6. The external boundaries and coastlines of India agree with the Record/Master Copy certified by Survey of India.
7. The state boundaries between Uttarakhand & Uttar Pradesh, Bihar & Jharkhand and Chhattisgarh & Madhya Pradesh have not been verified by the Governments concerned.
8. The spellings of names in these maps have been taken from various sources.

School Bhuvan-NCERT an Online web portal

Web based online e-learning Geo spatial portal **School Bhuvan-NCERT** has been launched by NCERT and ISRO in collaboration to enhance geo spatial skills among students. This online e-learning portal includes thematic maps given in Geography textbooks. This portal enables students to use Geo-spatial technology for better understanding of concepts in Geography. Online activities available on the portal as Level 1, Level 2 and Level 3 encourage learners from Classes VI to XII to develop neighbourhood maps and their attributes on satellite imageries available on **School Bhuvan-NCERT**.



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Constitution of India

Part IV A (Article 51 A)

Fundamental Duties

It shall be the duty of every citizen of India —

- (a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;
- (b) to cherish and follow the noble ideals which inspired our national struggle for freedom;
- (c) to uphold and protect the sovereignty, unity and integrity of India;
- (d) to defend the country and render national service when called upon to do so;
- (e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;
- (f) to value and preserve the rich heritage of our composite culture;
- (g) to protect and improve the natural environment including forests, lakes, rivers, wildlife and to have compassion for living creatures;
- (h) to develop the scientific temper, humanism and the spirit of inquiry and reform;
- (i) to safeguard public property and to abjure violence;
- (j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement;
- *(k) who is a parent or guardian, to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years.

Note: The Article 51A containing Fundamental Duties was inserted by the Constitution (42nd Amendment) Act, 1976 (with effect from 3 January 1977).

*(k) was inserted by the Constitution (86th Amendment) Act, 2002 (with effect from 1 April 2010).





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RESOURCES AND DEVELOPMENT



Can you identify and name the various items used in making life comfortable in our villages and towns. List the items and name the material used in their making.



The process of transformation of things available in our environment involves an interactive relationship between nature, technology and institutions. Human beings interact with nature through technology and create institutions to accelerate their economic development.

Everything available in our environment which can be used to satisfy our needs, provided, it is technologically accessible, economically feasible and culturally acceptable can be termed as 'Resource'.

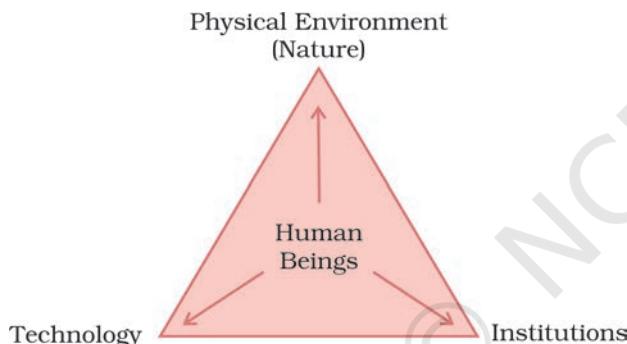


Fig. 1.1: Interdependent relationship between nature, technology and institutions

Do you think that resources are free gifts of nature as is assumed by many? They are not. Resources are a function of human activities. Human beings themselves are essential components of resources. They transform material available in our environment into resources and use them. These resources can be classified in the following ways—

- On the basis of origin – biotic and abiotic
- On the basis of exhaustibility – renewable and non-renewable
- On the basis of ownership – individual, community, national and international
- On the basis of status of development – potential, developed stock and reserves.

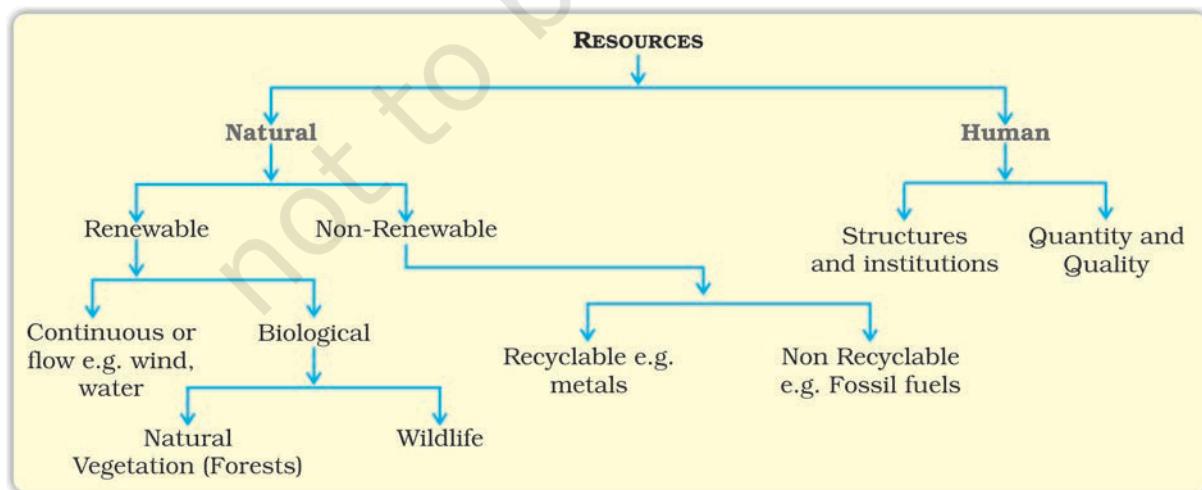


Fig. 1.2: Classification of resources

Activity

Prepare a list of stock and reserve, resources that you are familiar with from your local area.

DEVELOPMENT OF RESOURCES

Resources are vital for human survival as well as for maintaining the quality of life. It was believed that resources are free gifts of nature. As a result, human beings used them indiscriminately and this has led to the following major problems.

- Depletion of resources for satisfying the greed of a few individuals.
- Accumulation of resources in few hands, which, in turn, divided the society into two segments i.e. haves and have nots or rich and poor.
- Indiscriminate exploitation of resources has led to global ecological crises such as, global warming, ozone layer depletion, environmental pollution and land degradation.

Activity

1. Imagine, if the oil supply gets exhausted one day, how would this affect our life style?
2. Plan a survey in your colony/village to investigate people's attitude towards recycling of the domestic/agricultural wastes. Ask questions about :
 - (a) What do they think about resources they use?
 - (b) What is their opinion about the wastes, and its utilisation?
 - (c) Collage your results.

An equitable distribution of resources has become essential for a sustained quality of life and global peace. If the present trend of resource depletion by a few individuals and countries continues, the future of our planet is in danger.

Therefore, resource planning is essential for sustainable existence of all forms of life. Sustainable existence is a component of sustainable development.

Sustainable development

Sustainable economic development means 'development should take place without damaging the environment, and development in the present should not compromise with the needs of the future generations.'

Rio de Janeiro Earth Summit, 1992

In June 1992, more than 100 heads of states met in Rio de Janeiro in Brazil, for the first International Earth Summit. The Summit was convened for addressing urgent problems of environmental protection and socio-economic development at the global level. The assembled leaders signed the Declaration on Global Climatic Change and Biological Diversity. The Rio Convention endorsed the global Forest Principles and adopted Agenda 21 for achieving Sustainable Development in the 21st century.

Agenda 21

It is the declaration signed by world leaders in 1992 at the United Nations Conference on Environment and Development (UNCED), which took place at Rio de Janeiro, Brazil. It aims at achieving global sustainable development. It is an agenda to combat environmental damage, poverty, disease through global co-operation on common interests, mutual needs and shared responsibilities. One major objective of the Agenda 21 is that every local government should draw its own local Agenda 21.

RESOURCE PLANNING

Planning is the widely accepted strategy for judicious use of resources. It has importance in a country like India, which has enormous diversity in the availability of resources. There are regions which are rich in certain types of resources but are deficient in some other

resources. There are some regions which can be considered self sufficient in terms of the availability of resources and there are some regions which have acute shortage of some vital resources. For example, the states of Jharkhand, Chhattisgarh and Madhya Pradesh are rich in minerals and coal deposits. Arunachal Pradesh has abundance of water resources but lacks in infrastructural development. The state of Rajasthan is very well endowed with solar and wind energy but lacks in water resources. The cold desert of Ladakh is relatively isolated from the rest of the country. It has very rich cultural heritage but it is deficient in water, infrastructure and some vital minerals. This calls for balanced resource planning at the national, state, regional and local levels.

Activity

Prepare a list of resources found in your state and also identify the resources that are important but deficit in your state.

Resource Planning in India

Resource planning is a complex process which involves : (i) identification and inventory of resources across the regions of the country. This involves surveying, mapping and qualitative and quantitative estimation and measurement of the resources. (ii) Evolving a planning structure endowed with appropriate technology, skill and institutional set up for implementing resource development plans. (iii) Matching the resource development plans with overall national development plans.

India has made concerted efforts for achieving the goals of resource planning right from the First Five Year Plan launched after Independence.

The availability of resources is a necessary condition for the development of any region, but mere availability of resources in the absence of corresponding changes in

Find out

What resources are being developed in your surroundings by the community/village panchayats/ward level communities with the help of community participation?

technology and institutions may hinder development. There are many regions in our country that are rich in resources but these are included in economically backward regions. On the contrary there are some regions which have a poor resource base but they are economically developed.

Can you name some resource rich but economically backward regions and some resource poor but economically developed regions? Give reasons for such a situation.

The history of colonisation reveals that rich resources in colonies were the main attractions for the foreign invaders. It was primarily the higher level of technological development of the colonising countries that helped them to exploit resources of other regions and establish their supremacy over the colonies. Therefore, resources can contribute to development only when they are accompanied by appropriate technological development and institutional changes. India has experienced all this in different phases of colonisation. Therefore, in India, development, in general, and resource development in particular does not only involve the availability of resources, but also the technology, quality of human resources and the historical experiences of the people.

Conservation of Resources: Resources are vital for any developmental activity. But irrational consumption and over-utilisation of resources may lead to socio-economic and environmental problems. To overcome these problems, resource conservation at various levels is important. This had been the main concern of the leaders and thinkers in the past. For example, Gandhiji was very apt in voicing his concern about resource conservation in these words: "There is enough

for everybody's need and not for any body's greed." He placed the greedy and selfish individuals and exploitative nature of modern technology as the root cause for resource depletion at the global level. He was against mass production and wanted to replace it with the production by the masses.

At the international level, the Club of Rome advocated resource conservation for the first time in a more systematic way in 1968. Subsequently, in 1974, Gandhian philosophy was once again presented by Schumacher in his book **Small is Beautiful**. The seminal contribution with respect to resource conservation at the global level was made by the Brundtland Commission Report, 1987. This report introduced the concept of 'Sustainable Development' and advocated it as a means for resource conservation, which was subsequently published in a book entitled **Our Common Future**. Another significant contribution was made at the Earth Summit at Rio de Janeiro, Brazil in 1992.

LAND RESOURCES

We live on land, we perform our economic activities on land and we use it in different ways. Thus, land is a natural resource of utmost importance. It supports natural vegetation, wild life, human life, economic activities, transport and communication systems. However, land is an asset of a finite magnitude, therefore, it is important to use the

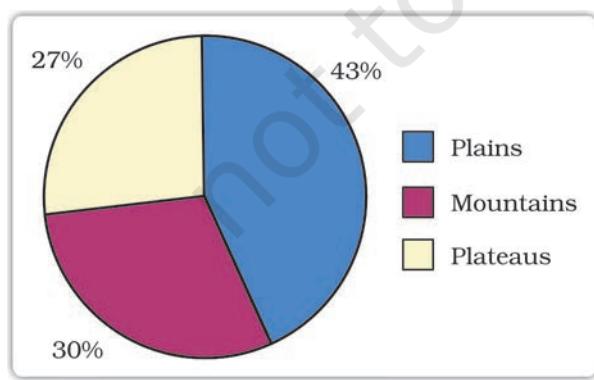


Fig 1.3: India : Land under important Relief Features

available land for various purposes with careful planning.

India has land under a variety of relief features, namely; mountains, plateaus, plains and islands. About 43 per cent of the land area is plain, which provides facilities for agriculture and industry. Mountains account for 30 per cent of the total surface area of the country and ensure perennial flow of some rivers, provide facilities for tourism and ecological aspects. About 27 per cent of the area of the country is the plateau region. It possesses rich reserves of minerals, fossil fuels and forests.

LAND UTILISATION

Land resources are used for the following purposes:

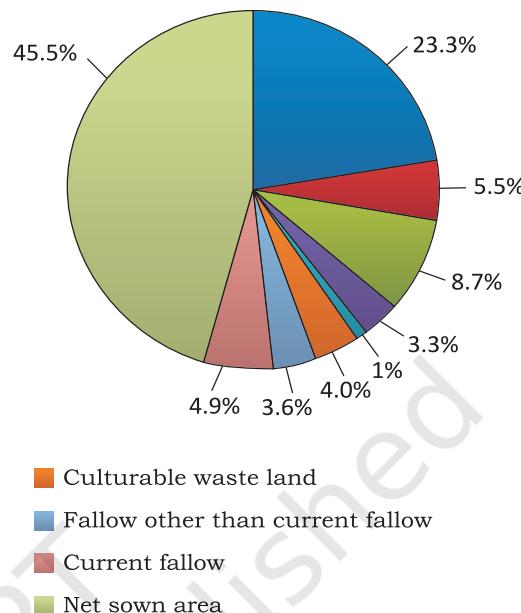
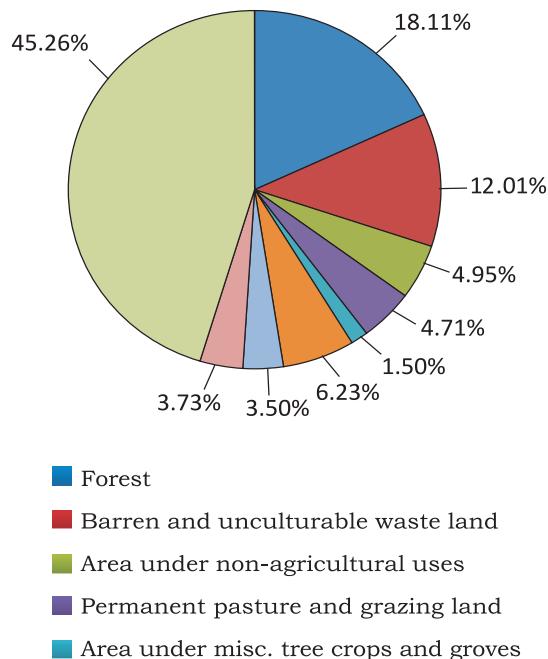
1. Forests
2. Land not available for cultivation
 - (a) Barren and waste land
 - (b) Land put to non-agricultural uses, e.g. buildings, roads, factories, etc.
3. Other uncultivated land (excluding fallow land)
 - (a) Permanent pastures and grazing land,
 - (b) Land under miscellaneous tree crops groves (not included in net sown area),
 - (c) Cultivable waste land (left uncultivated for more than 5 agricultural years).
4. Fallow lands
 - (a) Current fallow-(left without cultivation for one or less than one agricultural year),
 - (b) Other than current fallow-(left uncultivated for the past 1 to 5 agricultural years).
5. Net sown area the physical extent of land on which crops are sown harvested is known as net sown area.
Area sown more than once in an agricultural year plus net sown area is known as *gross cropped area*.

LAND USE PATTERN IN INDIA

The use of land is determined both by physical factors such as topography, climate, soil types as well as human factors such as population density, technological capability and culture and traditions etc.

General land use categories-1960-61**General land use categories-2014-15**

Reporting Area: 100 Per cent



Source : Directorate of Economics and Statistics, Ministry of Agriculture, 2017

Fig. 1.4

Total geographical area of India is 3.28 million sq km. Land use data, however, is available only for 93 per cent of the total geographical area because the land use reporting for most of the north-east states except Assam has not been done fully. Moreover, some areas of Jammu and Kashmir occupied by Pakistan and China have also not been surveyed.

Activity

Try to do a comparison between the two pie charts (Fig. 1.4) given for land use and find out why the net sown area and the land under forests have changed from 1960-61 to 2014-15 very marginally.

The land under permanent pasture has also decreased. How are we able to feed our huge cattle population on this pasture land and what are the consequences of it? Most of the other than the current fallow lands are either of poor quality or the cost of cultivation

of such land is very high. Hence, these lands are cultivated once or twice in about two to three years and if these are included in the net sown area then the percentage of NSA in India comes to about 54 per cent of the total reporting area.

The pattern of net sown area varies greatly from one state to another. It is over 80 per cent of the total area in Punjab and Haryana and less than 10 per cent in Arunachal Pradesh, Mizoram, Manipur and Andaman Nicobar Islands.

 Find out reasons for the low proportion of net sown area in these states.

Forest area in the country is far lower than the desired 33 per cent of geographical area, as it was outlined in the National Forest Policy (1952). It was considered essential for maintenance of the ecological balance. The livelihood of millions of people who live on the



fringes of these forests depends upon it. A part of the land is termed as waste land and land put to other non-agricultural uses. Waste land includes rocky, arid and desert areas and land put to other non-agricultural uses includes settlements, roads, railways, industry etc. Continuous use of land over a long period of time without taking appropriate measures to conserve and manage it, has resulted in land degradation. This, in turn, has serious repercussions on society and the environment.

LAND DEGRADATION AND CONSERVATION MEASURES

We have shared our land with the past generations and will have to do so with the future generations too. Ninety-five per cent of our basic needs for food, shelter and clothing are obtained from land. Human activities have not only brought about degradation of land but have also aggravated the pace of natural forces to cause damage to land.

Some human activities such as deforestation, over grazing, mining and quarrying too have contributed significantly in land degradation.

Mining sites are abandoned after excavation work is complete leaving deep scars and traces of over-burdening. In states like Jharkhand, Chhattisgarh, Madhya Pradesh and Odisha deforestation due to mining have caused severe land degradation. In states like Gujarat, Rajasthan, Madhya Pradesh and Maharashtra overgrazing is one of the main reasons for land degradation. In the states of Punjab, Haryana, western Uttar Pradesh, over irrigation is responsible for land degradation due to water logging leading to increase in salinity and alkalinity in the soil. The mineral processing like grinding of limestone for cement industry and calcite and soapstone for ceramic industry generate huge quantity of dust in the atmosphere. It retards the process of infiltration of water into the soil after it settles down on the land. In recent years, industrial effluents as waste have become a major source of land and water pollution in many parts of the country.

There are many ways to solve the problems of land degradation. Afforestation and proper management of grazing can help to some extent. Planting of shelter belts of plants, control on over grazing, stabilisation of sand dunes by growing thorny bushes are some of the methods to check land degradation in arid areas. Proper management of waste lands, control of mining activities, proper discharge and disposal of industrial effluents and wastes after treatment can reduce land and water degradation in industrial and suburban areas.

SOIL AS A RESOURCE

Soil is the most important renewable natural resource. It is the medium of plant growth and supports different types of living organisms on the earth. The soil is a living system. It takes millions of years to form soil upto a few cm in depth. Relief, parent rock or bed rock, climate, vegetation and other forms of life and time are important factors in the formation of soil. Various forces of nature such as change in temperature, actions of running water, wind and glaciers, activities of decomposers etc. contribute to the formation of soil. Chemical and organic changes which take place in the

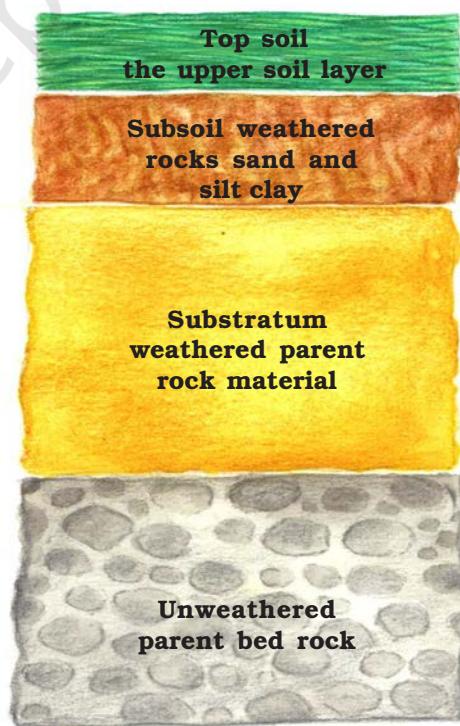


Fig. 1.5: Soil Profile

soil are equally important. Soil also consists of organic (humus) and inorganic materials (Fig. 1.5).

On the basis of the factors responsible for soil formation, colour, thickness, texture, age, chemical and physical properties, the soils of India are classified in different types.

Classification of Soils

India has varied relief features, landforms, climatic realms and vegetation types. These have contributed in the development of various types of soils.

Alluvial Soils

This is the most widely spread and important soil. In fact, the entire northern plains are made of alluvial soil. These have been deposited by three important Himalayan river systems – the Indus, the Ganga and the Brahmaputra. These soils also extend in Rajasthan and Gujarat through a narrow corridor. Alluvial soil is also found in the eastern coastal plains particularly in the deltas of the Mahanadi, the Godavari, the Krishna and the Kaveri rivers.



Fig. 1.6: Alluvial Soil

The alluvial soil consists of various proportions of sand, silt and clay. As we move inlands towards the river valleys, soil particles appear somewhat bigger in size. In the upper reaches of the river valley i.e. near the place of the break of slope, the soils are coarse. Such soils are more common in piedmont plains such as **Duars**, **Chos** and **Terai**.

Apart from the size of their grains or components, soils are also described on the basis of their age. According to their age alluvial soils can be classified as old alluvial (**Bangar**) and new alluvial (**Khadar**). The **bangar** soil has higher concentration of *kanker*

nodules than the **Khadar**. It has more fine particles and is more fertile than the **bangar**.

Alluvial soils as a whole are very fertile. Mostly these soils contain adequate proportion of potash, phosphoric acid and lime which are ideal for the growth of sugarcane, paddy, wheat and other cereal and pulse crops. Due to its high fertility, regions of alluvial soils are intensively cultivated and densely populated. Soils in the drier areas are more alkaline and can be productive after proper treatment and irrigation.

Black Soil

These soils are black in colour and are also known as *regur* soils. Black soil is ideal for growing cotton and is also known as *black cotton soil*. It is believed that climatic condition along with the parent rock material are the important factors for the formation of black soil. This type of soil is typical of the Deccan trap (*Basalt*) region spread over northwest Deccan plateau and is made up of lava flows. They cover the plateaus of Maharashtra, Saurashtra, Malwa, Madhya Pradesh and Chhattisgarh and extend in the south east direction along the Godavari and the Krishna valleys.

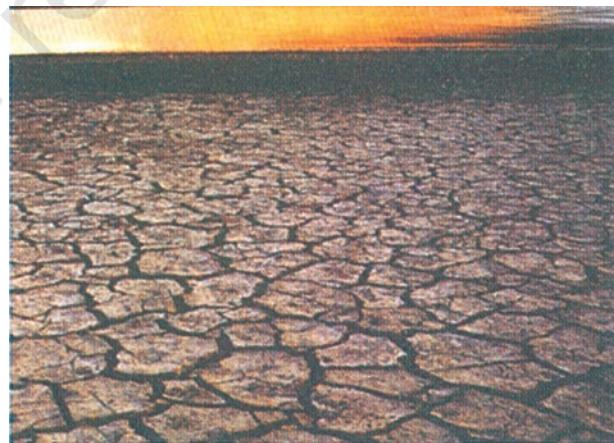
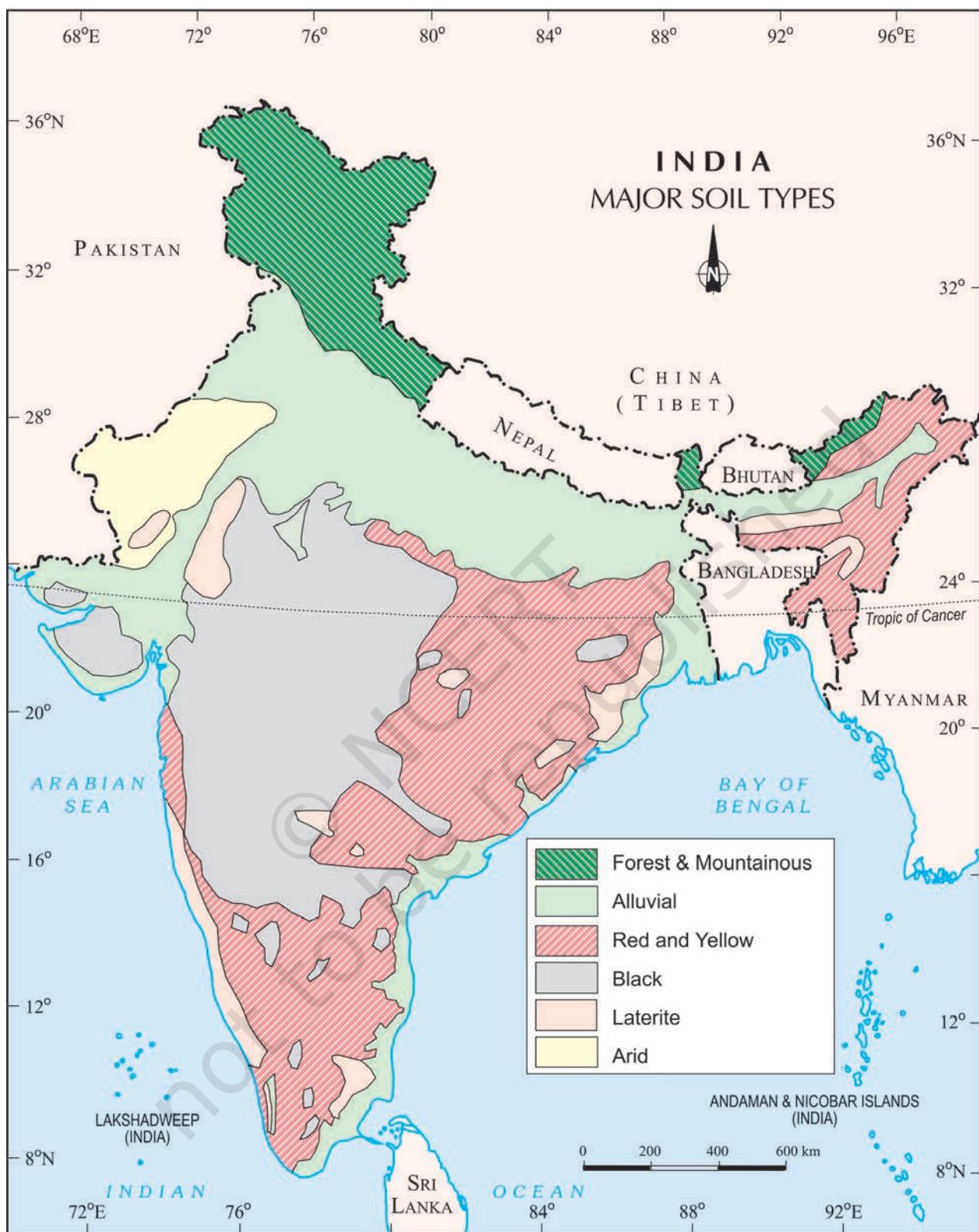


Fig. 1.7: Black Soil

The black soils are made up of extremely fine i.e. clayey material. They are well-known for their capacity to hold moisture. In addition, they are rich in soil nutrients, such as calcium carbonate, magnesium, potash and lime. These





India: Major Soil Types

soils are generally poor in phosphoric contents. They develop deep cracks during hot weather, which helps in the proper aeration of the soil. These soils are sticky when wet and difficult to work on unless tilled immediately after the first shower or during the pre-monsoon period.

Red and Yellow Soils

Red soil develops on crystalline igneous rocks in areas of low rainfall in the eastern and southern parts of the Deccan plateau. Yellow and red soils are also found in parts of Odisha, Chhattisgarh, southern parts of the middle Ganga plain and along the piedmont zone of the Western Ghats. These soils develop a reddish colour due to diffusion of iron in crystalline and metamorphic rocks. It looks yellow when it occurs in a hydrated form.

Laterite Soil

Laterite has been derived from the Latin word 'later' which means brick. The laterite soil develops under tropical and subtropical climate with alternate wet and dry season. This soil is the result of intense leaching due to heavy rain. Lateritic soils are mostly deep to very deep, acidic ($\text{pH} < 6.0$), generally deficient in plant nutrients and occur mostly in southern states, Western Ghats region of Maharashtra, Odisha, some parts of West Bengal and North-east regions. Where these soils support deciduous and evergreen forests, it is humus rich, but under sparse



Fig. 1.8: Laterite Soil

vegetation and in semi-arid environment, it is generally humus poor. They are prone to erosion and degradation due to their position on the landscape. After adopting appropriate soil conservation techniques particularly in the hilly areas of Karnataka, Kerala and Tamil Nadu, this soil is very useful for growing tea and coffee. Red laterite soils in Tamil Nadu, Andhra Pradesh and Kerala are more suitable for crops like cashew nut.

Arid Soils

Arid soils range from red to brown in colour. They are generally sandy in texture and saline in nature. In some areas the salt content is very high and common salt is obtained by evaporating the water. Due to the dry climate, high temperature, evaporation is faster and the soil lacks humus and moisture. The lower horizons of the soil are occupied by *Kankar* because of the increasing calcium content downwards. The *Kankar* layer formations in the bottom horizons restrict the infiltration of water. After proper irrigation these soils become cultivable as has been in the case of western Rajasthan.



Fig. 1.9: Arid Soil

Forest Soils

These soils are found in the hilly and mountainous areas where sufficient rain forests are available. The soils texture varies according to the mountain environment where they are formed. They are loamy and silty in valley sides and coarse grained in the upper slopes. In the snow covered areas

of Himalayas, these soils experience denudation and are acidic with low humus content. The soils found in the lower parts of the valleys particularly on the river terraces and alluvial fans are fertile.

Soil Erosion and Soil Conservation

The denudation of the soil cover and subsequent washing down is described as soil erosion. The processes of soil formation and erosion, go on simultaneously and generally there is a balance between the two. Sometimes, this balance is disturbed due to human activities like deforestation, over-grazing, construction and mining etc., while natural forces like wind, glacier and water lead to soil erosion. The running water cuts through the clayey soils and makes deep channels as **gullies**. The land becomes unfit for cultivation and is known as **bad land**. In the Chambal basin such lands are called ravines. Sometimes water flows as a sheet over large areas down a slope. In such cases the top



Fig. 1.11: Gully Erosion

soil is washed away. This is known as **sheet erosion**. Wind blows loose soil off flat or sloping land known as wind erosion. Soil erosion is also caused due to defective methods of farming. Ploughing in a wrong way i.e. up and down the slope form channels for the quick flow of water leading to soil erosion.

Ploughing along the contour lines can decelerate the flow of water down the slopes. This is called contour ploughing. Steps can be cut out on the slopes making terraces. Terrace cultivation restricts erosion. Western and central Himalayas have well developed terrace farming. Large fields can be divided into strips. Strips of grass are left to grow between the crops. This breaks up the force of the wind. This method is known as strip cropping. Planting lines of trees to create shelter also works in a similar way. Rows of such trees are called shelter belts. These shelter belts have contributed significantly to the stabilisation of sand dunes and in stabilising the desert in western India.



Fig. 1.10: Soil Erosion

1. Multiple choice questions.

- (i) Which one of the following is the main cause of land degradation in Punjab?
 - (a) Intensive cultivation
 - (c) Over irrigation
 - (b) Deforestation
 - (d) Overgrazing
- (ii) In which one of the following states is terrace cultivation practised?
 - (a) Punjab
 - (c) Haryana
 - (b) Plains of Uttar Pradesh
 - (d) Uttarakhand
- (iii) In which of the following states black soil is predominantly found?
 - (a) Uttar Pradesh
 - (c) Rajasthan
 - (b) Maharashtra
 - (d) Jharkhand

2. Answer the following questions in about 30 words.

- (i) Name three states having black soil and the crop which is mainly grown in it.
- (ii) What type of soil is found in the river deltas of the eastern coast? Give three main features of this type of soil.
- (iii) What steps can be taken to control soil erosion in the hilly areas?

3. Answer the following questions in about 120 words.

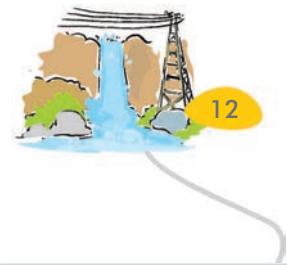
- (i) Explain land use pattern in India and why has the land under forest not increased much since 1960-61?
- (ii) How have technical and economic development led to more consumption of resources?

PROJECT/ACTIVITY

- 1. Make a project showing consumption and conservation of resources in your locality.
- 2. Have a discussion in the class – how to conserve various resources used in your school.
- 3. Imagine if oil supplies get exhausted, how will this affect our life style?
- 4. Solve the puzzle by following your search horizontally and vertically to find the hidden answers.
 - (i) Natural endowments in the form of land, water, vegetation and minerals.
 - (ii) A type of non-renewable resource.
 - (iii) Soil with high water retaining capacity.
 - (iv) Intensively leached soils of the monsoon climate.

S	F	G	S	F	O	B	R	O	M	S	U	A	P	J
Q	G	A	F	F	O	R	E	S	T	A	T	I	O	N
P	N	R	E	C	P	R	S	L	D	M	I	L	N	F
S	N	A	T	Q	X	U	O	V	A	I	O	L	A	L
O	D	E	I	D	R	J	U	J	L	D	B	N	B	D
T	G	H	M	I	N	E	R	A	L	S	A	X	M	W
B	V	J	K	M	E	D	C	R	U	P	F	M	H	R
L	A	T	E	R	I	T	E	M	V	A	Z	T	V	L
A	B	Z	O	E	N	M	F	T	I	S	D	L	R	C
C	G	N	N	S	Z	I	O	P	A	X	T	Y	J	H
K	J	G	K	D	T	D	C	S	L	S	E	G	E	W

- (i) Natural endowments in the form of land, water, vegetation and minerals.
- (ii) A type of non-renewable resource.
- (iii) Soil with high water retaining capacity.
- (iv) Intensively leached soils of the monsoon climate.
- (v) Plantation of trees on a large scale to check soil erosion.
- (vi) The Great Plains of India are made up of these soils.





1068CH02



FOREST AND WILDLIFE RESOURCES

Narak! My Lord, you are the creator of music
in the world of Lepchas

Oh Narak! My Lord, let me dedicate
myself to you

Let me gather your music from the
springs, the rivers, the mountains, the forests,
the insects and the animals

Let me gather your music from the sweet
breeze and offer it to you

Source: Lepcha folk song from northern part of West Bengal

We share this planet with millions of other living beings, starting from micro-organisms and bacteria, lichens to banyan trees, elephants and blue whales. This entire habitat that we live in has immense biodiversity. We humans along with all living organisms form a complex web of ecological system in which we are only a part and very much dependent on this system for our own existence. For example, the plants, animals and micro-organisms re-create the quality of the air we breathe, the water we drink and the soil that produces our food without which we cannot survive. Forests play a key role in the ecological system as these are also the primary producers on which all other living beings depend.

Biodiversity or Biological Diversity is
immensely rich in wildlife and cultivated
species, diverse in form and function but
closely integrated in a system through
multiple network of interdependencies.

Flora and Fauna in India

If you look around, you will be able to find that there are some animals and plants which are unique in your area. In fact, India is one of the world's richest countries in terms of its vast array of biological diversity. This is possibly twice or thrice the number yet to be discovered. You have already studied in detail about the extent and variety of forest and wildlife resources in India. You may have realised the importance of these resources in our daily life. These diverse flora and fauna are so well integrated in our daily life that we take these for granted. But, lately, they are under great stress mainly due to insensitivity to our environment.

Activity

Find out stories prevalent in your region which are about the harmonious relationship between human beings and nature.

Conservation of Forest and Wildlife in India

Conservation in the background of rapid decline in wildlife population and forestry has become essential. But why do we need to conserve our forests and wildlife? Conservation preserves the ecological diversity and our life support systems – water, air and soil. It also preserves the genetic diversity of plants and animals for better growth of species and breeding. For example, in agriculture, we are still dependent on traditional crop varieties. Fisheries too are heavily dependent on the maintenance of aquatic biodiversity.

In the 1960s and 1970s, conservationists demanded a national wildlife protection programme. The Indian Wildlife (Protection)



Fig. 2.1

Act was implemented in 1972, with various provisions for protecting habitats. An all-India list of protected species was also published. The thrust of the programme was towards protecting the remaining population of certain endangered species by banning hunting, giving legal protection to their habitats, and restricting trade in wildlife. Subsequently, central and many state governments established national parks and wildlife sanctuaries about which you have already studied. The central government also announced several projects for protecting specific animals, which were gravely threatened, including the tiger, the one-horned rhinoceros, the Kashmir stag or *hangul*, three types of crocodiles – fresh water crocodile, saltwater crocodile and the *Gharial*, the Asiatic lion, and others. Most recently, the Indian elephant, black buck (*chinkara*), the great Indian bustard (*godawan*) and the snow leopard, etc. have been given full or partial legal protection against hunting and trade throughout India.

Project Tiger

Tiger is one of the key wildlife species in the faunal web. In 1973, the authorities realised that the tiger population had dwindled to 1,827 from an estimated 55,000 at the turn of the century. The major threats to tiger population are numerous, such as poaching for trade, shrinking habitat, depletion of prey base species, growing human population, etc. The trade of tiger skins and the use of their bones in traditional medicines, especially in the Asian countries left the tiger population on the verge of extinction. Since India and Nepal provide habitat to about two-thirds of the surviving tiger population in the world, these two nations became prime targets for poaching and illegal trading.

"Project Tiger", one of the well-publicised wildlife campaigns in the world, was launched in 1973. Tiger conservation has been viewed not only as an effort to save an endangered species, but with





Fig. 2.2: Rhino and deer in Kaziranga National Park

equal importance as a means of preserving biotypes of sizeable magnitude. Corbett National Park in Uttarakhand, Sunderbans National Park in West Bengal, Bandhavgarh National Park in Madhya Pradesh, Sariska Wildlife Sanctuary in Rajasthan, Manas Tiger Reserve in Assam and Periyar Tiger Reserve in Kerala are some of the tiger reserves of India.

The conservation projects are now focusing on biodiversity rather than on a few of its components. There is now a more intensive search for different conservation measures. Increasingly, even insects are beginning to find a place in conservation planning. In the notification under Wildlife Act of 1980 and 1986, several hundred butterflies, moths, beetles, and one dragonfly have been added to the list of protected species. In 1991, for the first time plants were also added to the list, starting with six species.

Activity

Collect more information on the wildlife sanctuaries and national parks of India and cite their locations on the map of India.

Types and Distribution of Forest and Wildlife Resources

Even if we want to conserve our vast forest and wildlife resources, it is rather difficult to manage, control and regulate them. In India,

much of its forest and wildlife resources are either owned or managed by the government through the Forest Department or other government departments. These are classified under the following categories.

- (i) **Reserved Forests:** More than half of the total forest land has been declared **reserved forests**. Reserved forests are regarded as the most valuable as far as the conservation of forest and wildlife resources are concerned.
- (ii) **Protected Forests:** Almost one-third of the total forest area is protected forest, as declared by the Forest Department. This forest land are protected from any further depletion.
- (iii) **Unclassed Forests:** These are other forests and wastelands belonging to both government and private individuals and communities.

Reserved and protected forests are also referred to as permanent forest estates maintained for the purpose of producing timber and other forest produce, and for protective reasons. Madhya Pradesh has the largest area under permanent forests, constituting 75 per cent of its total forest area. Jammu and Kashmir, Andhra Pradesh, Uttarakhand, Kerala, Tamil Nadu, West Bengal, and Maharashtra have large percentages of reserved forests of its total forest area whereas Bihar, Haryana, Punjab, Himachal Pradesh, Odisha and Rajasthan have a bulk of it under protected forests. All North-

Gharial on the brink

The gharial population has been at its lowest since the 1970s. What went wrong and what can we do?

ROMULUS WHITAKER

and JANAKI LENIN

WISPY tendrils of mist rise delicately from the water surface, tinged gold by the dawn. Your breath hangs as little clouds of vapour as you gaze upon the Girwa River on a cold winter morning. A trio of hollow clapping sounds from the other side of the river, half a kilometre away tells you that an adult male gharial is advertising his presence. It is the height of the breeding season. The place seems trapped in a time in early history when man was still clad in animal skins. It is only as the sun rises higher and burns the mist off the water that the world comes into focus with appalling clarity. The five-km stretch of the Girwa River in Katerniaghata Wildlife Sanctuary is one of the only three wild breeding sites left in the world for the most unique of all the



CRITICALLY ENDANGERED: Captive gharial at the Madras C

hatched by FAO consultant Bob Bus-

ability to support larger numbers of the animal.

During the dry summer months, the

Bird deaths blamed on dirty Yamuna

Delhi Govt Report Points To Toxic Elements in Stagnant Water

By Nidhi Sharma/TNN

New Delhi: It is official now. The recent bird deaths reported in Okhla sanctuary have been caused by Yamuna water and contaminated fish and not because of bird flu. The wildlife departments of UP and Delhi have sent reports to respective governments saying that the bird deaths cannot be ruled out till the polluted water in that sanctuary is cleaned.

Fifty-three dead migratory birds were found dead in Okhla bird sanctuary earlier this month. Later, authorities had arrested three fishermen and claimed that they had added poison to water to kill fish. These po-



Can you find out the reasons for the above mentioned problems?

eastern states and parts of Gujarat have a very high percentage of their forests as unclassed forests managed by local communities.

Community and Conservation

Conservation strategies are not new in our country. We often ignore that in India, forests are also home to some of the traditional communities. In some areas of India, local communities are struggling to conserve these habitats along with government officials, recognising that only this will secure their own long-term livelihood. In Sariska Tiger Reserve, Rajasthan, villagers have fought against mining by citing the Wildlife Protection Act. In many areas, villagers themselves are protecting habitats and explicitly rejecting government involvement. The inhabitants of five villages in the Alwar district of Rajasthan have declared 1,200 hectares of forest as the Bhairodev Dakav 'Sonchuri', declaring their

own set of rules and regulations which do not allow hunting, and are protecting the wildlife against any outside encroachments.

The famous **Chipko** movement in the Himalayas has not only successfully resisted deforestation in several areas but has also shown that community afforestation with indigenous species can be enormously successful. Attempts to revive the traditional conservation methods or developing new methods of ecological farming are now widespread. Farmers and citizen's groups like the **Beej Bachao Andolan** in Tehri and **Navdanya** have shown that adequate levels of diversified crop production without the use of synthetic chemicals are possible and economically viable.

In India joint forest management (JFM) programme furnishes a good example for involving local communities in the management and restoration of degraded



Sacred groves - a wealth of diverse and rare species

Nature worship is an age old tribal belief based on the premise that all creations of nature have to be protected. Such beliefs have preserved several virgin forests in pristine form called Sacred Groves (the forests of God and Goddesses). These patches of forest or parts of large forests have been left untouched by the local people and any interference with them is banned.

Certain societies revere a particular tree which they have preserved from time immemorial. The Mundas and the Santhal of Chota Nagpur region worship mahua (**Bassia latifolia**) and kadamba (**Anthocaphalus cadamba**) trees, and the tribals of Odisha and Bihar worship the tamarind (**Tamarindus indica**) and mango (**Mangifera indica**) trees during weddings. To many of us, peepal and banyan trees are considered sacred.

Indian society comprises several cultures, each with its own set of traditional methods of conserving nature and its creations. Sacred qualities are often ascribed to springs, mountain peaks, plants and animals which are closely protected. You will find troops of macaques and langurs around many temples. They are fed daily and treated as a part of temple devotees. In and around Bishnoi villages in Rajasthan, herds of blackbuck, (chinkara), nilgai and peacocks can be seen as an integral part of the community and nobody harms them.

forests. The programme has been in formal existence since 1988 when the state of Odisha passed the first resolution for joint forest management. JFM depends on the formation of local (village) institutions that undertake protection activities mostly on degraded forest land managed by the forest department. In return, the members of these communities are entitled to intermediary benefits like non-timber forest produces and share in the timber harvested by 'successful protection'.

The clear lesson from the dynamics of both environmental destruction and reconstruction in India is that local communities everywhere have to be involved in some kind of natural resource management. But there is still a long way to go before local communities are at the centre-stage in decision-making. Accept only those economic or developmental activities, that are people centric, environment-friendly and economically rewarding.

Activity

Write a short essay on any practices which you may have observed and practised in your everyday lives that conserve and protect the environment around you.

"The tree is a peculiar organism of unlimited kindness and benevolence and makes no demand for its sustenance, and extends generously the products of its life activity. It affords protection to all beings, offering shade even to the axemen who destroy it".

Gautama Buddha (487 B.C.)

1. Multiple choice questions

- (i) Which of the following conservation strategies do not directly involve community participation?
- (a) Joint forest management (c) Chipko Movement
 (b) Beej Bachao Andolan (d) Demarcation of Wildlife sanctuaries

2. Match the following.

Reserved forests	other forests and wastelands belonging to both government and private individuals and communities
Protected forests	forests are regarded as most valuable as far as the conservation of forest and wildlife resources
Unclassed forests	forest lands are protected from any further depletion

3. Answer the following questions in about 30 words.

- (i) What is biodiversity? Why is biodiversity important for human lives?
 (ii) How have human activities affected the depletion of flora and fauna? Explain.

4. Answer the following questions in about 120 words.

- (i) Describe how communities have conserved and protected forests and wildlife in India?
 (ii) Write a note on good practices towards conserving forest and wildlife.





1068CH03

WATER RESOURCES

3



Hey Pinky, did you see those awesome T.V. reports on floods in Assam? My God! What havoc they have created it has destroyed and swept away everything in its path.

Yes, Chintu, I did. Isn't it strange that water can give life and take life as well. What would we do without water? We need water to drink, cook our food, wash our clothes and wash ourselves as well. My father was telling me that in his factory they need a lot of water for a number of things. Did you know that they even need water for cooling the machines?

In fact, the factory runs on the power supplied by the hydel power plant. Now, I can understand why through the ages we humans have chosen to live near water courses along the rivers and other water sources like springs, lakes, ponds and oases.



You already know that three-fourth of the earth's surface is covered with water, but only a small proportion of it accounts for freshwater that can be put to use. This freshwater is mainly obtained from surface run off and ground water that is continually being renewed and recharged through the hydrological cycle. All water moves within the hydrological cycle ensuring that water is a renewable resource.

You might wonder that if three-fourth of the world is covered with water and water is a renewable resource, then how is it that countries and regions around the globe suffer from water scarcity? Why is it predicted that by 2025, nearly two billion people will live in absolute water scarcity?

WATER SCARCITY AND THE NEED FOR WATER CONSERVATION AND MANAGEMENT

Given the abundance and renewability of water, it is difficult to imagine that we may suffer from water scarcity. The moment we speak of water shortages, we immediately associate it with regions having low rainfall or those that are drought prone. We instantaneously visualise the deserts of Rajasthan and women balancing many '*matkas*' (earthen pots) used for collecting and storing water and travelling long distances to get water. True, the availability of water resources varies over space and time, mainly due to the variations in seasonal and annual precipitation, but water scarcity in

most cases is caused by over-exploitation, excessive use and unequal access to water among different social groups.

Where is then water scarcity likely to occur? As you have read in the hydrological cycle, freshwater can be obtained directly from precipitation, surface run off and groundwater.

Is it possible that an area or region may have ample water resources but is still facing water scarcity? Many of our cities are such examples. Thus, water scarcity may be an outcome of large and growing population and

consequent greater demands for water, and unequal access to it. A large population requires more water not only for domestic use but also to produce more food. Hence, to facilitate higher food-grain production, water resources are being over-exploited to expand irrigated areas for dry-season agriculture. Irrigated agriculture is the largest consumer of water. Now it is needed to revolutionise the agriculture through developing drought resistant crops and dry farming techniques. You may have seen in many television advertisements that most farmers have their



Water, Water Everywhere, Not a Drop to Drink:
After a heavy downpour, a boy collects drinking water in Kolkata. Life in the city and its adjacent districts was paralysed as incessant overnight rain, meaning a record 180 mm, flooded vast area and disrupted traffic.



A Kashmiri earthquake survivor carries water in the snow in a devastated village.

एक और इंजराइल जैसे 25 सेमी. औसत वार्षिक वर्षा वाले देश में जल का कोई अभाव नहीं है तो दूसरी और 114 सेमी. औसत वार्षिक वर्षा वाले हमारे देश में प्रति वर्ष किसी भाग में सूखा अवश्य पड़ता है। देश में जल की उपलब्धता और उसके स्वरूप के अनुसार समुचित जलप्रबंधन न होने के कारण ही वर्षा का जल नदी-नालों में तेजी से बहकर समुद्र में चला जाता है जिससे वर्षा के बाद के लगभग नौ महीने देश के लिए पानी की कमी के होते हैं। ये ही मूल कारण हैं देश में जलीय अभाव के, जिसे हम उचित प्रबंधन के द्वारा ही नियंत्रित कर सकते हैं।

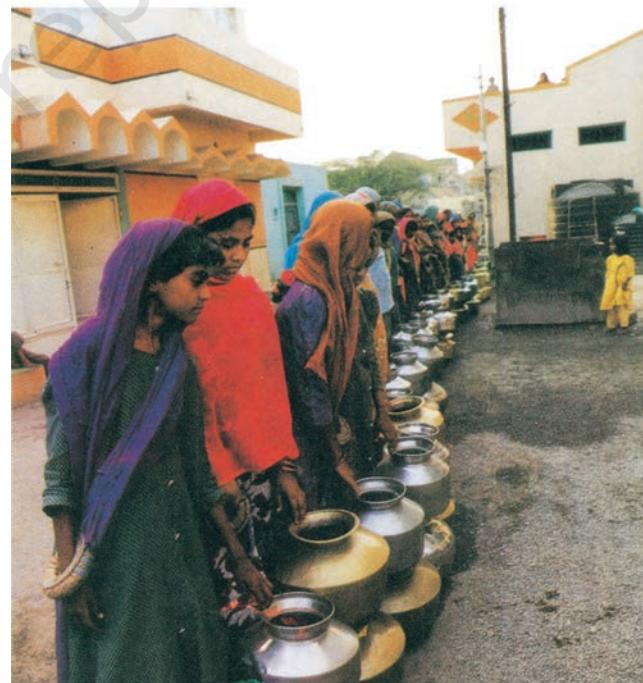


Fig. 3.1: Water Scarcity

own wells and tube-wells in their farms for irrigation to increase their produce. But have you ever wondered what this could result in? That it may lead to falling groundwater levels, adversely affecting water availability and food security of the people.

Post-independent India witnessed intensive industrialisation and urbanisation, creating vast opportunities for us. Today, large industrial houses are as commonplace as the industrial units of many MNCs (Multinational Corporations). The ever-increasing number of industries has made matters worse by exerting pressure on existing freshwater resources. Industries, apart from being heavy users of water, also require power to run them. Much of this energy comes from hydroelectric power. Today, in India hydroelectric power contributes approximately 22 per cent of the total electricity produced. Moreover, multiplying urban centres with large and dense populations and urban lifestyles have not only added to water and energy requirements but have further aggravated the problem. If you look into the housing societies or colonies in the cities, you would find that most of these have their own groundwater pumping devices to meet their water needs. Not surprisingly, we find that fragile water resources are being over-exploited and have caused their depletion in several of these cities.

So far we have focused on the quantitative aspects of water scarcity. Now, let us consider another situation where water is sufficiently available to meet the needs of the people, but, the area still suffers from water scarcity. This scarcity may be due to bad quality of water. Lately, there has been a growing concern that even if there is ample water to meet the needs of the people, much of it may be polluted by domestic and industrial wastes, chemicals, pesticides and fertilisers used in agriculture, thus, making it hazardous for human use. Government of India has accorded highest priority to improve the quality of life and enhance ease of living of people especially those living in rural areas by announcing the Jal Jeevan Mission (JJM). The Goal of JJM is to enable every rural household get assured supply of potable piped water at a service level of 55 litres per capita per day regularly on

long-term basis by ensuring functionality of the tap water connections. (Source: Economic Survey 2020–21, p.357)

India's rivers, especially the smaller ones, have all turned into toxic streams. And even the big ones like the Ganga and Yamuna are far from being pure. The assault on India's rivers – from population growth, agricultural modernisation, urbanisation and industrialisation – is enormous and growing by the day..... This entire life stands threatened.

Source: The Citizens' Fifth Report, CSE, 1999.

You may have already realised that the need of the hour is to conserve and manage our water resources, to safeguard ourselves from health hazards, to ensure food security, continuation of our livelihoods and productive activities and also to prevent degradation of our natural ecosystems. Over exploitation and mismanagement of water resources will impoverish this resource and cause ecological crisis that may have profound impact on our lives.

Activity

From your everyday experiences, write a short proposal on how you can conserve water.

MULTI-PURPOSE RIVER PROJECTS AND INTEGRATED WATER RESOURCES MANAGEMENT

But, how do we conserve and manage water? Archaeological and historical records show that from ancient times we have been constructing sophisticated hydraulic structures like dams built of stone rubble, reservoirs or lakes, embankments and canals for irrigation. Not surprisingly, we have continued this tradition in modern India by building dams in most of our river basins.

Hydraulic Structures in Ancient India

- In the first century B.C., Sringaverapura near Allahabad had sophisticated water harvesting system channelling the flood water of the river Ganga.
- During the time of Chandragupta Maurya, dams, lakes and irrigation systems were extensively built.

- Evidences of sophisticated irrigation works have also been found in Kalinga, (Odisha), Nagarjunakonda (Andhra Pradesh), Bennur (Karnataka), Kolhapur (Maharashtra), etc.
- In the 11th Century, Bhopal Lake, one of the largest artificial lakes of its time was built.
- In the 14th Century, the tank in Hauz Khas, Delhi was constructed by Iltutmish for supplying water to Siri Fort area.

Source: Dying Wisdom, CSE, 1997.

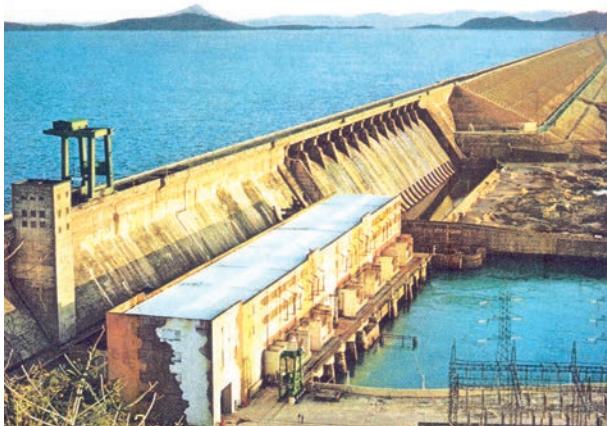


Fig. 3.2: Hirakud Dam

What are dams and how do they help us in conserving and managing water? Dams were traditionally built to impound rivers and rainwater that could be used later to irrigate agricultural fields. Today, dams are built not just for irrigation but for electricity generation, water supply for domestic and industrial uses, flood control, recreation, inland navigation and fish breeding. Hence, dams are now referred to as multi-purpose projects where the many uses of the impounded water are integrated with one another. For example, in the Sutluj-Beas river basin, the Bhakra – Nangal project water is being used both for hydel power production and irrigation. Similarly, the Hirakud project in the Mahanadi basin integrates conservation of water with flood control.

Multi-purpose projects, launched after Independence with their integrated water resources management approach, were thought of as the vehicle that would lead the nation to development and progress, overcoming the

A **dam** is a barrier across flowing water that obstructs, directs or retards the flow, often creating a reservoir, lake or impoundment. "Dam" refers to the reservoir rather than the structure. Most dams have a section called a spillway or weir over which or through which it is intended that water will flow either intermittently or continuously. Dams are classified according to structure, intended purpose or height. Based on structure and the materials used, dams are classified as timber dams, embankment dams or masonry dams, with several subtypes. According to the height, dams can be categorised as large dams and major dams or alternatively as low dams, medium height dams and high dams.

handicap of its colonial past. Jawaharlal Nehru proudly proclaimed the dams as the 'temples of modern India'; the reason being that it would integrate development of agriculture and the village economy with rapid industrialisation and growth of the urban economy.

Activity

Find out more about any one traditional method of building dams and irrigation works.

We have sown the crops in Asar

We will bring Bhadu in Bhadra

Floods have swollen the Damodar

The sailing boats cannot sail

Oh! Damodar, we fall at your feet

Reduce the floods a little

Bhadu will come a year later

Let the boats sail on your surface

(This popular Bhadu song in the Damodar valley region narrates the troubles faced by people owing to the flooding of Damodar river known as the river of sorrow.)

In recent years, multi-purpose projects and large dams have come under great scrutiny and opposition for a variety of reasons. Regulating and damming of rivers affect their natural flow causing poor sediment flow and excessive sedimentation at the bottom of the reservoir, resulting in rockier stream

beds and poorer habitats for the rivers' aquatic life. Dams also fragment rivers making it difficult for aquatic fauna to migrate, especially for spawning. The reservoirs that are created on the floodplains also submerge the existing vegetation and soil leading to its decomposition over a period of time.

Multi-purpose projects and large dams have also been the cause of many new environmental movements like the 'Narmada Bachao Andolan' and the 'Tehri Dam Andolan' etc. Resistance to these projects has primarily been due to the large-scale displacement of local communities. Local people often had to give up their land, livelihood and their meagre access and control over resources for the greater good of the nation. So, if the local people are not benefiting from such projects then who is benefited? Perhaps, the landowners and large farmers, industrialists and few urban centres. Take the case of the landless in a village – does he really gain from such a project?

Narmada Bachao Andolan or Save Narmada Movement is a Non Governmental Organisation (NGO) that mobilised tribal people, farmers, environmentalists and human rights activists against the Sardar Sarovar Dam being built across the Narmada river in Gujarat. It originally focused on the environmental issues related to trees that would be submerged under the dam water. Recently it has re-focused the aim to enable poor citizens, especially the oustees (displaced people) to get full rehabilitation facilities from the government.

People felt that their suffering would not be in vain... accepted the trauma of displacement believing in the promise of irrigated fields and plentiful harvests. So, often the survivors of Rihand told us that they accepted their sufferings as sacrifice for the sake of their nation. But now, after thirty bitter years of being adrift, their livelihood having even being more precarious, they keep asking: "Are we the only ones chosen to make sacrifices for the nation?"

Source: S. Sharma, quoted in *In the Belly of the River. Tribal conflicts over development in Narmada valley*, A. Baviskar, 1995.

Do you know?

Sardar Sarovar Dam has been built over the Narmada River in Gujarat. This is one of the largest water resource projects of India covering four states—Maharashtra, Madhya Pradesh, Gujarat and Rajasthan. The Sardar Sarovar project would meet the requirement of water in drought-prone and desert areas of Gujarat (9,490 villages and 173 towns) and Rajasthan (124 villages).

Source: <http://www.sardarsarovardam.org/project.aspx>

Irrigation has also changed the cropping pattern of many regions with farmers shifting to water intensive and commercial crops. This has great ecological consequences like salinisation of the soil. At the same time, it has transformed the social landscape i.e. increasing the social gap between the richer landowners and the landless poor. As we can see, the dams did create conflicts between people wanting different uses and benefits from the same water resources. In Gujarat, the Sabarmati-basin farmers were agitated and almost caused a riot over the higher priority given to water supply in urban areas, particularly during droughts. Inter-state water disputes are also becoming common with regard to sharing the costs and benefits of the multi-purpose project.

Do you know?

Do you know that the Krishna-Godavari dispute is due to the objections raised by Karnataka and Andhra Pradesh governments? It is regarding the diversion of more water at Koyna by the Maharashtra government for a multipurpose project. This would reduce downstream flow in their states with adverse consequences for agriculture and industry.

Activity

Make a list of inter-state water disputes.



India: Major Rivers and Dams



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CONTEMPORARY INDIA - II

Most of the objections to the projects arose due to their failure to achieve the purposes for which they were built. Ironically, the dams that were constructed to control floods have triggered floods due to sedimentation in the reservoir. Moreover, the big dams have mostly been unsuccessful in controlling floods at the time of excessive rainfall. You may have seen or read how the release of water from dams during heavy rains aggravated the flood situation in Maharashtra and Gujarat in 2006. The floods have not only devastated life and property but also caused extensive soil erosion. Sedimentation also meant that the flood plains were deprived of silt, a natural fertiliser, further adding on to the problem of land degradation. It was also observed that the multi-purpose projects induced earthquakes, caused water-borne diseases and pests and pollution resulting from excessive use of water.

FLOODS

Basic Safety Precautions To Be Taken :

- Listen to radio/TV for the latest weather bulletins and flood warnings. Pass on the information to others.
- Make a family emergency kit which should include; a portable radio/transistor, torch, spare batteries, a first aid box along with essential medicines, ORS, dry food items, drinking water, matchboxes, candles and other essential items.
- Keep hurricane lamp, ropes, rubber tubes, umbrella and bamboo stick in your house. These could be useful.
- Keep your cash, jewellery, valuables, important documents etc. in a safe place.
- If there is a flood, move along with your family members and cattle to safe areas like relief camps, evacuation centres, elevated grounds where you can take shelter.
- Turn off power and gas connections before leaving your house.

During floods

- Don't enter into flood waters; it could be dangerous.
- Don't allow children to play in or near flood waters.
- Stay away from sewerage line, gutters, drains, culverts etc.
- Be careful of snakes; snakebites are common during floods.
- Stay away from electric poles and fallen power-lines to avoid electrocution.
- Don't use wet electrical appliances - get them checked before use.
- Eat freshly cooked and dry food. Always keep your food covered.
- Use boiled and filtered drinking water.
- Keep all drains, gutters near your house clean.
- Stagnation of water can breed vector/water-borne diseases . In case of sickness, seek medical assistance.
- Use bleaching powder and lime to disinfect the surroundings.

Collect information about flood prone areas of the country

RAINWATER HARVESTING

Many thought that given the disadvantages and rising resistance against the multi-purpose projects, water harvesting system was a viable alternative, both socio-economically and environmentally. In ancient India, along with the sophisticated hydraulic structures, there existed an extraordinary tradition of water-harvesting system. People had in-depth knowledge of rainfall regimes and soil types and developed wide ranging techniques to harvest rainwater, groundwater, river water and flood water in keeping with the local ecological conditions and their water needs. In hill and mountainous regions, people built diversion channels like the 'guls' or 'kuls' of the Western Himalayas for agriculture. 'Rooftop rainwater harvesting' was commonly practised to store drinking water, particularly in Rajasthan. In the flood plains of Bengal, people developed inundation channels to



Lift-off An IAF helicopter rescues a woman and her child from the Dongargan village of Maharashtra's Hengol district. In all, 11 choppers were pressed into rescue operations across the state. (Unated reports on PI)



UP-UP & AWAY An IAF helicopter rescues a worker who was trapped in the floodwaters of the Tawi river in Jammu on Thursday.

THE RIDE OF HIS LIFE

Heavy rain drowns Kolkata

Durga Puja Preparations Go Awry As Met Predicts Downpour For Next 2 Days



STUCK A bus is stuck in a waterlogged street in Kolkata on Friday

TIMES NEWS NETWORK

Kolkata: With two days of incessant rain — and more forecast for the next two — the city came to a standstill on Friday. The city has so far recorded 218.44 mm rainfall.

The downpour, which started on Saturday morning, continued throughout the day. At least 10 people lost their lives in the southern fringes of the city and three of a family were killed in a wall collapse in the northern part of the city. Elsewhere in the state, 27 people died and nearly 30,000 houses were damaged.

On Saturday morning, as the chattering of Mahadev temple in the northern part of the city came to a standstill, the auspicious occasion observed seven days prior to the start of Durga Puja.

Buses were snared at Ultadanga, Alipore, Ballygunge Lines, Anchorage and Howrah Bridge. Trains had to wade through waist-deep water in many areas. Alipore Bodpurnam area, which houses the headquarters of the city's police force, was flooded. It had been cut off since two days, but Friday morning, the swollen Hooghly river left it completely submerged.

Trains services were disrupted in both directions. Some services were diverted to Sealdah and Howrah division while tracks submerged under water in many places. Six trains, including Janmanta Tari Express and Howrah-Puri Express, ran late. Some services were diverted to Arambagh Katra line EMU and Circular railway services.

were largely affected. However, there was no change in Rajdhani Express schedule. While surface transport was totally hit, there was no disruption in flights and ferries.

Power blocks occurred at Bhawanipur, Dumdum, Thakurpukur, Barrackpore, Bidhan Nagar Park and large parts of south and south-west Kolkata. The posh Salt Lake area, which is situated just along to the TTAh of Sector V had a tough time trudging through water-logged roads. About 100 vehicles were stranded in all sectors of Kamarhati in north Kolkata as rains seeped through the partition walls and to wash clay off the roofs.

"Even arteries of the city are red. While some have been badly damaged, colour has been washed off many others," said a resident.

Though efforts were on to use lorries frequent to dry clay soils, the action did not yield much results over time.

If the rain does not subside soon, delivery schedules will go haywire. The rain has also affected the market. The late morning traffic jam caused by a series of depression came as a disaster for the city residents as most of the vehicles were stuck in the mud.

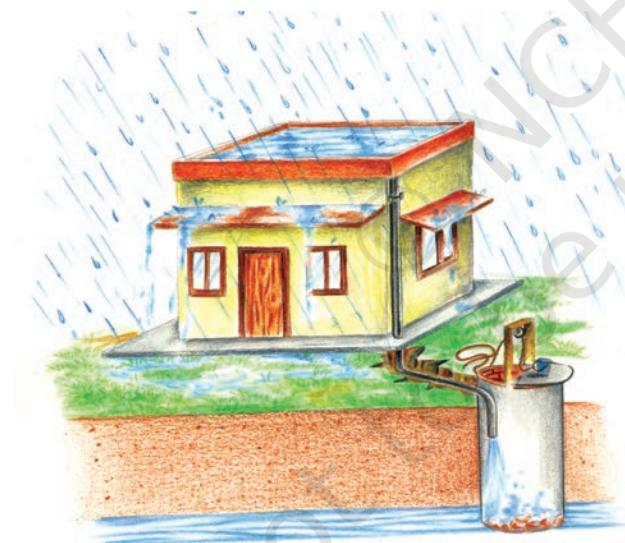
City roads were empty with few



irrigate their fields. In arid and semi-arid regions, agricultural fields were converted into rain fed storage structures that allowed the water to stand and moisten the soil like the 'khadins' in Jaisalmer and 'Johads' in other parts of Rajasthan.



(a) Recharge through Hand Pump



(b) Recharge through Abandoned Dugwell

- Rooftop rainwater is collected using a PVC pipe
- Filtered using sand and bricks
- Underground pipe takes water to sump for immediate usage
- Excess water from the sump is taken to the well
- Water from the well recharges the underground
- Take water from the well (later)

Fig 3.3: Rooftop Rainwater Harvesting



Are you a water harvester?

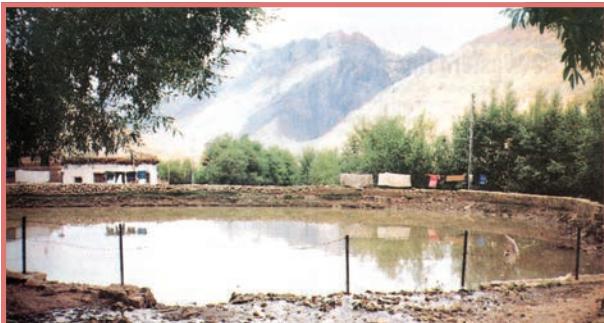
This monsoon, join us in counting the raindrops



Fig. 3.4

In the semi-arid and arid regions of Rajasthan, particularly in Bikaner, Phalodi and Barmer, almost all the houses traditionally had underground tanks or *tankas* for storing drinking water. The tanks could be as large as a big room; one household in Phalodi had a tank that was 6.1 metres deep, 4.27 metres long and 2.44 metres wide. The tankas were part of the well-developed rooftop rainwater harvesting system and were built inside the main house or the courtyard. They were connected to the sloping roofs of the houses through a pipe. Rain falling on the rooftops would travel down the pipe and was stored in these underground 'tankas'. The first spell of rain was usually not collected as this would clean the roofs and the pipes. The rainwater from the subsequent showers was then collected.

The rainwater can be stored in the **tankas** till the next rainfall making it an extremely reliable source of drinking water when all other sources are dried up,



A kul leads to a circular village tank, as the above in the Kaza village, from which water is released as and when required.

Fig 3.5: Traditional method of rainwater harvesting

particularly in the summers. Rainwater, or **palar pani**, as commonly referred to in these parts, is considered the purest form of natural water. Many houses constructed underground rooms adjoining the 'tanka' to beat the summer heat as it would keep the room cool.

Interesting Fact

Rooftop rainwater harvesting is the most common practice in Shillong, Meghalaya. It is interesting because Cherapunjee and Mawsynram situated at a distance of 55 km. from Shillong receive the highest rainfall in the world, yet the state capital Shillong faces acute shortage of water. Nearly every household in the city has a rooftop rainwater harvesting structure. Nearly 15-25 per cent of the total water requirement of the household comes from rooftop water harvesting.

Activity

Find out other rainwater harvesting systems existing in and around your locality.

Today, in western Rajasthan, sadly the practice of rooftop rainwater harvesting is on the decline as plenty of water is available due to the perennial Indira Gandhi Canal, though some houses still maintain the tankas since they do not like the taste of tap water.

Fortunately, in many parts of rural and urban India, rooftop rainwater harvesting is being successfully adapted to store and conserve water. In Gendathur, a remote backward village in Mysuru, Karnataka, villagers have installed, in their household's rooftop, rainwater harvesting system to meet their water needs. Nearly 200 households have installed this system and the village has earned the rare distinction of being rich in rainwater. See Fig. 3.6 for a better understanding of the rooftop rainwater harvesting system which is adapted here. Gendathur receives an annual precipitation of 1,000 mm, and with 80 per cent of collection efficiency and of about 10 fillings, every house can collect and use about 50,000 litres of water annually. From the 200 houses, the net amount of rainwater harvested annually amounts to 1,00,000 litres.



Rooftop harvesting was common across the towns and villages of the Thar. Rainwater that falls on the sloping roofs of houses is taken through a pipe into an underground *tanka* (circular holes in the ground), built in the main house or in the courtyard. The picture above shows water being taken from a neighbour's roof through a long pipe. Here the neighbour's rooftop has been used for collection of rainwater. The picture shows a hole through which rainwater flows down into an underground *tanka*.

Fig. 3.6

Interesting Fact

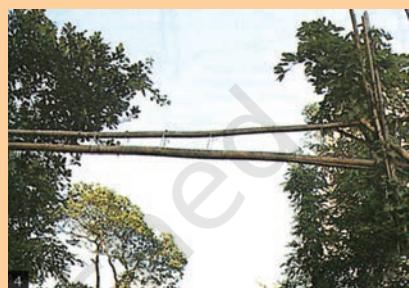
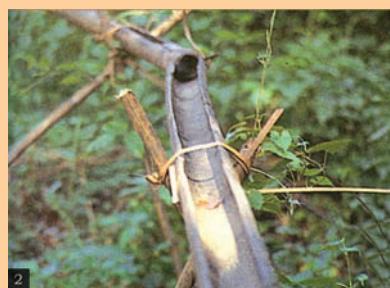
Tamil Nadu is the first state in India which has made rooftop rainwater harvesting structure compulsory to all the houses across the state. There are legal provisions to punish the defaulters.



BAMBOO DRIP IRRIGATION SYSTEM

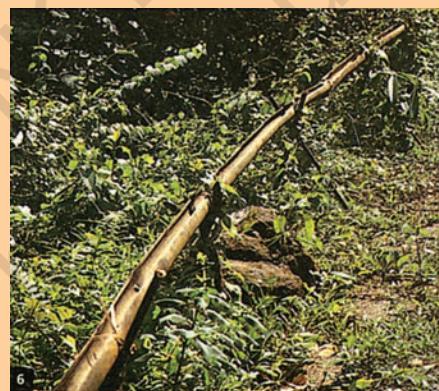
In Meghalaya, a 200-year-old system of tapping stream and spring water by using bamboo pipes, is prevalent. About 18-20 litres of water enters the bamboo pipe system, gets transported over hundreds of metres, and finally reduces to 20-80 drops per minute at the site of the plant.

Picture 1: Bamboo pipes are used to divert perennial springs on the hilltops to the lower reaches by gravity.



Picture 2 and 3: The channel sections, made of bamboo, divert water to the plant site where it is distributed into branches, again made and laid out with different forms of bamboo pipes. The flow of water into the pipes is controlled by manipulating the pipe positions.

Picture 4: If the pipes pass a road, they are taken high above the land.



Picture 5 and 6

Reduced channel sections and diversion units are used at the last stage of water application. The last channel section enables water to be dropped near the roots of the plant.

Fig 3.7

Activity –

1. Collect information on how industries are polluting our water resources.
2. Enact with your classmates a scene of water dispute in your locality.



1. Multiple choice questions.

- (i) Based on the information given below classify each of the situations as 'suffering from water scarcity' or 'not suffering from water scarcity'.
 - (a) Region with high annual rainfall.
 - (b) Region having high annual rainfall and large population.
 - (c) Region having high annual rainfall but water is highly polluted.
 - (d) Region having low rainfall and low population.
- (ii) Which one of the following statements is not an argument in favour of multi-purpose river projects?
 - (a) Multi-purpose projects bring water to those areas which suffer from water scarcity.
 - (b) Multi-purpose projects by regulating water flow helps to control floods.
 - (c) Multi-purpose projects lead to large scale displacements and loss of livelihood.
 - (d) Multi-purpose projects generate electricity for our industries and our homes.
- (iii) Here are some false statements. Identify the mistakes and rewrite them correctly.
 - (a) Multiplying urban centres with large and dense populations and urban lifestyles have helped in proper utilisation of water resources.
 - (b) Regulating and damming of rivers does not affect the river's natural flow and its sediment flow.
 - (c) In Gujarat, the Sabarmati basin farmers were not agitated when higher priority was given to water supply in urban areas, particularly during droughts.
 - (d) Today in Rajasthan, the practice of rooftop rainwater harvesting has gained popularity despite high water availability due to the Indira Gandhi Canal.

2. Answer the following questions in about 30 words.

- (i) Explain how water becomes a renewable resource.
- (ii) What is water scarcity and what are its main causes?
- (iii) Compare the advantages and disadvantages of multi-purpose river projects.

3. Answer the following questions in about 120 words.

- (i) Discuss how rainwater harvesting in semi-arid regions of Rajasthan is carried out.
- (ii) Describe how modern adaptations of traditional rainwater harvesting methods are being carried out to conserve and store water.



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AGRICULTURE

4



India is an agriculturally important country. Two-thirds of its population is engaged in agricultural activities. Agriculture is a primary activity, which produces most of the food that we consume. Besides food grains, it also produces raw material for various industries.

Can you name some industries based on agricultural raw material?

Moreover, some agricultural products like tea, coffee, spices, etc. are also exported.

TYPES OF FARMING

Agriculture is an age-old economic activity in our country. Over these years, cultivation methods have changed significantly depending upon the characteristics of physical environment, technological know-how and socio-cultural practices. Farming varies from subsistence to commercial type. At present, in different parts of India, the following farming systems are practised.

Primitive Subsistence Farming

This type of farming is still practised in few pockets of India. Primitive subsistence agriculture is practised on small patches of land with the help of primitive tools like hoe, dao and digging sticks, and family/ community labour. This type of farming depends upon monsoon, natural fertility of the soil and suitability of other environmental conditions to the crops grown.

It is a 'slash and burn' agriculture. Farmers clear a patch of land and produce cereals and other food crops to sustain their family. When the soil fertility decreases, the farmers shift and clear a fresh patch of land for cultivation. This type of shifting allows Nature to replenish the fertility of the soil

through natural processes; land productivity in this type of agriculture is low as the farmer does not use fertilisers or other modern inputs. It is known by different names in different parts of the country.

Can you name some such types of farmings?

It is *jhumming* in north-eastern states like Assam, Meghalaya, Mizoram and Nagaland; *Pamlou* in Manipur, *Dipa* in Bastar district of Chhattisgarh, and in Andaman and Nicobar Islands.

Jhumming: The 'slash and burn' agriculture is known as 'Milpa' in Mexico and Central America, 'Conuco' in Venezuela, 'Roca' in Brazil, 'Masole' in Central Africa, 'Ladang' in Indonesia, 'Ray' in Vietnam.

In India, this primitive form of cultivation is called 'Bewar' or 'Dahiya' in Madhya Pradesh, 'Podu' or 'Penda' in Andhra Pradesh, 'Pama Dabi' or 'Koman' or 'Bringa' in Odisha, 'Kumari' in Western Ghats, 'Valre' or 'Waltre' in South-eastern Rajasthan, 'Khil' in the Himalayan belt, 'Kuruwa' in Jharkhand, and 'Jhumming' in the North-eastern region.



Fig. 4.1

Rinjha lived with her family in a small village at the outskirts of Diphu in Assam. She enjoys watching her family members clearing, slashing and burning a patch of land for cultivation. She often helps them in irrigating the fields with water running through a bamboo canal from the nearby spring. She loves the surroundings and wants to stay here as long as she can, but this little girl has no idea about the declining fertility of the soil and her family's search for fresh a patch of land in the next season.

Can you name the type of farming Rinjha's family is engaged in?

Can you enlist some crops which are grown in such farming?

Intensive Subsistence Farming

This type of farming is practised in areas of high population pressure on land. It is labour-intensive farming, where high doses of biochemical inputs and irrigation are used for obtaining higher production.

Can you name some of the states of India where such farming is practised?

Though the 'right of inheritance' leading to the division of land among successive generations has rendered land-holding size uneconomical, the farmers continue to take maximum output from the limited land in the absence of alternative source of livelihood. Thus, there is enormous pressure on agricultural land.

Commercial Farming

The main characteristic of this type of farming is the use of higher doses of modern inputs, e.g. high yielding variety (HYV) seeds, chemical fertilisers, insecticides and pesticides in order to obtain higher productivity. The degree of commercialisation of agriculture varies from one region to another. For example, rice is a commercial crop in Haryana and Punjab, but in Odisha, it is a subsistence crop.

Can you give some more examples of crops which may be commercial in one region and may provide subsistence in another region?

Plantation is also a type of commercial farming. In this type of farming, a single crop is grown on a large area. The plantation has an interface of agriculture and industry. Plantations cover large tracts of land, using capital intensive inputs, with the help of migrant labourers. All the produce is used as raw material in respective industries.

In India, tea, coffee, rubber, sugarcane, banana, etc., are important plantation crops. Tea in Assam and North Bengal coffee in Karnataka are some of the important plantation crops grown in these states. Since the production is mainly for market, a well-developed network of transport and communication connecting the plantation areas, processing industries and markets plays an important role in the development of plantations.



Fig. 4.2: Banana plantation in Southern part of India

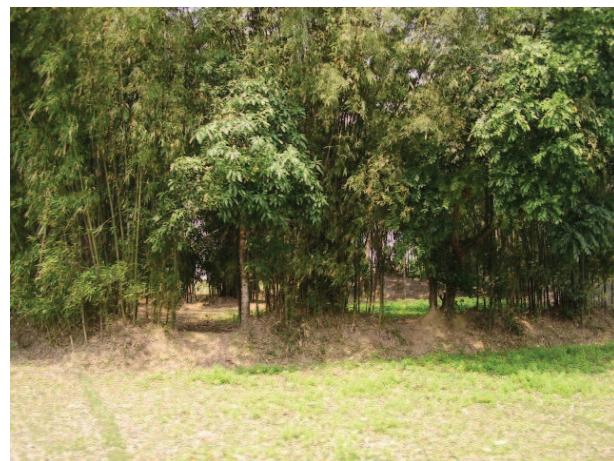


Fig. 4.3: Bamboo plantation in North-east

CROPPING PATTERN

You have studied the physical diversities and plurality of cultures in India. These are also reflected in agricultural practices and cropping patterns in the country. Various types of food and fibre crops, vegetables and fruits, spices and condiments, etc. constitute some of the important crops grown in the country. India has three cropping seasons — **rabi**, **kharif** and **zaid**.

Rabi crops are sown in winter from October to December and harvested in summer from April to June. Some of the important rabi crops are wheat, barley, peas, gram and mustard. Though, these crops are grown in large parts of India, states from the north and north-western parts such as Punjab, Haryana, Himachal Pradesh, Jammu and Kashmir, Uttarakhand and Uttar Pradesh are important for the production of wheat and other rabi crops. Availability of precipitation during winter months due to the western temperate cyclones helps in the success of these crops. However, the success of the green revolution in Punjab, Haryana, western Uttar Pradesh and parts of Rajasthan has also been an important factor in the growth of the above-mentioned rabi crops.

Kharif crops are grown with the onset of monsoon in different parts of the country and these are harvested in September–October. Important crops grown during this season are paddy, maize, jowar, bajra, tur (arhar), moong, urad, cotton, jute, groundnut and soyabean. Some of the most important rice-growing regions are Assam, West Bengal, coastal regions of Odisha, Andhra Pradesh, Telangana, Tamil Nadu, Kerala and Maharashtra, particularly the (Konkan coast) along with Uttar Pradesh and Bihar. Recently, paddy has also become an important crop of Punjab and Haryana. In states like Assam, West Bengal and Odisha, three crops of paddy are grown in a year. These are *Aus*, *Aman* and *Boro*.

In between the rabi and the kharif seasons, there is a short season during the summer months known as the **Zaid** season. Some of the crops produced during ‘zaid’ are

watermelon, muskmelon, cucumber, vegetables and fodder crops. Sugarcane takes almost a year to grow.

Major Crops

A variety of food and non food crops are grown in different parts of the country depending upon the variations in soil, climate and cultivation practices. Major crops grown in India are rice, wheat, millets, pulses, tea, coffee, sugarcane, oil seeds, cotton and jute, etc.

Rice: It is the staple food crop of a majority of the people in India. Our country is the second largest producer of rice in the world after China. It is a kharif crop which requires high temperature, (above 25°C) and high humidity with annual rainfall above 100 cm. In the areas of less rainfall, it grows with the help of irrigation.



Fig. 4.4 (a): Rice Cultivation



Fig. 4.4 (b): Rice is ready to be harvested in the field



India: Distribution of Rice

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Rice is grown in the plains of north and north-eastern India, coastal areas and the deltaic regions. Development of dense network of canal irrigation and tubewells have made it possible to grow rice in areas of less rainfall such as Punjab, Haryana and western Uttar Pradesh and parts of Rajasthan.

Wheat: This is the second most important cereal crop. It is the main food crop, in north and north-western part of the country. This rabi crop requires a cool growing season and a bright sunshine at the time of ripening. It requires 50 to 75 cm of annual rainfall evenly-distributed over the growing season. There are two important wheat-growing zones in the country – the Ganga-Satluj plains in the north-west and black soil region of the Deccan. The major wheat-producing states are Punjab, Haryana, Uttar Pradesh, Madhya Pradesh, Bihar and Rajasthan.



Fig. 4.5: Wheat Cultivation

Millets: Jowar, bajra and ragi are the important millets grown in India. Though, these are known as coarse grains, they have very high nutritional value. For example, ragi is very rich in iron, calcium, other micro nutrients and roughage. Jowar is the third most important food crop with respect to area and production. It is a rain-fed crop mostly grown in the moist areas which hardly needs irrigation. Major Jowar producing States are Maharashtra, Karnataka, Andhra Pradesh and Madhya Pradesh.



Fig. 4.6: Bajra Cultivation

Bajra grows well on sandy soils and shallow black soil. Major Bajra producing States are Rajasthan, Uttar Pradesh, Maharashtra, Gujarat and Haryana. Ragi is a crop of dry regions and grows well on red, black, sandy, loamy and shallow black soils. Major ragi producing states are: Karnataka, Tamil Nadu, Himachal Pradesh, Uttarakhand, Sikkim, Jharkhand and Arunachal Pradesh.

Maize: It is a crop which is used both as food and fodder. It is a kharif crop which requires temperature between 21°C to 27°C and grows well in old alluvial soil. In some states like Bihar maize is grown in rabi season also. Use of modern inputs such as HYV seeds, fertilisers and irrigation have contributed to the increasing production of maize. Major maize-producing states are Karnataka, Madhya Pradesh, Uttar Pradesh, Bihar, Andhra Pradesh and Telangana.



Fig. 4.7: Maize Cultivation



India: Distribution of Wheat

AGRICULTURE

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Pulses: India is the largest producer as well as the consumer of pulses in the world. These are the major source of protein in a vegetarian diet. Major pulses that are grown in India are tur (arhar), urad, moong, masur, peas and gram. Can you distinguish which of these pulses are grown in the kharif season and which are grown in the rabi season? Pulses need less moisture and survive even in dry conditions. Being leguminous crops, all these crops except arhar help in restoring soil fertility by fixing nitrogen from the air. Therefore, these are mostly grown in rotation with other crops. Major pulse producing states in India are Madhya Pradesh, Rajasthan, Maharashtra, Uttar Pradesh and Karnataka.

Food Crops other than Grains

Sugarcane: It is a tropical as well as a subtropical crop. It grows well in hot and humid climate with a temperature of 21°C to 27°C and an annual rainfall between 75cm. and 100cm. Irrigation is required in the regions of low rainfall. It can be grown on a variety of soils and needs manual labour from



Fig. 4.8: Sugarcane Cultivation

sowing to harvesting. India is the second largest producer of sugarcane only after Brazil. It is the main source of sugar, gur (jaggery), khandsari and molasses. The major sugarcane-producing states are Uttar Pradesh, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Telangana, Bihar, Punjab and Haryana.

Oil Seeds: In 2018 India was the second largest producer of groundnut in the world after China. In rapeseed production India was third largest producer in the world after Canada and China in 2018. Different oil seeds are grown covering approximately 12 per cent of the total cropped area of the country. Main oil-seeds produced in India are groundnut, mustard, coconut, sesamum (til), soyabean, castor seeds, cotton seeds, linseed and sunflower. Most of these are edible and used as cooking mediums. However, some of these are also used as raw material in the production of soap, cosmetics and ointments.

Groundnut is a kharif crop and accounts for about half of the major oilseeds produced in the country. Gujarat was the largest producer of groundnut followed by Rajasthan and Tamil Nadu in 2019–20. Linseed and mustard are rabi crops. Sesamum is a kharif crop in north and rabi crop in south India. Castor seed is grown both as rabi and kharif crop.

Tea: Tea cultivation is an example of plantation agriculture. It is also an important beverage crop introduced in India initially by the British. Today, most of the tea plantations are owned by Indians. The tea plant grows well in tropical and sub-tropical climates endowed with deep and fertile well-drained soil, rich in humus and organic matter. Tea bushes require warm and moist frost-free



Fig. 4.9: Groundnut, sunflower and mustard are ready to be harvested in the field

climate all through the year. Frequent showers evenly distributed over the year ensure continuous growth of tender leaves. Tea is a labour-intensive industry. It requires abundant, cheap and skilled labour. Tea is processed within the tea garden to restore its freshness. Major tea-producing states are Assam, hills of Darjeeling and Jalpaiguri districts, West Bengal, Tamil Nadu and Kerala. Apart from these, Himachal Pradesh, Uttarakhand, Meghalaya, Andhra Pradesh and Tripura are also tea-producing states in the country. In 2018 India was the second largest producer of tea after China.

Coffee: Indian coffee is known in the world for its good quality. The Arabica variety initially brought from Yemen is produced in the country. This variety is in great demand all over the world. Initially its cultivation was introduced on the Baba Budan Hills and even today its cultivation is confined to the Nilgiri in Karnataka, Kerala and Tamil Nadu.



Fig. 4.10: Tea Cultivation



Fig. 4.11: Tea-leaves Harvesting

Horticulture Crops: In 2018, India was the second largest producer of fruits and vegetables in the world after China. India is a producer of tropical as well as temperate fruits. Mangoes of Maharashtra, Andhra Pradesh, Telangana, Uttar Pradesh and West Bengal, oranges of Nagpur and Cherrapunjee (Meghalaya), bananas of Kerala, Mizoram, Maharashtra and Tamil Nadu, lichi and guava of Uttar Pradesh and Bihar, pineapples of Meghalaya, grapes of Andhra Pradesh, Telangana and Maharashtra, apples, pears, apricots and walnuts of Jammu and Kashmir and Himachal Pradesh are in great demand the world over.



Fig. 4.12: Apricots, apple and pomegranate

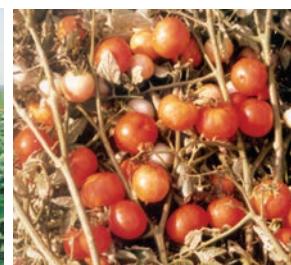


Fig. 4.13: Cultivation of vegetables – peas, cauliflower, tomato and brinjal

Source: Pocket book of agricultural statistics, 2020, Govt. of India. Directorate of Economics and Statistics.

India is an important producer of pea, cauliflower, onion, cabbage, tomato, brinjal and potato.

Non-Food Crops

Rubber: It is an equatorial crop, but under special conditions, it is also grown in tropical and sub-tropical areas. It requires moist and humid climate with rainfall of more than 200 cm. and temperature above 25°C.

Rubber is an important industrial raw material. It is mainly grown in Kerala, Tamil Nadu, Karnataka and Andaman and Nicobar islands and Garo hills of Meghalaya.

Activity

List the items which are made of rubber and are used by us.

Fibre Crops: Cotton, jute, hemp and natural silk are the four major fibre crops grown in India. The first three are derived from the crops grown in the soil, the latter is obtained from cocoons of the silkworms fed on green leaves specially mulberry. Rearing of silk worms for the production of silk fibre is known as **sericulture**.

Cotton: India is believed to be the original home of the cotton plant. Cotton is one of the main raw materials for cotton textile industry. In 2017, India was second largest producer of cotton after China. Cotton grows well in drier parts of the black cotton soil of the Deccan plateau. It requires high temperature, light rainfall or irrigation, 210 frost-free days and bright sun-shine for its growth. It is a kharif crop and requires 6 to 8 months to mature. Major cotton-producing states are— Maharashtra, Gujarat, Madhya Pradesh,



Fig. 4.14: Cotton Cultivation

Karnataka, Andhra Pradesh, Telangana, Tamil Nadu, Punjab, Haryana and Uttar Pradesh.

Jute: It is known as the golden fibre. Jute grows well on well-drained fertile soils in the flood plains where soils are renewed every year. High temperature is required during the time of growth. West Bengal, Bihar, Assam, Odisha and Meghalaya are the major jute producing states. It is used in making gunny bags, mats, ropes, yarn, carpets and other artefacts. Due to its high cost, it is losing market to synthetic fibres and packing materials, particularly the nylon.

Technological and Institutional Reforms

It was mentioned in the previous pages that agriculture has been practised in India for thousands of years. Sustained uses of land without compatible techno-institutional changes have hindered the pace of agricultural development. Inspite of development of sources of irrigation most of the farmers in large parts of the country still depend upon monsoon and natural fertility in order to carry on their agriculture. For a growing population, this poses a serious challenge. Agriculture which provides livelihood for more than 60 per cent of its population, needs some serious technical and institutional reforms. Thus, collectivisation, consolidation of holdings, cooperation and abolition of zamindari, etc. were given priority to bring about institutional reforms in the country after Independence. 'Land reform' was the main focus of our First Five Year Plan. The right of inheritance had already lead to fragmentation of land holdings necessitating consolidation of holdings.

The laws of land reforms were enacted but the implementation was lacking or lukewarm. The Government of India embarked upon introducing agricultural reforms to improve Indian agriculture in the 1960s and 1970s. The Green Revolution based on the use of package technology and the White Revolution (Operation Flood) were some of the strategies initiated to improve the lot of Indian agriculture. But, this too led to the concentration of development in few selected areas. Therefore, in the 1980s and 1990s, a comprehensive land development programme was initiated, which included both institutional and technical





Fig. 4.15: Modern technological equipments used in agriculture

reforms. Provision for crop insurance against drought, flood, cyclone, fire and disease, establishment of Grameen banks, cooperative societies and banks for providing loan facilities to the farmers at lower rates of interest were some important steps in this direction.

Kissan Credit Card (KCC), Personal Accident Insurance Scheme (PAIS) are some other schemes introduced by the Government of India for the benefit of the farmers. Moreover, special weather bulletins and agricultural programmes for farmers were introduced on the radio and television. The government also announces minimum support price, remunerative and procurement prices for important crops to check the exploitation of farmers by speculators and middlemen.

Activity

Collect information about agriculture, horticulture, agricultural schemes, etc. from Farmers' Portal website <https://farmer.gov.in/FarmerHome.aspx>. Discuss about the benefits of the information available on the portal.

Bhoodan – Gramdan

Mahatma Gandhi declared Vinoba Bhave as his spiritual heir. He also participated in

Satyagraha as one of the foremost satyagrahis. He was one of the votaries of Gandhi's concept of **gram swarajya**. After Gandhiji's martyrdom, Vinoba Bhave undertook **padyatra** to spread Gandhiji's message covered almost the entire country. Once, when he was delivering a lecture at Pochampalli in Andhra Pradesh, some poor landless villagers demanded some land for their economic well-being. Vinoba Bhave could not promise it to them immediately but assured them to talk to the Government of India regarding provision of land for them if they undertook cooperative farming. Suddenly, Shri Ram Chandra Reddy stood up and offered 80 acres of land to be distributed among 80 land-less villagers. This act was known as 'Bhoodan'. Later he travelled and introduced his ideas widely all over India. Some zamindars, owners of many villages offered to distribute some villages among the landless. It was known as **Gramdan**. However, many land-owners chose to provide some part of their land to the poor farmers due to the fear of land ceiling act. This Bhoodan-Gramdan movement initiated by Vinoba Bhave is also known as the **Blood-less Revolution**.

1. Multiple choice questions.

- (i) Which one of the following describes a system of agriculture where a single crop is grown on a large area?
 - (a) Shifting Agriculture
 - (b) Plantation Agriculture
 - (c) Horticulture
 - (d) Intensive Agriculture
- (ii) Which one of the following is a rabi crop?
 - (a) Rice
 - (b) Gram
 - (c) Millets
 - (d) Cotton
- (iii) Which one of the following is a leguminous crop?
 - (a) Pulses
 - (b) Jawar
 - (c) Millets
 - (d) Sesamum

2. Answer the following questions in 30 words.

- (i) Name one important beverage crop and specify the geographical conditions required for its growth.
- (ii) Name one staple crop of India and the regions where it is produced.
- (iii) Enlist the various institutional reform programmes introduced by the government in the interest of farmers.

3. Answer the following questions in about 120 words.

- (i) Suggest the initiative taken by the government to ensure the increase in agricultural production.
- (ii) Describe the geographical conditions required for the growth of rice.

PROJECT WORK

1. Group discussion on the necessity of literacy among farmers.
2. On an outline map of India show wheat producing areas.



ACTIVITY

Solve the puzzle by following your search horizontally and vertically to find the hidden answers.

A	Z	M	X	N	C	B	V	N	X	A	H	D	Q
S	D	E	W	S	R	J	D	Q	J	Z	V	R	E
D	K	H	A	R	I	F	G	W	F	M	R	F	W
F	N	L	R	G	C	H	H	R	S	B	S	V	T
G	B	C	W	H	E	A	T	Y	A	C	H	B	R
H	R	T	K	A	S	S	E	P	H	X	A	N	W
J	I	E	S	J	O	W	A	R	J	Z	H	D	T
K	C	L	A	E	G	A	C	O	F	F	E	E	Y
L	T	E	F	Y	M	T	A	T	S	S	R	G	I
P	D	E	J	O	U	Y	V	E	J	G	F	A	U
O	U	M	H	Q	S	U	D	I	T	S	W	S	P
U	O	A	C	O	T	T	O	N	E	A	H	F	O
Y	O	L	F	L	U	S	R	Q	Q	D	T	W	I
T	M	U	A	H	R	G	Y	K	T	R	A	B	F
E	A	K	D	G	D	Q	H	S	U	O	I	W	H
W	Q	Z	C	X	V	B	N	M	K	J	A	S	L

1. The two staple food crops of India.
2. This is the summer cropping season of India.
3. Pulses like arhar, moong, gram, urad contain...
4. It is a coarse grain.
5. The two important beverages in India are...
6. One of the four major fibers grown on black soils.



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MINERALS AND ENERGY RESOURCES

Haban comes to Guwahati with his father from a remote village.

He sees people getting into strange house like objects which move along the road. He also sees a "kitchen" dragging a number of house along with it. He is amazed and asked his father "Why don't our houses move like the one we saw in Guwahati, Ba?"

Ba replies, "These are not houses, they are buses and trains. Unlike our houses these are not made of bricks and stones, metal like iron and alluminium are used in making these. They do not move on their own. They are driven by an engine which needs energy to work."

We use different things in our daily life made from metal. Can you list a number of items used in your house made of metals. Where do these metals come from?

You have studied that the earth's crust is made up of different minerals embedded in the rocks. Various metals are extracted from these minerals after proper refinement.

Minerals are an indispensable part of our lives. Almost everything we use, from a tiny pin to a towering building or a big ship, all are made from minerals. The railway lines and the tarmac (paving) of the roads, our implements and machinery too are made from minerals. Cars, buses, trains, aeroplanes are manufactured from minerals and run on power resources derived from the earth. Even the food that we eat contains minerals. In all stages of development, human beings have used minerals for their livelihood, decoration, festivities, religious and ceremonial rites.

A bright smile from toothpaste and minerals

Toothpaste cleans your teeth. Abrasive minerals like silica, limestone, aluminium oxide and various phosphate minerals do the cleaning. Fluoride which is used to reduce cavities, comes from a mineral fluorite. Most toothpaste are made white with titanium oxide, which comes from minerals called rutile, ilmenite and anatase. The sparkle in some toothpastes comes from mica. The toothbrush and tube containing the paste are made of plastics from petroleum. Find out where these minerals are found?

Dig a little deeper and find out how many minerals are used to make a light bulb?

All living things need minerals

Life processes cannot occur without minerals. Although our mineral intake represents only about 0.3 per cent of our total intake of nutrients, they are so potent and so important that without them we would not be able to utilise the other 99.7 per cent of foodstuffs.

Dig a little deeper and collect "Nutritional Facts" printed on food labels.

What is a mineral?

Geologists define mineral as a "homogenous, naturally occurring substance with a definable internal structure." Minerals are found in varied forms in nature, ranging from the hardest diamond to the softest talc. Why are they so varied?

You have already learnt about rocks. Rocks are combinations of homogenous substances called **minerals**. Some rocks, for instance limestone, consist of a single mineral only, but majority of the rock consist of several minerals in varying proportions. Although, over 2000 minerals have been identified, only a few are abundantly found in most of the rocks.

A particular mineral that will be formed from a certain combination of elements depends upon the physical and chemical conditions under which the material forms. This, in turn, results in a wide range of colours, hardness, crystal forms, lustre and density that a particular mineral possesses. Geologists use these properties to classify the minerals.

Study of Minerals by Geographers and Geologists

Geographers study minerals as part of the earth's crust for a better understanding of landforms. The distribution of mineral resources and associated economic activities are of interest to geographers. A geologist, however, is interested in the formation of minerals, their age and physical and chemical composition.

However, for general and commercial purposes minerals can be classified as under.

MODE OF OCCURRENCE OF MINERALS

Where are these minerals found?

Minerals are usually found in "ores". The term ore is used to describe an accumulation of any mineral mixed with other elements. The mineral content of the ore must be in

sufficient concentration to make its extraction commercially viable. The type of formation or structure in which they are found determines the relative ease with which mineral ores may be mined. This also determines the cost of extraction. It is, therefore, important for us to understand the main types of formations in which minerals occur.

Minerals generally occur in these forms:

- (i) In igneous and metamorphic rocks minerals may occur in the cracks, crevices, faults or joints. The smaller occurrences are called **veins** and the larger are called **lodes**. In most cases, they are formed when minerals in liquid/molten and gaseous forms are forced upward through cavities towards the earth's surface. They cool and solidify as they rise. Major metallic minerals like tin, copper, zinc and lead etc. are obtained from veins and lodes.
- (ii) In sedimentary rocks a number of minerals occur in **beds or layers**. They have been formed as a result of deposition, accumulation and concentration in horizontal strata. Coal and some forms of iron ore have been concentrated as a result of long periods under great heat and pressure. Another group of sedimentary minerals include gypsum, potash salt and sodium salt. These are formed as a result of **evaporation** especially in arid regions.
- (iii) Another mode of formation involves the decomposition of surface rocks, and the removal of soluble constituents, leaving a **residual mass of weathered material** containing ores. Bauxite is formed this way.

CLASSIFICATION OF MINERALS

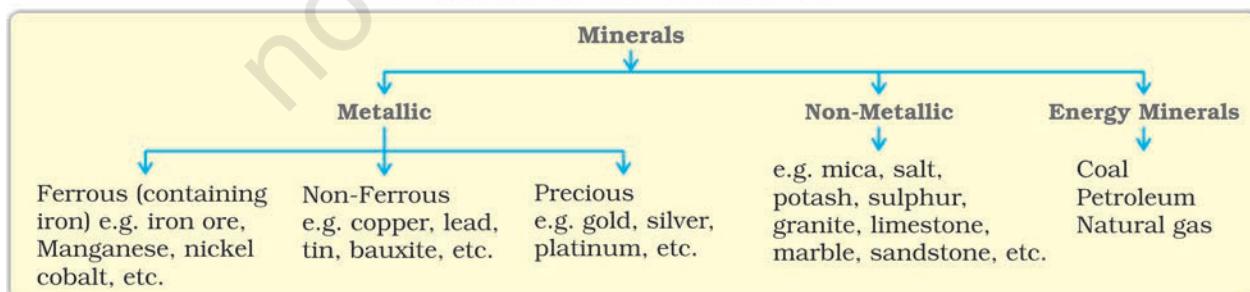


Fig. 5.1

- (iv) Certain minerals may occur as **alluvial deposits** in sands of valley floors and the base of hills. These deposits are called 'placer deposits' and generally contain minerals, which are not corroded by water. Gold, silver, tin and platinum are most important among such minerals.
- (v) The ocean waters contain vast quantities of minerals, but most of these are too widely diffused to be of economic significance. However, common salt, magnesium and bromine are largely derived from ocean waters. The ocean beds, too, are rich in manganese nodules.

Interesting Fact

Rat-Hole Mining. Do you know that most of the minerals in India are nationalised and their extraction is possible only after obtaining due permission from the government? But in most of the tribal areas of the north-east India, minerals are owned by individuals or communities. In Meghalaya, there are large deposits of coal, iron ore, limestone and dolomite etc. Coal mining in Jowai and Cherapunjee is done by family member in the form of a long narrow tunnel, known as 'Rat hole' mining. The National Green Tribunal has declared such activities illegal and recommended that these should be stopped forthwith.

Dig a little deeper: What is the difference between an open pit mine, a quarry and an underground mine with shafts?

India is fortunate to have fairly rich and varied mineral resources. However, these are unevenly distributed. Broadly speaking, peninsular rocks contain most of the reserves of coal, metallic minerals, mica and many other non-metallic minerals. Sedimentary rocks on the western and eastern flanks of the peninsula, in Gujarat and Assam have most of the petroleum deposits. Rajasthan with the rock systems of the peninsula, has reserves of many

non-ferrous minerals. The vast alluvial plains of north India are almost devoid of economic minerals. These variations exist largely because of the differences in the geological structure, processes and time involved in the formation of minerals.

Let us now study the distribution of a few major minerals in India. Always remember that the concentration of mineral in the ore, the ease of extraction and closeness to the market play an important role in affecting the economic viability of a reserve. Thus, to meet the demand, a choice has to be made between a number of possible options. When this is done a mineral 'deposit' or 'reserve' turns into a **mine**.

Ferrous Minerals

Ferrous minerals account for about three-fourths of the total value of the production of metallic minerals. They provide a strong base for the development of metallurgical industries. India exports substantial quantities of ferrous minerals after meeting her internal demands.

Iron Ore

Iron ore is the basic mineral and the backbone of industrial development. India is endowed with fairly abundant resources of iron ore. India is rich in good quality iron ores. Magnetite is the finest iron ore with a very high content of iron up to 70 per cent. It has excellent magnetic qualities, especially valuable in the electrical industry. Hematite ore is the most important industrial iron ore in terms of the quantity used, but has a slightly lower iron content than magnetite. (50-60 per cent). In 2018–19 almost entire production of iron ore (97%) accrued from Odisha, Chhattisgarh, Karnataka and Jharkhand. The remaining production (3%) was from other states.

Do you know?

Kudre in Kannada means horse. The highest peak in the western ghats of Karnataka resembles the face of a horse. The Bailadila hills look like the hump of an ox, and hence its name.



Fig. 5.2: Iron ore mine

The major iron ore belts in India are:

- **Odisha-Jharkhand belt:** In Odisha high grade hematite ore is found in Badampahar mines in the Mayurbhanj and Kendujhar districts. In the adjoining Singhbhum district of Jharkhand haematite iron ore is mined in Gua and Noamundi.
- **Durg-Bastar-Chandrapur belt** lies in Chhattisgarh and Maharashtra. Very high grade hematites are found in the famous Bailadila range of hills in the Bastar district of Chhattisgarh. The range of hills comprise of 14 deposits of super high grade hematite iron ore. It has the best physical properties needed for steel making. Iron ore from these mines is exported to Japan and South Korea via Vishakhapatnam port.
- **Ballari-Chitradurga-Chikkamagaluru-Tumakuru belt** in Karnataka has large reserves of iron ore. The Kudremukh mines located in the Western Ghats of Karnataka are a 100 per cent export unit. Kudremukh deposits are known to be one of the largest in the world. The ore is transported as slurry through a pipeline to a port near Mangaluru.
- **Maharashtra-Goa belt** includes the state of Goa and Ratnagiri district of

Maharashtra. Though, the ores are not of very high quality, yet they are efficiently exploited. Iron ore is exported through Marmagao port.

Manganese

Manganese is mainly used in the manufacturing of steel and ferro-manganese alloy. Nearly 10 kg of manganese is required to manufacture one tonne of steel. It is also used in manufacturing bleaching powder, insecticides and paints.

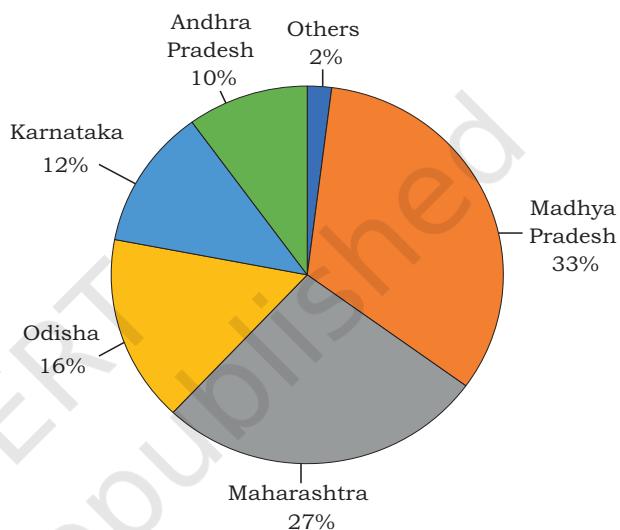


Fig. 5.3: Production of Manganese showing state-wise share in per cent, 2018–19

Dig a little deeper: Superimpose the maps showing distribution of iron ore, manganese, coal and iron and steel industry. Do you see any correlation. Why?

Non-Ferrous Minerals

India's reserves and production of non-ferrous minerals is not very satisfactory. However, these minerals, which include copper, bauxite, lead, zinc and gold play a vital role in a number of metallurgical, engineering and electrical industries. Let us study the distribution of copper and bauxite.



India: Distribution of Iron Ore, Manganese, Bauxite and Mica

Copper

India is critically deficient in the reserve and production of copper. Being malleable, ductile and a good conductor, copper is mainly used in electrical cables, electronics and chemical



Fig. 5.4: Copper mines at Malanjkhand

industries. The Balaghat mines in Madhya Pradesh, Khetri mines in Rajasthan and Singhbhum district of Jharkhand are leading producers of copper.

Bauxite

Though, several ores contain aluminium, it is from bauxite, a clay-like substance that alumina and later aluminium is obtained. Bauxite deposits are formed by the decomposition of a wide variety of rocks rich in aluminium silicates.

Aluminium is an important metal because it combines the strength of metals such as iron, with extreme lightness and also with good conductivity and great malleability.

India's bauxite deposits are mainly found in the Amarkantak plateau, Maikal hills and the plateau region of Bilaspur-Katni.

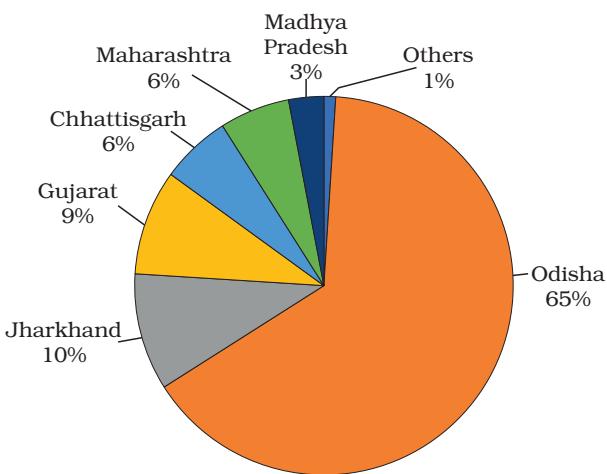


Fig. 5.5: Production of Bauxite showing state-wise share in per cent, 2018-19

Odisha was the largest bauxite producing state in India in 2016-17. Panchpatmali deposits in Koraput district are the most important bauxite deposits in the state.



Fig. 5.6: Bauxite Mine

Dig a little deeper: Locate the mines of Bauxite on the physical map of India.



Interesting Fact

After the discovery of aluminium Emperor Napoleon III wore buttons and hooks on his clothes made of aluminium and served food to his more illustrious guests in aluminium utensils and the less honourable ones were served in gold and silver utensils. Thirty years after this incident aluminium bowls were most common with the beggars in Paris.

Non-Metallic Minerals

Mica is a mineral made up of a series of plates or leaves. It splits easily into thin sheets. These sheets can be so thin that a thousand can be layered into a mica sheet of a few centimeters high. Mica can be clear, black, green, red yellow or brown. Due to its excellent di-electric strength, low power loss factor, insulating properties and resistance to high voltage, mica is one of the most indispensable minerals used in electric and electronic industries.

Mica deposits are found in the northern edge of the Chota Nagpur plateau. Koderma Gaya – Hazaribagh belt of Jharkhand is the leading producer.

In Rajasthan, the major mica producing area is around Ajmer. Nellore mica belt of Andhra Pradesh is also an important producer in the country.

Rock Minerals

Limestone is found in association with rocks composed of calcium carbonates or calcium and magnesium carbonates. It is found in sedimentary rocks of most geological formations. Limestone is the basic raw material for the cement industry and essential for smelting iron ore in the blast furnace.

Dig a little deeper: Study the maps to explain why Chota Nagpur is a storehouse of minerals.

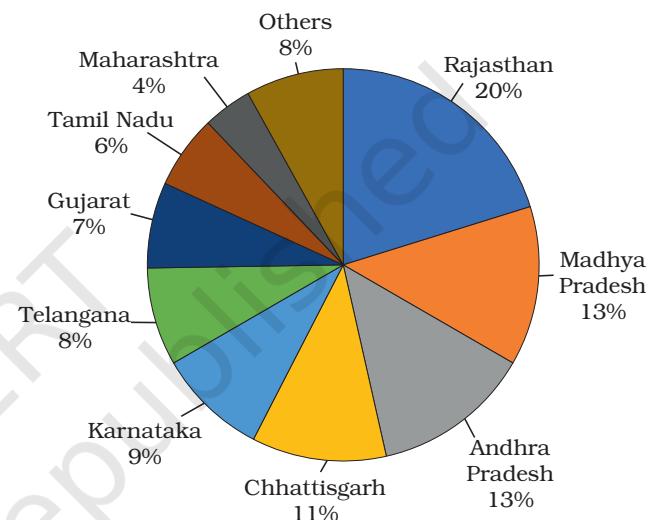


Fig. 5.7: Production of Limestone showing state-wise share in per cent, 2018-19

Hazards of Mining

Have you ever wondered about the efforts the miners make in making life comfortable for you? What are the impacts of mining on the health of the miners and the environment?

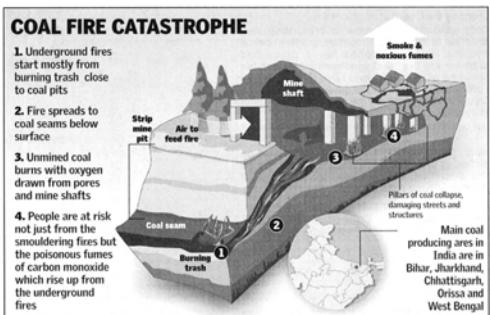
The dust and noxious fumes inhaled by miners make them vulnerable to pulmonary diseases. The risk of collapsing mine roofs, inundation and fires in coalmines are a constant threat to miners.

The water sources in the region get contaminated due to mining. Dumping of waste and slurry leads to degradation of land, soil, and increase in stream and river pollution.



Fig. 5.8: Air pollution due to generation of dust in mining areas

Jharia to be shifted



Law Kumar Mishra | TNN

Dhanbad: The government has decided to relocate an entire township — Jharia — because of the uncontrollable spread of underground fires that have been burning for years in the coal belt.

Coal unit fined Rs 300 cr in damages

Debanjanay Mahapatra | TNN

New Delhi: The Supreme Court has asked India's largest coal producing company — South Eastern Coalfields Ltd — to pay within a month Rs 300 crore as compensation for using forest land in Chhattisgarh. This is in addition to Rs 50 crore already paid by the PSU, which is a subsidiary of Coal India Ltd, to continue its operations in the state.

SECL will have to pay Rs 100 crore within a week and the rest within a month, the forest Bench comprising Justice Y K Sabharwal and Justices Arijit Pasayat and S H Kapadia directed on Friday.

The court, in its earlier judgment, had said that all companies were liable to pay Penal Compensation Aforestation cost and amount of Net Present Value to continue operations in forest land already allotted to them by the states.

Appearing for the PSU, solicitor general G E Vahamwati argued that the company had one of the best records for protection of environment and had won awards at the national and state level. He said the Rs 50 crore already deposited by the company was compensation enough for it to be allowed coal mining operations. Appearing for the ministry of environment and forests, counsel A N Ran-

"The Centre has already sanctioned Rs 14 crore for the first phase of shifting."

Claiming it to be one of the world's major evacuation drives, Soren said the shifting would be done in three phases in five years and he also as-

sued.

1990. According to the Rana panel, the cost of shifting people will be at Rs 20,000 crore. The Rana panel had also said, "It is profitable to shift people from Jharia since coal worth Rs 60,000 crore is lying unutilised beneath the Jharia

'Over 50% of coal-belt mines unsafe'

Law Kumar Mishra | TNN

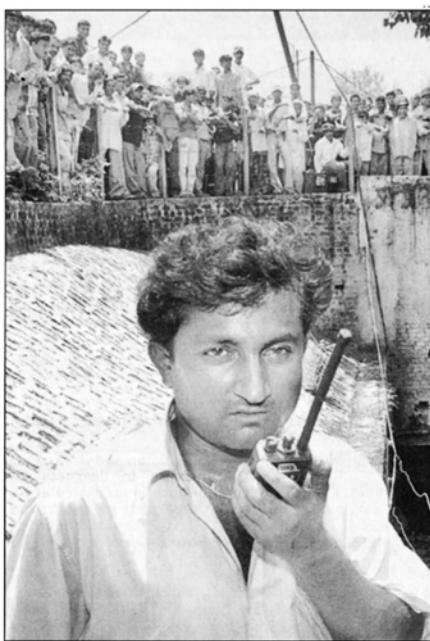
Dhanbad: Three days after one of the worst mining disasters in decades left 54 people dead, the chief of the company which owns these mines, said no less than half the mines in the area did not meet the basic safety standards.

Bharat Coking Coal Ltd (BCCl) chairman Partha S Bhattacharya, however, said on Saturday the company shouldn't be blamed for operating unsafe mines because workers and trade unions had blocked moves to shut these for fear of losing jobs. He said only one out of 41 mines was operated scientifically and of the rest, the many were functioning against the advice of the Directorate General of Mines Safety. He described safety standards in 24 mines as poor.

Bhattacharya said workers were aware that they would have to seek voluntary retirement if unsafe mines were shut.

Bharat Coking Coal management on Saturday also handed over employment letters to the immediate people nominated by families of victims. Ironically, these people, most likely, would go to work in mines deemed unsafe by the company.

BCCl's audit of the safety status of mines, graded second and third degrees,



WAIT AND WATCH: A crowd watches the ongoing rescue operation outside the Bharat Coking Coal Ltd mine at Bhatdih in Jharkhand on Thursday

'Safety standards were not in place'

Law Kumar Mishra | TNN

Dhanbad: Union coal minister Shibu Soren on Thursday announced an ex gratia of Rs 3 lakh to the families of the mine tragedy victims. Soren said: "Dependents of the victims will be provided employment by the Bharat Coking Coal from today. A probe by the director general of mines safety and the labour commissioner will also be initiated."

Soren also held discussions with Bharat Coking Coal officials and promised medical help to the four survivors.

tained, even though the director general of mine safety carries out surveys of the safety norms," an expert said.

Some agitating miners alleged that "there is no emergency measures inside the mine. We go deep — between 400 feet and 1,500 ft — into the mines with only an oxygen mask." The tragedy points to the lack of security measures by Bharat Coking Coal despite previous instances of disasters due to methane leak.

At least 48 people were killed in explosions in Jeetpur mine, 43 in Sudamdeeh and 30 in

Stricter safety regulations and implementation of environmental laws are essential to prevent mining from becoming a "killer industry".

CONSERVATION OF MINERALS

We all appreciate the strong dependence of industry and agriculture upon mineral deposits and the substances manufactured from them. The total volume of workable mineral deposits is an insignificant fraction i.e. one per cent of the earth's crust. We are rapidly consuming mineral resources that

required millions of years to be created and concentrated. The geological processes of mineral formation are so slow that the rates of replenishment are infinitely small in comparison to the present rates of consumption. Mineral resources are, therefore, finite and non-renewable. Rich mineral deposits are our country's extremely valuable but short-lived possessions. Continued extraction of ores leads to increasing costs as mineral extraction comes from greater depths along with decrease in quality.



A concerted effort has to be made in order to use our mineral resources in a planned and sustainable manner. Improved technologies need to be constantly evolved to allow use of low grade ores at low costs. Recycling of metals, using scrap metals and other substitutes are steps in conserving our mineral resources for the future.

Dig a little deeper: Make a list of items where substitutes are being used instead of minerals.
Where are these substitutes obtained from?

Energy Resources

Energy is required for all activities. It is needed to cook, to provide light and heat, to propel vehicles and to drive machinery in industries.

Energy can be generated from fuel minerals like coal, petroleum, natural gas, uranium and from electricity. Energy resources can be classified as conventional and non-conventional sources. Conventional sources include: firewood, cattle dung cake, coal, petroleum, natural gas and electricity (both hydel and thermal). Non-conventional sources include solar, wind, tidal, geothermal, biogas and atomic energy. Firewood and cattle dung cake are most common in rural India. According to one estimate more than 70 per cent energy requirement in rural households is met by these two ; continuation of these is increasingly becoming difficult due to decreasing forest area. Moreover, using dung cake too is being discouraged because it consumes most valuable manure which could be used in agriculture.

Conventional Sources of Energy

Coal: In India, coal is the most abundantly available fossil fuel. It provides a substantial part of the nation's energy needs. It is used for power generation, to supply energy to industry as well as for domestic needs. India is highly dependent on coal for meeting its commercial energy requirements.

As you are already aware that coal is formed due the compression of plant material over millions of years. Coal, therefore, is found in a variety of forms depending on the degrees of compression and the depth and

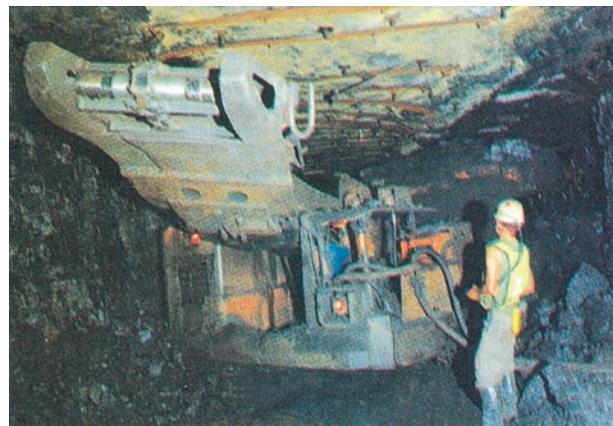


Fig. 5.9 (a): A view from inside of a coal mine



Fig. 5.9 (b): A view from outside of a coal mine

time of burial. Decaying plants in swamps produce peat. Which has a low carbon and high moisture contents and low heating capacity. **Lignite** is a low grade brown coal, which is soft with high moisture content. The principal lignite reserves are in Neyveli in Tamil Nadu and are used for generation of electricity. Coal that has been buried deep and subjected to increased temperatures is **bituminous** coal. It is the most popular coal in commercial use. Metallurgical coal is high grade bituminous coal which has a special value for smelting iron in blast furnaces. **Anthracite** is the highest quality hard coal.

In India coal occurs in rock series of two main geological ages, namely Gondwana, a little over 200 million years in age and in tertiary deposits which are only about 55 million years old. The major resources of Gondwana coal, which are metallurgical coal, are located in Damodar valley (West Bengal-



India: Distribution of Coal, Oil and Natural Gas

Activity

Collect information about cross country natural gas pipelines laid by GAIL (India) under "One Nation One Grid".

Jharkhand). Jharia, Raniganj, Bokaro are important coalfields. The Godavari, Mahanadi, Son and Wardha valleys also contain coal deposits.

Tertiary coals occur in the north eastern states of Meghalaya, Assam, Arunachal Pradesh and Nagaland.

Remember coal is a bulky material, which loses weight on use as it is reduced to ash. Hence, heavy industries and thermal power stations are located on or near the coalfields.

Petroleum

Petroleum or mineral oil is the next major energy source in India after coal. It provides fuel for heat and lighting, lubricants for machinery and raw materials for a number of manufacturing industries. Petroleum refineries act as a “nodal industry” for synthetic textile, fertiliser and numerous chemical industries.

Most of the petroleum occurrences in India are associated with anticlines and fault traps in the rock formations of the tertiary age. In regions of folding, anticlines or domes, it occurs where oil is trapped in the crest of the upfold. The oil bearing layer is a porous limestone or sandstone through which oil may flow. The oil is prevented from rising or sinking by intervening non-porous layers.

Petroleum is also found in fault traps between porous and non-porous rocks. Gas, being lighter usually occurs above the oil.

Mumbai High, Gujarat and Assam are major petroleum production areas in India. From the map locate the 3 major off shore fields of western India. Ankeleshwar is the most important field of Gujarat. Assam is the oldest oil producing state of India. Digboi, Naharkatiya and Moran-Hugrijan are the important oil fields in the state.

Natural Gas

Natural Gas is found with petroleum deposits and is released when crude oil is brought to the surface. It can be used as a domestic and industrial fuel. It is used as fuel in power sector to generate electricity, for heating purpose in industries, as raw material in chemical, petrochemical and fertilizer industries, as transport fuel and as cooking fuel. With the expansion of gas infrastructure and local city

gas distribution (COD) networks, natural gas is also emerging as a preferred transport fuel (CNG) and cooking fuel (PNG) at homes. India's major gas reserves are found in the Mumbai High and allied fields along the west coast which are supplemented by finds in the Cambay basin. Along the East Coast, new reserves of natural gas have been discovered in the Krishna-Godavari basin.

The first 1,700 km long Hazira-Vijaipur-Jagdishpur (HVJ) cross country gas pipeline, constructed by GAIL (India), linked Mumbai High and Bassein gas fields with various fertilizer, power and industrial complexes in western and northern India. This artery provided impetus to Indian gas market development. Overall, India's gas infrastructure has expanded over ten times from 1,700 km to 18,500 km of cross-country pipelines and is expected to soon reach over 34,000 km as Gas Grid by linking all gas sources and consuming markets across the country including North Eastern states.

Electricity

Electricity has such a wide range of applications in today's world that, its per capita consumption is considered as an index of development. Electricity is generated mainly in two ways: by running water which drives hydro turbines to generate *hydro electricity*; and by burning other fuels such as coal, petroleum and natural gas to drive turbines to produce *thermal power*. Once generated the electricity is exactly the same.

Activity

Name some river valley projects and write the names of the dams built on these rivers.

Hydro electricity is generated by fast flowing water, which is a renewable resource. India has a number of multi-purpose projects like the Bhakra Nangal, Damodar Valley corporation, the Kopili Hydel Project etc. producing hydroelectric power.

Thermal electricity is generated by using coal, petroleum and natural gas. The thermal power stations use non-renewable fossil fuels for generating electricity.



India: Distribution of Nuclear and Thermal Power Plants

MINERALS AND ENERGY RESOURCES

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Collect information about thermal/hydel power plants located in your state. Show them on the map of India.

Non-Conventional Sources of Energy

The growing consumption of energy has resulted in the country becoming increasingly dependent on fossil fuels such as coal, oil and gas. Rising prices of oil and gas and their potential shortages have raised uncertainties about the security of energy supply in future, which in turn has serious repercussions on the growth of the national economy. Moreover, increasing use of fossil fuels also causes serious environmental problems. Hence, there is a pressing need to use renewable energy sources like solar energy, wind, tide, biomass and energy from waste material. These are called non-conventional energy sources.

India is blessed with an abundance of sunlight, water, wind and biomass. It has the largest programmes for the development of these renewable energy resources.

Nuclear or Atomic Energy

It is obtained by altering the structure of atoms. When such an alteration is made, much energy is released in the form of heat and this is used to generate electric power. Uranium and Thorium, which are available in Jharkhand and the Aravalli ranges of Rajasthan are used for generating atomic or nuclear power. The Monazite sands of Kerala is also rich in Thorium.

Locate the 6 nuclear power stations and find out the state in which they are located.

Solar Energy

India is a tropical country. It has enormous possibilities of tapping solar energy. Photovoltaic technology converts sunlight directly into electricity. Solar energy is fast becoming popular in rural and remote areas. Some big solar power plants are being established in different parts of India which will minimise the dependence of rural households on firewood and dung cakes, which in turn will contribute to environmental conservation and adequate supply of manure in agriculture.



Fig. 5.10: Solar operated electronic milk testing equipment

Activity

Collect information about newly established solar power plants in India.

Wind power

India has great potential of wind power. The largest wind farm cluster is located in Tamil Nadu from Nagarcoil to Madurai. Apart from these, Andhra Pradesh, Karnataka, Gujarat, Kerala, Maharashtra and Lakshadweep have important wind farms. Nagarcoil and Jaisalmer are well known for effective use of wind energy in the country.



Fig. 5.11: Wind mills – Nagarcoil

Biogas

Shrubs, farm waste, animal and human waste are used to produce biogas for domestic consumption in rural areas. Decomposition of organic matter yields gas, which has higher thermal efficiency in comparison to kerosene, dung cake and charcoal. Biogas plants are set up at municipal, cooperative and individual levels. The plants using cattle dung are known as 'Gobar gas plants' in rural India. These provide twin benefits to the farmer in the form of energy and improved quality of

manure. Biogas is by far the most efficient use of cattle dung. It improves the quality of manure and also prevents the loss of trees and manure due to burning of fuel wood and cow dung cakes.

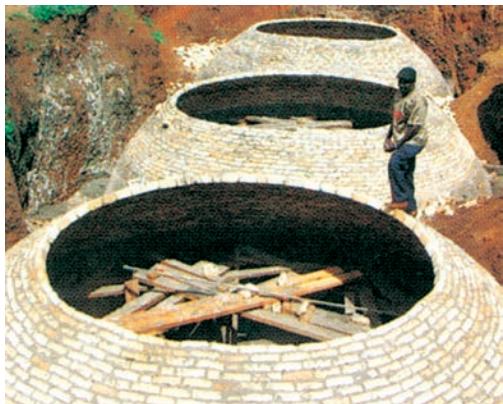


Fig. 5.12: Biogas Plant

Tidal Energy

Oceanic tides can be used to generate electricity. Floodgate dams are built across inlets. During high tide water flows into the inlet and gets trapped when the gate is closed. After the tide falls outside the flood gate, the water retained by the floodgate flows back to the sea via a pipe that carries it through a power-generating turbine.

In India the Gulf of Khambhat, the Gulf of Kuchchh in Gujarat on the western coast and Gangetic delta in Sunderban regions of West Bengal provide ideal conditions for utilising tidal energy.

Geo Thermal Energy

Geo thermal energy refers to the heat and electricity produced by using the heat from the interior of the Earth. Geothermal energy exists because, the Earth grows progressively hotter with increasing depth. Where the

geothermal gradient is high, high temperatures are found at shallow depths. Groundwater in such areas absorbs heat from the rocks and becomes hot. It is so hot that when it rises to the earth's surface, it turns into steam. This steam is used to drive turbines and generate electricity.

There are several hundred hot springs in India, which could be used to generate electricity. Two experimental projects have been set up in India to harness geothermal energy. One is located in the Parvati valley near Manikarn in Himachal Pradesh and the other is located in the Puga Valley, Ladakh.

Conservation of Energy Resources

Energy is a basic requirement for economic development. Every sector of the national economy – agriculture, industry, transport, commercial and domestic – needs inputs of energy. The economic development plans implemented since Independence necessarily required increasing amounts of energy to remain operational. As a result, consumption of energy in all forms has been steadily rising all over the country.

In this background, there is an urgent need to develop a sustainable path of energy development. Promotion of energy conservation and increased use of renewable energy sources are the twin planks of sustainable energy.

India is presently one of the least energy efficient countries in the world. We have to adopt a cautious approach for the judicious use of our limited energy resources. For example, as concerned citizens we can do our bit by using public transport systems instead of individual vehicles; switching off electricity when not in use, using power-saving devices and using non-conventional sources of energy. After all, “energy saved is energy produced”.

EXERCISES EXERCISES EXERCISES EXERCISES EXERCISES

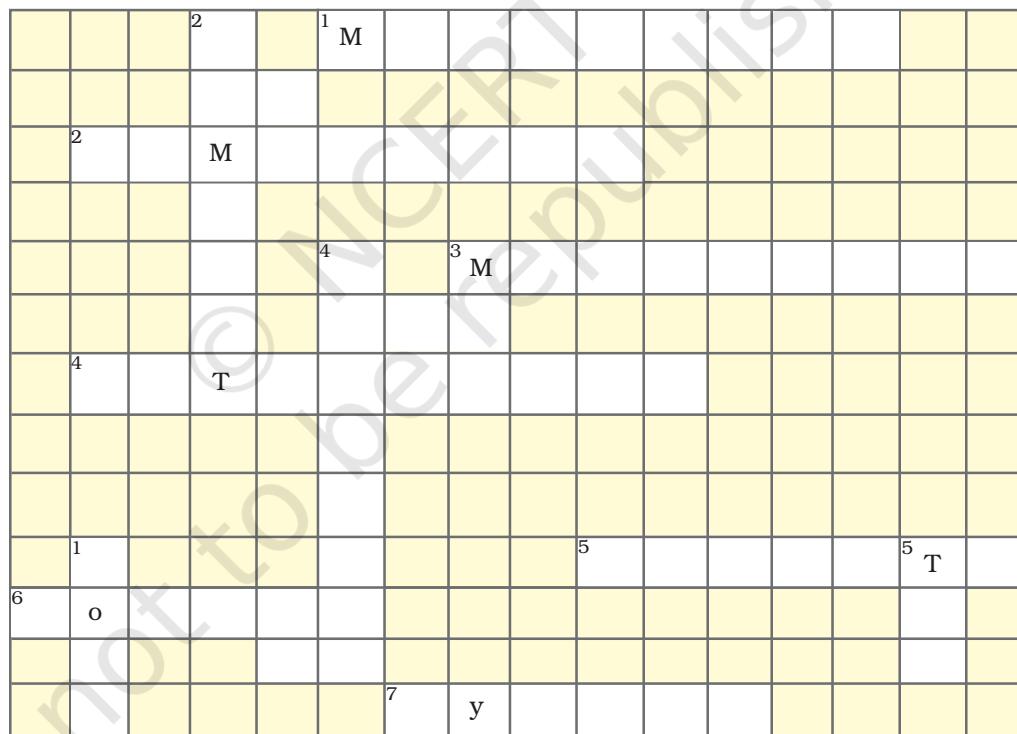
1. Multiple choice questions.
 - (i) Which one of the following minerals is formed by decomposition of rocks, leaving a residual mass of weathered material?

(a) coal	(b) bauxite	(c) gold	(d) zinc
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 - (ii) Koderma, in Jharkhand is the leading producer of which one of the following minerals?

(a) bauxite	(b) mica	(c) iron ore	(d) copper
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ACTIVITY

Fill the name of the correct mineral in the crossword below:



ACROSS

1. A ferrous mineral (9)
2. Raw material for cement industry (9)
3. Finest iron ore with magnetic properties (9)
4. Highest quality hard coal (10)
5. Aluminium is obtained from this ore (7)
6. Khetri mines are famous for this mineral (6)
7. Formed due to evaporation (6)

DOWN

1. Found in placer deposit (4)
2. Iron ore mined in Bailadila (8)
3. Indispensable for electrical industry (4)
4. Geological Age of coal found in north east India (8)
5. Formed in veins and lodes (3)

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6



MANUFACTURING INDUSTRIES

On the occasion of Diwali, Harish went to a market with his parents. They purchased shoes and clothes for him. His mother purchased utensils, sugar, tea and diyas (earthen lamps). Harish observed that the shops in the market were flooded with items for sale. He wondered how so many items could be made in such large quantities. His father explained that shoes, clothes, sugar etc. are manufactured by machines in large industries, some utensils are manufactured in small industries, while items like **diyas** are made by individual artisans in household industry.

Do you have some ideas about these industries?

Production of goods in large quantities after processing from raw materials to more valuable products is called manufacturing. Do you know that paper is manufactured from wood, sugar from sugarcane, iron and steel from iron ore and aluminium from bauxite? Do you also know that some types of clothes are manufactured from yarn which itself is an industrial product?

People employed in the secondary activities manufacture the primary materials into finished goods. The workers employed in steel factories, car, breweries, textile industries, bakeries etc. fall into this category. Some people are employed in providing services. In this chapter, we are mainly concerned with manufacturing industries which fall in the secondary sector.

The economic strength of a country is measured by the development of manufacturing industries.

IMPORTANCE OF MANUFACTURING

Manufacturing sector is considered the backbone of development in general and economic development in particular mainly because—

- Manufacturing industries not only help in modernising agriculture, which forms the backbone of our economy, they also reduce the heavy dependence of people on agricultural income by providing them jobs in secondary and tertiary sectors.
- Industrial development is a precondition for eradication of unemployment and poverty from our country. This was the main philosophy behind public sector industries and joint sector ventures in India. It was also aimed at bringing down regional disparities by establishing industries in tribal and backward areas.
- Export of manufactured goods expands trade and commerce, and brings in much needed foreign exchange.
- Countries that transform their raw materials into a wide variety of finished goods of higher value are prosperous. India's prosperity lies in increasing and diversifying its manufacturing industries as quickly as possible.

Agriculture and industry are not exclusive of each other. They move hand in hand. For instance, the agro-industries in India have given a major boost to agriculture by raising its productivity. They depend on the latter for raw materials and sell their products such as irrigation pumps, fertilisers, insecticides, pesticides, plastic and PVC pipes, machines and tools, etc. to the farmers. Thus, development and competitiveness of

manufacturing industry has not only assisted agriculturists in increasing their production but also made the production processes very efficient.

In the present day world of globalisation, our industry needs to be more efficient and competitive. Self-sufficiency alone is not enough. Our manufactured goods must be at par in quality with those in the international market. Only then, will we be able to compete in the international market.

Classification of Industries

List the various manufactured products you use in your daily life such as – transistors, electric bulbs, vegetable oil, cement, glassware, petrol, matches, scooters, automobiles, medicines and so on. If we classify the various industries based on a particular criterion then we would be able to understand their manufacturing better. Industries may be classified as follows:

On the basis of source of raw materials used:

- Agro based: cotton, woollen, jute, silk textile, rubber and sugar, tea, coffee, edible oil.
- Mineral based: iron and steel, cement, aluminium, machine tools, petrochemicals.

According to their main role:

- Basic or key industries are those which supply their products as raw materials to manufacture other goods e.g. iron and steel and copper smelting, aluminum smelting.
- Consumer industries that produce goods for direct use by consumers – sugar, toothpaste, paper, sewing machines, fans etc.

On the basis of capital investment:

- A small scale industry is defined with reference to the maximum investment

allowed on the assets of a unit. This limit has changed over a period of time. At present the maximum investment allowed is rupees one crore.

On the basis of ownership:

- Public sector, owned and operated by government agencies – BHEL, SAIL etc.
- Private sector industries owned and operated by individuals or a group of individuals – TISCO, Bajaj Auto Ltd., Dabur Industries.
- Joint sector industries which are jointly run by the state and individuals or a group of individuals. Oil India Ltd. (OIL) is jointly owned by public and private sector.
- Cooperative sector industries are owned and operated by the producers or suppliers of raw materials, workers or both. They pool in the resources and share the profits or losses proportionately. Such examples are the sugar industry in Maharashtra, the coir industry in Kerala.

Based on the bulk and weight of raw material and finished goods:

- Heavy industries such as iron and steel
- Light industries that use light raw materials and produce light goods such as electrical goods industries.

Activity

Classify the following into two groups on the basis of bulk and weight of raw material and finished goods.

- | | |
|-----------------------|-----------------------|
| (i) Oil | (vi) Sewing Machines |
| (ii) Knitting needles | (vii) Shipbuilding |
| (iii) Brassware | (viii) Electric Bulbs |
| (iv) Fuse wires | (ix) Paint brushes |
| (v) Watches | (x) Automobiles |

Agro-based Industries

Cotton, jute, silk, woollen textiles, sugar and edible oil, etc. industries are based on agricultural raw materials.

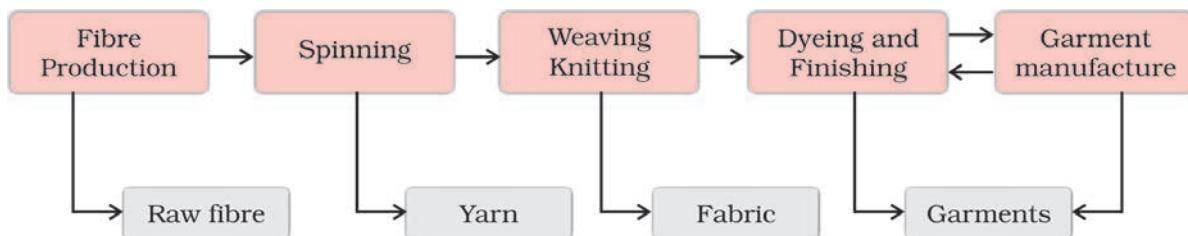


Fig. 6.1: Value addition in the textile industry

Textile Industry: The textile industry occupies unique position in the Indian economy, because it contributes significantly to industrial production, employment generation and foreign exchange earnings. It is the only industry in the country, which is self-reliant and complete in the value chain i.e., from raw material to the highest value added products.

Cotton Textiles: In ancient India, cotton textiles were produced with hand spinning and handloom weaving techniques. After the 18th century, power-looms came into use. Our traditional industries suffered a setback during the colonial period because they could not compete with the mill-made cloth from England.

- The first successful textile mill was established in Mumbai in 1854.
- The two world wars were fought in Europe, India was a British colony. There was a demand for cloth in U.K. hence, they gave a boost to the development of the cotton textile industry.

In the early years, the cotton textile industry was concentrated in the cotton growing belt of Maharashtra and Gujarat. Availability of raw cotton, market, transport including accessible port facilities, labour, moist climate, etc. contributed towards its localisation. This industry has close links with agriculture and provides a living to farmers, cotton boll pluckers and workers engaged in ginning, spinning, weaving,

dyeing, designing, packaging, tailoring and sewing. The industry by creating demands supports many other industries, such as, chemicals and dyes, packaging materials and engineering works.

While spinning continues to be centralised in Maharashtra, Gujarat and Tamil Nadu, weaving is highly decentralised to provide scope for incorporating traditional skills and designs of weaving in cotton, silk, zari, embroidery, etc. India has world class production in spinning, but weaving supplies low quality of fabric as it cannot use much of the high quality yarn produced in the country. Weaving is done by handloom, powerloom and in mills.

The handspun khadi provides large scale employment to weavers in their homes as a cottage industry.

Why did Mahatma Gandhi lay emphasis on spinning yarn and weaving khadi?

Why is it important for our country to keep the mill sector loomage lower than power loom and handloom?

Jute Textiles

India is the largest producer of raw jute and jute goods and stands at second place as an exporter after Bangladesh. Most of the mills are located in West Bengal, mainly along the banks of the Hugli river, in a narrow belt.

The first jute mill was set up near Kolkata in 1855 at Rishra. After Partition in 1947, the jute mills remained in India but three-fourth of the jute producing area went to Bangladesh (erstwhile East Pakistan).



India: Distribution of cotton, woollen and silk industries

MANUFACTURING INDUSTRIES



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Factors responsible for their location in the Hugli basin are: proximity of the jute producing areas, inexpensive water transport, supported by a good network of railways, roadways and waterways to facilitate movement of raw material to the mills, abundant water for processing raw jute, cheap labour from West Bengal and adjoining states of Bihar, Odisha and Uttar Pradesh. Kolkata as a large urban centre provides banking, insurance and port facilities for export of jute goods.

Sugar Industry

India stands second as a world producer of sugar but occupies the first place in the production of *gur* and *khandsari*. The raw material used in this industry is bulky, and in haulage its sucrose content reduces. The mills are located in Uttar Pradesh, Bihar, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Gujarat, Punjab, Haryana and Madhya Pradesh. Sixty per cent mills are in Uttar Pradesh and Bihar. This industry is seasonal in nature so, it is ideally suited to the cooperative sector. Can you explain why this is so?

In recent years, there is a tendency for the mills to shift and concentrate in the southern and western states, especially in Maharashtra. This is because the cane produced here has a higher sucrose content. The cooler climate also ensures a longer crushing season. Moreover, the cooperatives are more successful in these states.

Mineral-based Industries

Industries that use minerals and metals as raw materials are called mineral-based industries. Can you name some industries that would fall in this category?

Iron and Steel Industry

The iron and steel industry is the basic industry since all the other industries — heavy, medium and light, depend on it for their machinery. Steel is needed to manufacture a variety of engineering goods, construction material, defence, medical, telephonic, scientific equipment and a variety of consumer goods.

Activity

Make a list of all such goods made of steel that you can think of.

Production and consumption of steel is often regarded as the index of a country's development. Iron and steel is a heavy industry because all the raw materials as well as finished goods are heavy and bulky entailing heavy transportation costs. Iron ore, coking coal and lime stone are required in the ratio of approximately 4 : 2 : 1. Some quantities of manganese, are also required to harden the steel. Where should the steel plants be ideally located? Remember that the finished products also need an efficient transport network for their distribution to the markets and consumers.

Processes of Manufacture of Steel

Blast Furnace

Transport of raw material to plant

Iron ore is melted. Lime stone is fluxing material which is added. Slag is removed. Coke is burnt to heat the ore.

Pig Iron

Molten materials poured into moulds called pigs

Shaping Metal

Rolling, pressing, casting and forging

Steel Making

Pig iron is further purified by melting and oxidising the impurities. Manganese, nickel, chromium are added

Fig. 6.2





India: Iron and Steel Plants

MANUFACTURING INDUSTRIES

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Chhotanagpur plateau region has the maximum concentration of iron and steel industries. It is largely, because of the relative advantages this region has for the development of this industry. These include, low cost of iron ore, high grade raw materials in proximity, cheap labour and vast growth potential in the home market.

Aluminium Smelting

Aluminium smelting is the second most important metallurgical industry in India. It is light, resistant to corrosion, a good conductor of heat, malleable and becomes strong when it is mixed with other metals. It is used to manufacture aircraft, utensils and wires. It has gained popularity as a substitute of steel, copper, zinc and lead in a number of industries.



Fig. 6.3: Strip coating mill at smelter of NALCO

Aluminium smelting plants in the country are located in Odisha, West Bengal, Kerala, Uttar Pradesh, Chhattisgarh, Maharashtra and Tamil Nadu.

Bauxite, the raw material used in the smelters is a very bulky, dark reddish coloured rock. The flow chart given below shows the process of manufacturing aluminium. Regular supply of electricity and an assured source of raw material at minimum cost are the two prime factors for location of the industry.

Chemical Industries

The Chemical industry in India is fast growing and diversifying. It comprises both large and small scale manufacturing units. Rapid growth has been recorded in both inorganic and organic sectors. Inorganic chemicals include sulphuric acid (used to manufacture fertilizers, synthetic fibres, plastics, adhesives, paints, dyes stuffs), nitric acid, alkalies, soda ash (used to make glass, soaps and detergents, paper) and caustic soda. These industries are widely spread over the country.

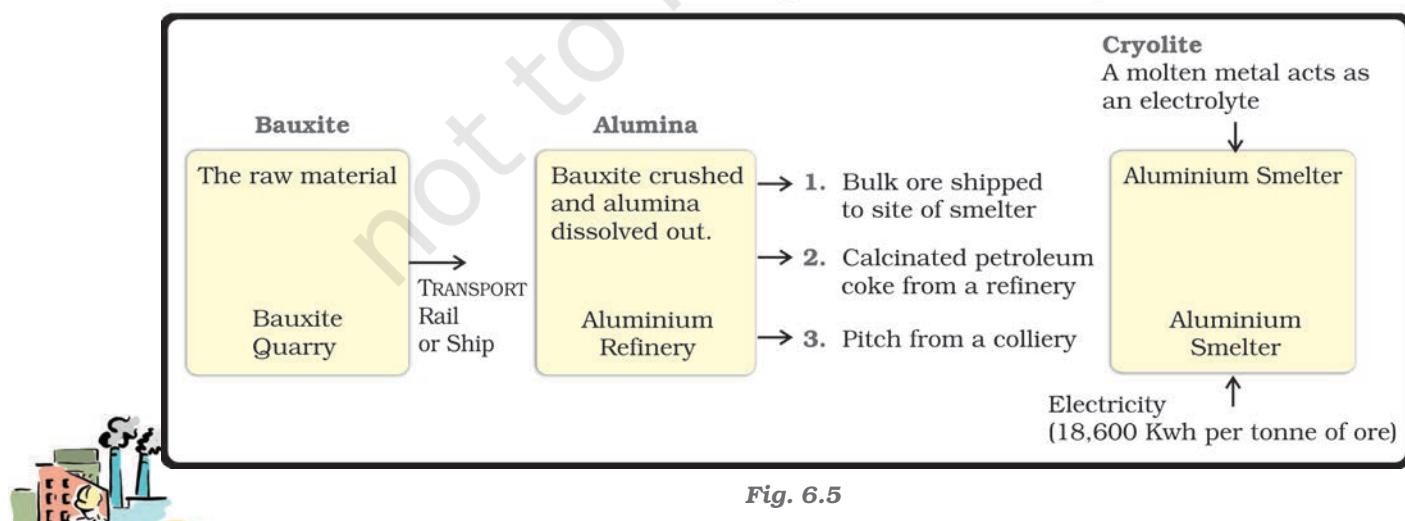
Why do you think it is so?

Organic chemicals include petrochemicals, which are used for manufacturing of synthetic fibers, synthetic rubber, plastics, dye-stuffs, drugs and pharmaceuticals. Organic chemical

4 to 6 tonnes of bauxite → 2 tonnes of alumina → 1 tonne of aluminium

Fig. 6.4

Process of Manufacturing in Aluminium Industry



plants are located near oil refineries or petrochemical plants.

The chemical industry is its own largest consumer. Basic chemicals undergo processing to further produce other chemicals that are used for industrial application, agriculture or directly for consumer markets. Make a list of the products you are aware of.

Fertilizer Industry

The fertilizer industry is centred around the production of nitrogenous fertilizers (mainly urea), phosphatic fertilizers and ammonium phosphate (DAP) and complex fertilizers which have a combination of nitrogen (N), phosphate (P), and potash (K). The third, i.e. potash is entirely imported as the country does not have any reserves of commercially usable potash or potassium compounds in any form.

After the Green Revolution the industry expanded to several other parts of the country. Gujarat, Tamil Nadu, Uttar Pradesh, Punjab and Kerala contribute towards half of the fertilizer production. Other significant producers are Andhra Pradesh, Odisha, Rajasthan, Bihar, Maharashtra, Assam, West Bengal, Goa, Delhi, Madhya Pradesh and Karnataka.

Cement Industry

Cement is essential for construction activity such as building houses, factories, bridges, roads, airports, dams and for other commercial establishments. This industry requires bulky and heavy raw materials like limestone, silica and gypsum. Coal and electric power are needed apart from rail transportation.

Activity

Where would it be economically viable to set up the cement manufacturing units?

The industry has strategically located plants in Gujarat that have suitable access to the market in the Gulf countries.

Activity

Find out where the plants are located in other States of India. Find their names.

Automobile Industry

Automobiles provide vehicle for quick transport of goods and passengers. Trucks, buses, cars, motor cycles, scooters, three-wheelers and multi-utility vehicles are manufactured in India at various centres. After the liberalisation, the coming in of new and contemporary models stimulated the demand for vehicles in the market, which led to the healthy growth of the industry including passenger cars, two and three-wheelers. The industry is located around Delhi, Gurugram, Mumbai, Pune, Chennai, Kolkata, Lucknow, Indore, Hyderabad, Jamshedpur and Bengaluru.

Information Technology and Electronics Industry

The electronics industry covers a wide range of products from transistor sets to television, telephones, cellular telecom, telephone exchange, radars, computers and many other equipments required by the telecommunication industry. Bengaluru has emerged as the electronic capital of India. Other important centres for electronic goods are Mumbai, Delhi, Hyderabad, Pune, Chennai, Kolkata, Lucknow and Coimbatore. The major industry concentration is at Bengaluru, Noida, Mumbai, Chennai, Hyderabad and Pune. A major impact of this industry has been on employment generation. The continuing growth in the hardware and software is the key to the success of IT industry in India.



Fig. 6.6: Cable manufacturing facilities at HCL, Rupnarainpur (West Bengal)

Industrial Pollution and Environmental Degradation

Although industries contribute significantly to India's economic growth and development, the increase in pollution of land, water, air, noise and resulting degradation of environment that they have caused, cannot be overlooked. Industries are responsible for four types of pollution: (a) Air (b) Water (c) Land (d) Noise. The polluting industries also include thermal power plants.

Air pollution is caused by the presence of high proportion of undesirable gases, such as sulphur dioxide and carbon monoxide. Air-borne particulate materials contain both solid and liquid particles like dust, sprays mist and smoke. Smoke is emitted by chemical and paper factories, brick kilns, refineries and smelting plants, and burning of fossil fuels in big and small factories that ignore pollution norms. Toxic gas leaks can be very hazardous with long-term effects. Are you aware of the Bhopal Gas tragedy that occurred? Air pollution adversely affects human health, animals, plants, buildings and the atmosphere as a whole.

Water pollution is caused by organic and inorganic industrial wastes and effluents discharged into rivers. The main culprits in this regard are paper, pulp, chemical, textile and dyeing, petroleum refineries, tanneries and electroplating industries that let out dyes, detergents, acids, salts and heavy metals like lead and mercury pesticides, fertilisers, synthetic chemicals with carbon, plastics and rubber, etc. into the water bodies. Fly ash, phospho-gypsum and iron and steel slags are the major solid wastes in India.

Thermal pollution of water occurs when hot water from factories and thermal plants is drained into rivers and ponds before cooling. What would be the effect on aquatic life?

Wastes from nuclear power plants, nuclear and weapon production facilities cause cancers, birth defects and miscarriages. Soil and water pollution are closely related.

Dumping of wastes specially glass, harmful chemicals, industrial effluents, packaging, salts and garbage renders the soil useless. Rain water percolates to the soil carrying the pollutants to the ground and the ground water also gets contaminated.

Noise pollution not only results in irritation and anger, it can also cause hearing impairment, increased heart rate and blood pressure among other physiological effects. Unwanted sound is an irritant and a source of stress. Industrial and construction activities, machinery, factory equipment, generators, saws and pneumatic and electric drills also make a lot of noise.

Control of Environmental Degradation

Every litre of waste water discharged by our industry pollutes eight times the quantity of freshwater. How can the industrial pollution of fresh water be reduced? Some suggestions are-

- (i) minimising use of water for processing by reusing and recycling it in two or more successive stages
- (ii) harvesting of rainwater to meet water requirements
- (iii) treating hot water and effluents before releasing them in rivers and ponds. Treatment of industrial effluents can be done in three phases
 - (a) Primary treatment by mechanical means.
This involves screening, grinding, flocculation and sedimentation.
 - (b) Secondary treatment by biological process
 - (c) Tertiary treatment by biological, chemical and physical processes. This involves recycling of wastewater.

Overdrawing of ground water reserves by industry where there is a threat to ground water resources also needs to be regulated legally. Particulate matter in the air can be reduced by fitting smoke stacks to factories with electrostatic precipitators, fabric filters, scrubbers and inertial separators. Smoke can be reduced by using oil or gas instead





India: Some Software Technology Parks

MANUFACTURING INDUSTRIES

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of coal in factories. Machinery and equipment can be used and generators should be fitted with silencers. Almost all machinery can be redesigned to increase energy efficiency and reduce noise. Noise absorbing material may be used apart from personal use of earplugs and earphones.

The challenge of sustainable development requires integration of economic development with environmental concerns.



Fig. 6.7: Sewage Treatment plant under Yamuna action plan at Faridabad

NTPC shows the way

NTPC is a major power providing corporation in India. It has ISO certification for EMS (Environment Management System) 14001. The corporation has a proactive approach for preserving the natural environment and resources like water, oil and gas and fuels in places where it is setting up power plants. This has been possible through-

- Optimum utilisation of equipment adopting latest techniques and upgrading existing equipment.
- Minimising waste generation by maximising ash utilisation.
- Providing greenbelts for nurturing ecological balance and addressing the question of special purpose vehicles for afforestation.
- Reducing environmental pollution through ash pond management, ash water recycling system and liquid waste management.
- Ecological monitoring, reviews and on-line database management for all its power stations.



Fig. 6.8: Ramagundam plant

EXERCISES EXERCISES EXERCISES EXERCISES EXERCISES

- Multiple choice questions.
 - Which one of the following industries uses bauxite as a raw material?
 - Aluminium Smelting
 - Cement
 - Paper
 - Steel
 - Which one of the following industries manufactures telephones, computer, etc.
 - Steel
 - Electronic
 - Aluminium Smelting
 - Information Technology
- Answer the following briefly in not more than 30 words.
 - What is manufacturing?
 - What are basic industries? Give an example.



- 3.** Write the answers of the following questions in 120 words.
- How do industries pollute the environment?
 - Discuss the steps to be taken to minimise environmental degradation by industry?

ACTIVITY

Give one word for each of the following with regard to industry. The number of letters in each word are hinted in brackets.

- | | |
|------------------------------------|-------------|
| (i) Used to drive machinery | (5) P..... |
| (ii) People who work in a factory | (6) W..... |
| (iii) Where the product is sold | (6) M..... |
| (iv) A person who sells goods | (8) R..... |
| (v) Thing produced | (7) P..... |
| (vi) To make or produce | (11) M..... |
| (vii) Land, Water and Air degraded | (9) P..... |

PROJECT WORK

Select one agro-based and one mineral-based industry in your area.

- What are the raw materials they use?
- What are the other inputs in the process of manufacturing that involve transportation cost?
- Are these factories following environmental norms?

ACTIVITY

Solve the puzzle by following your search horizontally and vertically to find the hidden answers.

- Textiles, sugar, vegetable oil and plantation industries deriving raw materials from agriculture are called...
- The basic raw material for sugar industry.
- This fibre is also known as the 'Golden Fibre'.
- Iron-ore, coking coal, and limestone are the chief raw materials of this industry.
- A public sector steel plant located in Chhattisgarh.



ACTIVITY

Solve the puzzle by following your search horizontally and vertically to find the hidden answers.

G	G	G	P	V	A	R	A	N	A	S	I
U	O	J	I	P	G	X	K	M	Q	W	V
K	S	U	G	A	R	C	A	N	E	E	N
O	T	T	O	N	O	Z	V	O	P	T	R
A	U	E	L	U	B	H	I	L	A	I	U
T	K	O	C	R	A	Q	N	T	R	L	N
E	I	R	O	N	S	T	E	E	L	S	J
E	N	A	N	O	E	P	I	T	L	R	Y
G	A	N	U	J	D	R	A	G	D	T	A
N	T	A	R	P	O	A	P	U	E	P	Y
A	S	N	A	E	N	J	D	I	Y	S	K
S	M	H	V	L	I	A	J	H	S	K	G

1. Textiles, sugar, vegetable oil and plantation industries deriving raw materials from agriculture are called...
2. The basic raw material for sugar industry.
3. This fibre is also known as the 'Golden Fibre'.
4. Iron-ore, coking coal, and limestone are the chief raw materials of this industry.
5. A public sector steel plant located in Chhattisgarh.
6. Railway diesel engines are manufactured in Uttar Pradesh at this place.





1068CH07



LIFELINES OF NATIONAL ECONOMY

We use different materials and services in our daily life. Some of these are available in our immediate surroundings, while other requirements are met by bringing things from other places. Goods and services do not move from supply locales to demand locales on their own. The movement of these goods and services from their supply locations to demand locations necessitates the need for transport. Some people are engaged in facilitating these movements. These are known to be traders who make the products come to the consumers by transportation. Thus, the pace of development of a country depends upon the production of goods and services as well as their movement over space. Therefore, efficient means of transport are prerequisites for fast development.

Movement of these goods and services can be over three important domains of our earth i.e. land, water and air. Based on these, transport can also be classified into land, water and air transport.

the help of equally developed communication system. Therefore, transport, communication and trade are complementary to each other.

Today, India is well-linked with the rest of the world despite its vast size, diversity and linguistic and socio-cultural plurality. Railways, airways, waterways, newspapers, radio, television, cinema and internet, etc. have been contributing to its socio-economic progress in many ways. The trades from local to international levels have added to the vitality of its economy. It has enriched our life and added substantially to growing amenities and facilities for the comforts of life.

In this chapter, you will see how modern means of transport and communication serve as lifelines of our nation and its modern economy. It is thus, evident that a dense and efficient network of transport and communication is a prerequisite for local, national and global trade of today.

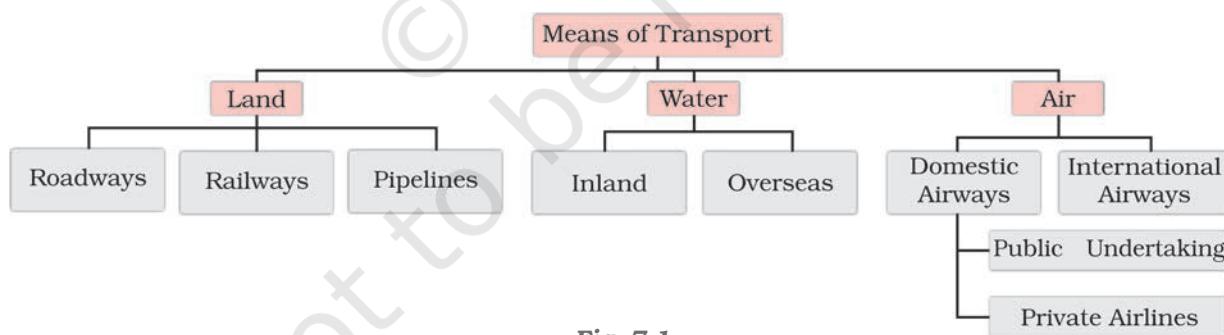


Fig. 7.1

For a long time, trade and transport were restricted to a limited space. With the development in science and technology, the area of influence of trade and transport expanded far and wide. Today, the world has been converted into a large village with the help of efficient and fast moving transport. Transport has been able to achieve this with

TRANSPORT

Roadways

India has second largest road networks in the world, aggregating to about 62.16 lakh km (2020–21). In India, roadways have preceded railways. They still have an edge over railways in view of the ease with which they can be built

and maintained. The growing importance of road transport vis-à-vis rail transport is rooted in the following reasons; (a) construction cost of roads is much lower than that of railway lines, (b) roads can traverse comparatively more dissected and undulating topography, (c) roads can negotiate higher gradients of slopes and as such can traverse mountains such as the Himalayas, (d) road transport is economical in transportation of few persons and relatively smaller amount of goods over short distances, (e) it also provides door-to-door service, thus the cost of loading and unloading is much lower, (f) road transport is also used as a feeder to other modes of transport such as they provide a link between railway stations, air and sea ports.

In India, roads are classified in the following six classes according to their capacity. Look at the map of the National Highways and find out about the significant role played by these roads.

- **Golden Quadrilateral Super Highways:** The government has launched a major road development project linking Delhi-Kolkata-Chennai-Mumbai and Delhi by six-lane Super Highways. The North-South corridors linking Srinagar (Jammu & Kashmir) and Kanniyakumari (Tamil Nadu), and East-West Corridor connecting Silchar (Assam) and Porbander (Gujarat) are part of this project. The major objective of these Super Highways is to reduce the time and distance between the mega cities of India. These highway projects are being implemented by the National Highway Authority of India (NHAI).
- **National Highways:** National Highways link extreme parts of the country. These are the primary road systems. A number of major National Highways run in North-South and East-West directions.
- **State Highways:** Roads linking a state capital with different district headquarters are known as State Highways.



Fig. 7.2: Ahmedabad- Vadodara Expressway

Activity

Collect information of National Highway numbers (old and new) from the website morth.nic.in/national-highway-details. The historical Sher-Shah Suri Marg between Delhi and Amritsar is known by which National Highway ?

- **District Roads:** These roads connect the district headquarters with other places of the district.
- **Other Roads:** Rural roads, which link rural areas and villages with towns, are classified under this category. These roads received special impetus under the *Pradhan Mantri Grameen Sadak Yojana*. Under this scheme special provisions are made so that every village in the country is linked to a major town in the country by an all season motorable road.
- **Border Roads:** Apart from these, Border Roads Organisation a Government of India undertaking constructs and maintains roads in the bordering areas of the country. This organisation was established in 1960 for the development of the roads of strategic importance in the northern and north-eastern border areas. These roads have improved accessibility in areas of difficult terrain and have helped in the economic development of these area.





India: National Highways

LIFELINES OF NATIONAL ECONOMY



Do you Know?

The World's longest Highway tunnel-Atal Tunnel (9.02 Km) has been built by Border Road Organisation. This tunnel connects Manali to Lahul-Spiti valley throughout the year. Earlier the valley was cut off for about 6 months each year owing to heavy snowfall. The tunnel is built with ultra-modern specifications in the Pir Panjal range of Himalayas at an altitude of 3000 metres from the Mean Sea Level (MSL).

Source: <http://www.bro.gov.in/pagefimg.asp?imid=144>, And PIBdelhi03October2020



Fig. 7.3: Hilly Tracts



Fig. 7.4: Traffic on north-eastern border road (Arunachal Pradesh)

Roads can also be classified on the basis of the type of material used for their construction such as metalled and unmetalled roads. Metalled roads may be made of cement, concrete or even bitumen or coal, therefore,

and narrow. However, in recent years fast development of road network has taken place in different parts of the country

Railways

Railways are the principal mode of transportation for freight and passengers in India. Railways also make it possible for people to conduct multifarious activities like business, sightseeing, pilgrimage along with transportation of goods over longer distances. Apart from an important means of transport the Indian Railways have been a great integrating force for more than 150 years. Railways in India bind the economic life of the country as well as accelerate the development of the industry and agriculture.

The Indian Railways is the largest public sector undertaking in the country. The first train steamed off from Mumbai to Thane in 1853, covering a distance of 34 km.

The Indian Railway is now reorganised into 16 zones.

Activity

Find out the current Railway zones and their headquarters. Also locate the headquarters of Railway zones on the map of India.

The distribution pattern of the Railway network in the country has been largely influenced by physiographic, economic and administrative factors. The northern plains with their vast level land, high population density and rich agricultural resources provided the most favourable condition for their growth. However, a large number of rivers requiring construction of bridges across their wide beds posed some obstacles. In the hilly terrains of the peninsular region, railway tracts are laid through low hills, gaps or tunnels. The Himalayan mountainous regions too are unfavourable for the construction of railway lines due to high relief, sparse population and lack of economic opportunities. Likewise, it was difficult to lay railway lines on



Table 7.1: India: Railway Track

The Indian Railway network runs on multiple gauge operations extending over 67,956 km.

Gauge in metres	Route (Km)
Broad Gauge (1.676)	63950
Metre Gauge (1.000)	2,402
Narrow Gauge (0.762 and 0.610)	1,604
Total	67,956

Source: Railway Yearbook 2019–20, Ministry of Railways, Government of India.

Website: www.indianrailways.gov.in

the sandy plain of western Rajasthan, swamps of Gujarat, forested tracks of Madhya Pradesh, Chhattisgarh, Odisha and Jharkhand. The contiguous stretch of Sahyadri could be crossed only through gaps or passes (Ghats). In recent times, the development of the Konkan railway along the west coast has facilitated the movement of passengers and goods in this most important economic region of India. It has also faced a number of problem such as sinking of track in some stretches and landslides.

Today, the railways have become more important in our national economy than all other means of transport put together. However, rail transport suffers from certain problems as well. Many passengers travel without tickets. Thefts and damaging of railway property has not yet stopped completely. People stop the trains, pull the chain unnecessarily and this causes heavy damage to the railway. Think over it, how we can help our railway in running as per the scheduled time?

Pipelines

Pipeline transport network is a new arrival on the transportation map of India. In the past, these were used to transport water to cities and industries. Now, these are used for transporting crude oil, petroleum products and natural gas from oil and natural gas fields to refineries, fertilizer factories and big thermal power plants. Solids can also be transported through a pipeline when converted into slurry. The far inland locations of refineries like Barauni, Mathura, Panipat and gas based fertilizer plants could be thought of only because of pipelines. Initial cost of laying pipelines is high but

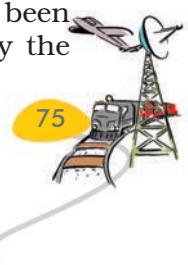
subsequent running costs are minimal. It rules out trans-shipment losses or delays.

There are three important networks of pipeline transportation in the country.

- From oil field in upper Assam to Kanpur (Uttar Pradesh), via Guwahati, Barauni and Allahabad. It has branches from Barauni to Haldia, via Rajbandh, Rajbandh to Maurigram and Guwahati to Siliguri.
- From Salaya in Gujarat to Jalandhar in Punjab, via Viramgam, Mathura, Delhi and Sonipat. It has branches to connect Koyali (near Vadodara, Gujarat) Chakshu and other places.
- The first 1,700 km long Hazira-Vijaipur-Jagdishpur (HVJ) cross country gas pipeline, linked Mumbai High and Bassein gas fields with various fertilizer, power and industrial complexes in western and northern India. Overall, India's gas pipeline infrastructure has expanded from 1,700 km to 18,500 km of cross-country pipelines.

Waterways

Since the ancient period, India was one of the seafaring countries. Its seamen sailed far and near, thus, carrying and spreading Indian commerce and culture. Waterways are the cheapest means of transport. They are most suitable for carrying heavy and bulky goods. It is a fuel-efficient and environment friendly mode of transport. India has inland navigation waterways of 14,500 km in length. Out of these only 5685 km are navigable by mechanised vessels. The following waterways have been declared as the National Waterways by the Government.





Activity

Railway line has been extended from Banihal to Baramula in the Kashmir Valley. Locate these two towns on the map of India.



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CONTEMPORARY INDIA – II



Fig. 7.5: Inland waterways widely used in north-eastern states

- The Ganga river between Allahabad and Haldia (1620 km)-N.W. No.1
- The Brahmaputra river between Sadiya and Dhubri (891 km)-N.W. No.2
- The West-Coast Canal in Kerala (Kottapurma-Kollam, Udyogamandal and Champakkara canals-205 km) – N.W. No.3
- Specified stretches of Godavari and Krishna rivers along with Kakinada Puducherry stretch of canals (1078 km) – N.W. No.4
- Specified stretches of river Brahmani along with Matai river, delta channels of Mahanadi and Brahmani rivers and East Coast Canal (588 km) – N.W. No.5

There are some other inland water ways on which substantial transportation takes place. These are Mandavi, Zuari and Cumberjua, Sunderbans, Barak and backwaters of Kerala.

Apart from these, India's trade with foreign countries is carried from the ports located along the coast. 95 per cent of the country's trade volume (68 per cent in terms of value) is moved by sea.

Major Sea Ports

With a long coastline of 7,516.6 km, India is dotted with 12 major and 200 notified non-majors (minor/intermediate) ports. These major ports handle 95 per cent of India's foreign trade.

Kandla in Kuchchh was the first port developed soon after Independence to ease the volume of trade on the Mumbai port, in the wake of loss of Karachi port to Pakistan after the Partition. Kandla also known as the

Deendayal Port, is a tidal port. It caters to the convenient handling of exports and imports of highly productive granary and industrial belt stretching across UT of Jammu and Kashmir, and the states of Himachal Pradesh, Punjab, Haryana, Rajasthan and Gujarat.



Fig. 7.6: Trucks being driven into the vessel at Mumbai port

Mumbai is the biggest port with a spacious natural and well-sheltered harbour. The Jawaharlal Nehru port was planned with a view to decongest the Mumbai port and serve as a hub port for this region. Marmagao port (Goa) is the premier iron ore exporting port of the country. This port accounts for about fifty per cent of India's iron ore export. New Mangalore port, located in Karnataka caters to the export of iron ore concentrates from Kudremukh mines. Kochchi is the extreme south-western port, located at the entrance of a lagoon with a natural harbour.



Fig. 7.7: Tanker discharging crude oil at New Mangalore port

Moving along the east coast, you would see the extreme south-eastern port of Tuticorin, in Tamil Nadu. This port has a natural harbour and rich hinterland. Thus, it has a flourishing trade handling of a large variety of cargoes to



even our neighbouring countries like Sri Lanka, Maldives, etc. and the coastal regions of India. Chennai is one of the oldest artificial ports of the country. It is ranked next to Mumbai in terms of the volume of trade and cargo. Vishakhapatnam is the deepest landlocked and well-protected port. This port was, originally, conceived as an outlet for iron ore exports. Paradwip port located in Odisha, specialises in the export of iron ore. Kolkata is an inland riverine port. This port serves a very large and rich hinterland of Ganga-Brahmaputra basin. Being a tidal port, it requires constant dredging of Hoogly. Haldia port was developed as a subsidiary port, in order to relieve growing pressure on the Kolkata port.



Fig. 7.8: Handling of oversize cargo at Tuticorin port

Airways

The air travel, today, is the fastest, most comfortable and prestigious mode of transport. It can cover very difficult



Why is air travel preferred in the north-eastern states?

Fig. 7.9

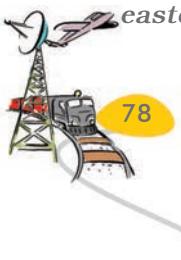
terrains like high mountains, dreary deserts, dense forests and also long oceanic stretches with great ease. Think of the north-eastern part of the country, marked with the presence of big rivers, dissected relief, dense forests and frequent floods and international frontiers, etc. in the absence of air transport. Air travel has made access easier.

Pawan Hans Helicopters Ltd. provides helicopter services to Oil and Natural Gas Corporation in its off-shore operations, to inaccessible areas and difficult terrains like the north-eastern states and the interior parts of Jammu and Kashmir, Himachal Pradesh and Uttarakhand.

Air travel is not within the reach of the common people. It is only in the north-eastern states that special provisions are made to extend the services to the common people.

Communication

Ever since humans appeared on the earth, they have used different means of communication. But, the pace of change, has been rapid in modern times. Long distance communication is far easier without physical movement of the communicator or receiver. Personal communication and mass communication including television, radio, press, films, etc. are the major means of communication in the country. The Indian postal network is the largest in the world. It handles parcels as well as personal written communications. Cards and envelopes are considered first-class mail and are airlifted between stations covering both land and air. The second-class mail includes book packets, registered newspapers and periodicals. They are carried by surface mail, covering land and water transport. To facilitate quick delivery of mails in large towns and cities, six mail channels have been introduced recently. They are called Rajdhani Channel, Metro Channel, Green Channel, Business Channel, Bulk Mail Channel and Periodical Channel.





India: Major Ports and Some International Airports

LIFELINES OF NATIONAL ECONOMY

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Do you know?

Digital India is an umbrella programme to prepare India for a knowledge based transformation. The focus of Digital India Programme is on being transformative to realise – IT (Indian Talent) + IT (Information Technology)=IT (India Tomorrow) and is on making technology central to enabling change.



Fig. 7.10 : Emergency call box on NH-8

India has one of the largest telecom networks in Asia. Excluding urban places more than two-thirds of the villages in India have already been covered with Subscriber Trunk Dialling (STD) telephone facility. In order to strengthen the flow of information from the grassroot to the higher level, the government has made special provision to extend twenty-four hours STD facility to every village in the country. There is a uniform rate of STD facilities all over India. It has been made possible by integrating the development in space technology with communication technology.

Mass communication provides entertainment and creates awareness among people about various national programmes and policies. It includes radio, television, newspapers, magazines, books and films. All India Radio (Akashwani) broadcasts a variety of programmes in national, regional and local languages for various categories of people, spread over different parts of the country. Doordarshan, the national television channel

of India, is one of the largest terrestrial networks in the world. It broadcasts a variety of programmes from entertainment, educational to sports, etc. for people of different age groups.

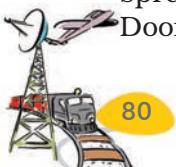
India publishes a large number of newspapers and periodicals annually. They are of different types depending upon their periodicity. Newspapers are published in about 100 languages and dialects. Did you know that the largest number of newspapers published in the country are in Hindi, followed by English and Urdu? India is the largest producer of feature films in the world. It produces short films; video feature films and video short films. The Central Board of Film Certification is the authority to certify both Indian and foreign films.

International Trade

The exchange of goods among people, states and countries is referred to as trade. The market is the place where such exchanges take place. Trade between two countries is called international trade. It may take place through sea, air or land routes. While local trade is carried in cities, towns and villages, state level trade is carried between two or more states. Advancement of international trade of a country is an index to its economic prosperity. It is, therefore, considered the economic barometer for a country.

As the resources are space bound, no country can survive without international trade. Export and import are the components of trade. The balance of trade of a country is the difference between its export and import. When the value of export exceeds the value of imports, it is called a favourable balance of trade. On the contrary, if the value of imports exceeds the value of exports, it is termed as unfavourable balance of trade.

India has trade relations with all the major trading blocks and all geographical regions of the world. The commodities exported from India to other countries include gems and jewellery, chemicals and related products, agriculture and allied products, etc.



The commodities imported to India include petroleum crude and products, gems and jewellery, chemicals and related products, base metals, electronic items, machinery, agriculture and allied products. India has emerged as a software giant at the international level and it is earning large foreign exchange through the export of information technology.

Tourism as a Trade

Tourism in India has grown substantially over the last three decades.

More than 15 million people are directly engaged in the tourism industry. Tourism also promotes national integration, provides support to local handicrafts and cultural pursuits. It also helps in the development of international understanding about our culture and heritage. Foreign tourists visit India for heritage tourism, eco tourism,

adventure tourism, cultural tourism, medical tourism and business tourism.

There is a vast potential for development of tourism in all parts of the country. Efforts are being made to promote different types of tourism for this upcoming industry.

- Activity

On the map of India show important tourist places of your State/UT and its connectivity with other parts of the country by railways/ roadways/airways.

Discuss in the class:

- What type of tourism may be developed in your state/UT and why?
 - Which areas in your state/UT you find more attractive for development of tourism and why?
 - How tourism may be helpful for the economic development of a region adopting sustainable development approach?



Prepare a project on the heritage tourism in India.

***Source:** Annual Report 2016–17, Ministry of Commerce and Industry, Government of India.

- 1.** Multiple choice questions.

 - (i) Which two of the following extreme locations are connected by the east-west corridor?
 - (a) Mumbai and Nagpur
 - (c) Mumbai and Kolkata
 - (b) Silchar and Porbandar
 - (d) Nagpur and Siliguri
 - (ii) Which mode of transportation reduces trans-shipment losses and delays?
 - (a) Railways
 - (c) Pipeline
 - (b) Roadways
 - (d) Waterways
 - (iii) Which one of the following states is not connected with the H.V.J. pipeline?
 - (a) Madhya Pradesh
 - (c) Gujarat
 - (b) Maharashtra
 - (d) Uttar Pradesh
 - (iv) Which one of the following ports is the deepest land-locked and well-protected port along the east coast?
 - (a) Chennai
 - (c) Tuticorin
 - (b) Paradip
 - (d) Vishakhapatnam
 - (v) Which one of the following is the most important modes of transportation in India?
 - (a) Pipeline
 - (c) Roadways
 - (b) Railways
 - (d) Airways
 - (vi) Which one of the following terms is used to describe trade between two or more countries?
 - (a) Internal trade
 - (c) External trade
 - (b) International trade
 - (d) Local trade

2. Answer the following questions in about 30 words.

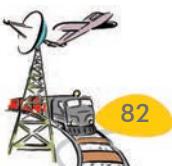
 - (i) State any three merits of roadways.
 - (ii) Where and why is rail transport the most convenient means of transportation?
 - (iii) What is the significance of the border roads?
 - (iv) What is meant by trade? What is the difference between international and local trade?

3. Answer the following questions in about 120 words.

 - (i) Why are the means of transportation and communication called the lifelines of a nation and its economy?
 - (ii) Write a note on the changing nature of the international trade in the last fifteen years.

QUIZ DRIVE

1. Northern terminal of the North-south corridor.
 2. The name of National Highway No.2.
 3. The headquarter of the southern railway zone.
 4. The rail gauge with a track width of 1.676 m.
 5. The southern terminal of the National Highway No.7.
 6. A Riverine Port.
 7. Busiest railway junction in Northern India.



ACTIVITY

Start your search vertically, horizontally or diagonally and reach various destinations across the country!

S	H	E	R	S	H	A	H	S	U	R	I	M	A	R	G
A	R	T	P	R	N	X	E	L	A	T	A	D	L	A	Y
J	M	M	X	I	P	O	R	A	Y	M	P	G	H	T	X
Y	C	H	E	N	N	N	A	I	I	K	M	C	A	I	M
O	D	C	D	A	L	M	C	S	O	T	P	O	R	C	P
A	P	T	R	G	S	K	J	M	J	L	E	A	N	E	R
R	A	E	T	A	J	P	O	R	M	W	M	A	S	X	O
I	L	S	B	R	O	A	D	G	A	U	G	E	L	O	T
A	S	N	L	C	M	E	C	U	K	Z	M	A	A	J	E
L	M	U	G	H	A	L	S	A	R	A	I	B	S	N	A
G	O	E	T	V	R	A	Y	F	T	O	R	E	A	J	M
K	Q	A	I	P	M	N	Y	R	Y	A	Y	H	L	I	N
Q	K	O	L	K	A	T	A	E	U	I	T	W	B	E	A
N	I	T	N	K	D	E	M	O	U	R	P	N	P	J	D

APPENDIX-I

Websites you can see

Bombay Natural History Society: <http://www.bnhs.org/>

Birding in India and South Asia: <http://www.birding.in/>

Website of Project Tiger: <http://projecttiger.nic.in/>

Nature Conservation Foundation: <http://www.ncf-india.org/>

Wildlife Conservation Society of India: <http://www.wildlife.in/>

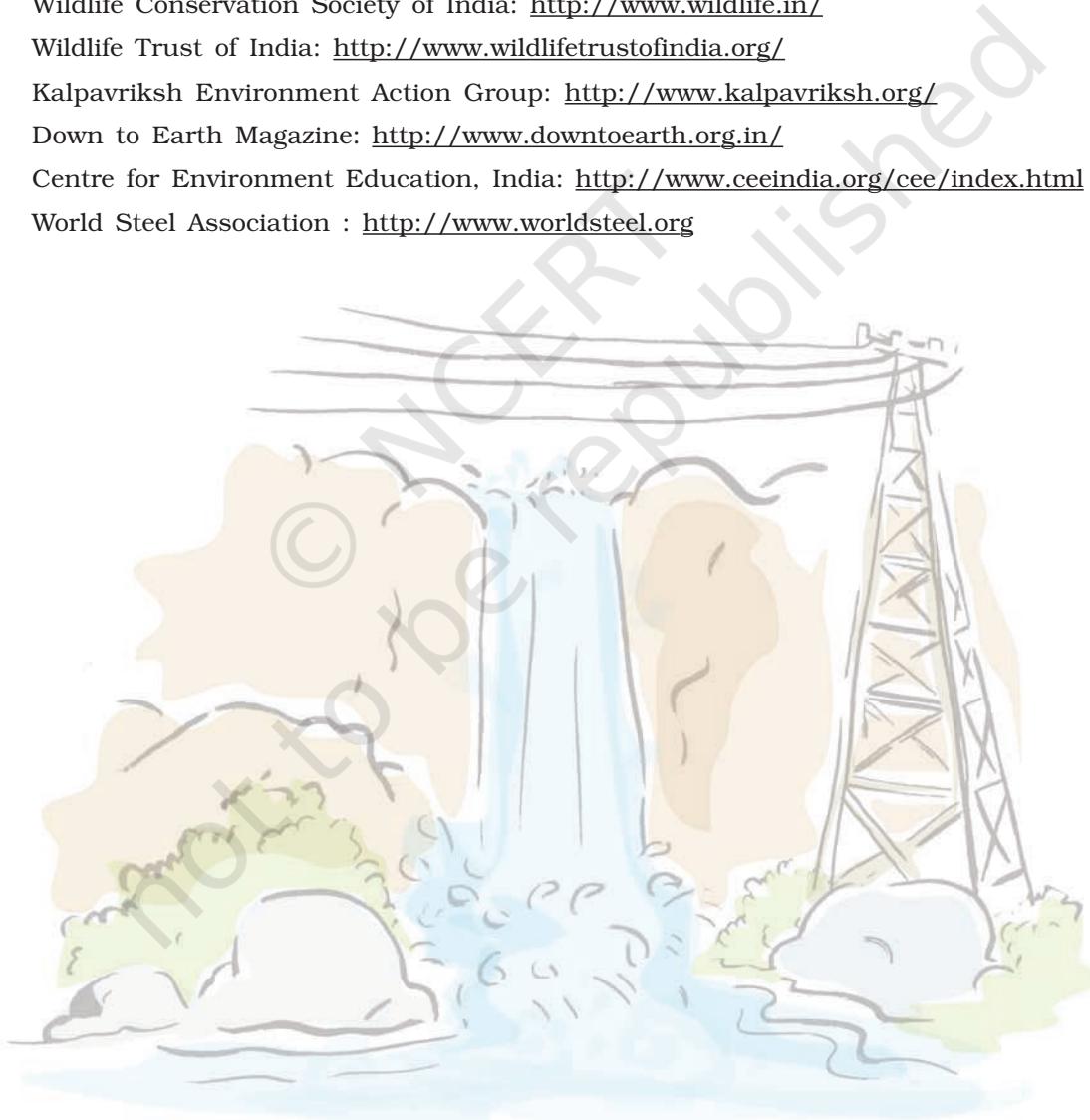
Wildlife Trust of India: <http://www.wildlifetrustofindia.org/>

Kalpavriksh Environment Action Group: <http://www.kalpavriksh.org/>

Down to Earth Magazine: <http://www.downtoearth.org.in/>

Centre for Environment Education, India: <http://www.ceeindia.org/cee/index.html>

World Steel Association : <http://www.worldsteel.org>



APPENDIX-II

Steel Plants	Year of Establishment	Collaborating Country	Location
IISCO	1870-1913 (Private initially)	(Nationalised in 1972)	Kulti and Burnpur (W.B.)
TISCO	1907 (Private ownership)	Jamshedji Tata	Jamshedpur (Jharkhand)
VISL	1923 Private as MISCO	Nationalised later	Bhadrapur (Karnataka)
Bhilai	1959 (Public Sector)	Soviet Union	Bhilai (M.P.)
Bokaro	1972 (Public Sector)	Soviet Union	Bokaro (Jharkhand)
Durgapur	1959 (Public Sector)	U.K.	Durgapur (W.B.)
Rourkela	— (Public Sector)	Germany	Rourkela (Odisha)
Vishakhapatnam	— (Public Sector)	—	Vishakhapatnam Andhra Pradesh
Salem	— (Public Sector)	—	Salem (T. Nadu)
Vijay Nagar	— Public Sector	—	Karnataka



GLOSSARY

Anticline: A fold in sedimentary strata that resembles an arch.

Gross Domestic Product: It is a monetary measure of the value of goods and services produced within a natural economy at a given period of time. Normally it is one year.

Gross Value Added (GVA): The GVA is estimated from GDP by adding subsidies on production and subtracting indirect taxes.

Geologist: A scientist who studies the composition, structure and history of the earth.

Geothermal Gradient: The gradual increase in temperature with depth in the crust. The average is 30°C per kilometer in the upper crust.

Humus: Dead and decayed organic matter adds to the fertility of the top soil.

Igneous Rocks: Rocks which have solidified from molten magma.

Manganese Nodules: A type of sediment scattered on the ocean floor, consisting mainly of manganese and iron, and usually containing small amounts of copper, nickel and cobalt.

Metamorphic Rocks: Rocks which were originally igneous or sedimentary, but have changed in character and appearance.

Oil Trap: A geological structure that allows for significant amounts of oil and gas to accumulate.

Rock: A consolidated mixture of minerals

Sedimentary Rocks: Rocks which have been deposited as beds and layers of sediments.

NOTES

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UNDERSTANDING ECONOMIC DEVELOPMENT

SOCIAL SCIENCE TEXTBOOK FOR CLASS X



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FOREWORD

The National Curriculum Framework (NCF), 2005, recommends that children's life at school must be linked to their life outside the school. This principle marks a departure from the legacy of bookish learning, which continues to shape our system, and causes a gap between the school, home and community. The syllabi and textbooks developed on the basis of NCF signify an attempt to implement this basic idea. They also attempt to discourage rote learning and the maintenance of sharp boundaries between different subject areas. We hope these measures will take us significantly further in the direction of a child-centered system of education outlined in the National Policy on Education (1986).

The success of this effort depends on the steps that school principals and teachers will take to encourage children to reflect on their own learning and to pursue imaginative activities and questions. We must recognise that, given space, time and freedom, children generate new knowledge by engaging with the information passed on to them by adults. Treating the prescribed textbook as the sole basis of examination is one of the key reasons why other resources and sites of learning are ignored. Inculcating creativity and initiative is possible if we perceive and treat children as participants in learning, not as receivers of a fixed body of knowledge.

These aims imply considerable change in school routines and mode of functioning. Flexibility in the daily time-table is as necessary as rigour in implementing the annual calendar so that the required number of teaching days are actually devoted to teaching. The methods used for teaching and evaluation will also determine how effective this textbook proves for making children's life at school a happy experience, rather than a source of stress or boredom. Syllabus designers have tried to address the problem of curricular burden by restructuring and reorienting knowledge at different stages with greater consideration for child psychology and the time available for teaching. The textbook attempts to enhance this endeavour by giving higher priority and space to opportunities for contemplation and wondering, discussion in small groups, and activities requiring hands-on experience.

The National Council of Educational Research and Training (NCERT) appreciates the hard work done by the textbook development committee responsible for this book. We wish to thank the Chairperson of the advisory committee for textbooks in Social Sciences, at the secondary level, Professor Hari Vasudevan and the Chief Advisor for this book, Professor Tapas Majumdar for guiding the work of this committee. Several teachers contributed to the development of this

textbook; we are grateful to their principals for making this possible. We are indebted to the institutions and organisations, which have generously permitted us to draw upon their resources, material and personnel. We are especially grateful to the members of the National Monitoring Committee, appointed by the Department of Secondary and Higher Education, Ministry of Human Resource Development under the Chairpersonship of Professor Mrinal Miri and Professor G.P. Deshpande, for their valuable time and contribution. As an organisation committed to systemic reform and continuous improvement in the quality of its products, NCERT welcomes comments and suggestions which will enable us to undertake further revision and refinement.

New Delhi
20 November 2006

Director
National Council of Educational
Research and Training

A FEW INTRODUCTORY WORDS FOR TEACHERS

This book introduces you to a simplified view of the process of development in the Indian economy. In Economics, we usually try to look at development as a process of change in the economic life of the people, as producers or consumers of goods and services. Sometimes, development is studied mainly as a phenomenon that acquired significance only with the growth of the modern industrial civilisation. This is because the state of development (or underdevelopment) of a country has often depended on outcomes of wars and conquests and on colonial exploitation of one country by another. However, in this book, we have not emphasised on the external factors. We have taken a long view of the process of development: a process that could have started before any external factors intervened or interrupted it. The process of development may also restart after such interruptions, and continue on independent lines after the period of subjugation ends. This has happened in the case of our own country, India.

In this book the first beginnings of development are seen in terms of the emergence of agriculture, manufacturing and services as three distinct sectors of the economy. We have also tried to look at economic development not in isolation but as part of a more general concept of human development that includes the development of health and education and other indicators that, along with income, broadly define the quality of life of a people.

In the first chapter, we will study how people actually perceive development and how it can be measured. There are various measures available for this purpose. We will look at the extent to which some of the important developmental indicators help in understanding development and how the process may affect different people differently.

Development as a process had probably started quite early in history. To begin with, perhaps no country could be distinguished as developed in the sense that we understand development. Perhaps the process would have started in most human settlements when people started living in relative peace and in more or less fixed habitations without which agriculture would not have been possible on any significant scale. Once agriculture began and developed, the extraction of other natural products, like mineral ores, probably was started. This latter process of recovering stones and other minerals is called 'quarrying'.

Humans learnt to use the non-food products like wood from trees and the minerals obtained from quarrying as raw materials for making their tools, weapons, utensils, fishing nets and so on. These were the first human-made products called 'artefacts'. Economists called the process of making the artefacts 'manufacture' as distinguished from 'agriculture (including quarrying)' that covered the gathering, cultivating or extracting of purely natural products such as fruit, rice or minerals.

The separation of productive activities between the two distinct sectors of agriculture including quarrying (also called the Primary Sector) and





Labour is the source of all wealth

manufacture (also called the Secondary Sector) was probably the first visible manifestation of economic development. This separation came about through the process of “division of labour” as Adam Smith, regarded as the father of economics had called it. The process is briefly explained below.

At first every person, or at least members of every household, presumably, had to do *everything all by themselves*. Then at some point the advantage of ‘division of labour’ must have been felt. Humans found out with experience that production became more efficient if some people concentrated on learning how to fish, others on how to till the soil, still others on how to produce pottery, or trap or hunt animals and birds for food and so on. This was also ‘development’ of a kind. Then there emerged specialists who were not themselves producing any good at all: they were people specialising in *teaching* others how to do these things better. There were also doctors who healed people when they were injured or had fallen ill. Naturally division of labour between people increased the productivity of all the people and the economy grew.

The second chapter will look at the way economic activities in a modern economy can be classified and understood within the framework of primary, secondary and tertiary sectors. The discussion here is focussed on India and the changes that have occurred in the three sectors over the past decades. Besides this, it also provides two other ways of classifying economic activities — organised and unorganised, and private and public sectors. The relevance of additional ways of classification for understanding the problems and challenges of the modern Indian economy is illustrated using real life examples and case studies.

The third chapter initiates the learners into the world of money — its role in a modern economy, forms and its linkage with various institutions such as banks. Then the chapter moves on to discuss the role of banks and other institutions in providing credit to the people. Issues stressed in the discussion on credit are (a) pervasiveness of credit in economic life across a very large section of the population (b) the preponderance of informal credit in India and (c) role of credit in creating either a self-sustaining *virtuous cycle* of productive investment, higher income streams, higher standards of living leading to more productive investments contributing to development, or a *vicious cycle* of indebtedness, poverty and debt-trap leading to increased poverty. These ideas are presented through case studies.

Globalisation is an important phenomenon, which has influenced development and people around the world in various ways. The fourth chapter focuses on a particular dimension of globalisation that is economic in nature — the complex organisation of production. How multinational companies facilitate globalisation through trade and investment is also explained. Some important factors and institutions that facilitate globalisation also find place in this chapter. In the end, the chapter appraises the impacts of globalisation (positive and negative) on the Indian economy.

The process of development leads to not only higher levels of production in different sectors of the economy, but has some down sides too. The examples and case studies in this chapter and elsewhere try to examine whether the benefits of development are spreading to all people (producers big and small, workers in the organised or unorganised sectors, consumers belonging to all

income groups, men and women and so on) or are being confined to only some privileged sections.

Our final chapter presents a relevant study of how, and to what extent, we can protect the rights of citizens as consumers. During the process of rapid development and emergence of new brands and advertisement campaigns by unscrupulous producers, consumers are often at the receiving end of business malpractices. After tracing the historical root of the consumer movement and through various real-life instances, this chapter tells of different inexpensive consumer protection mechanisms evolved over the years. It also offers details of how people can now assert some of their rights at very little expense at the special consumer courts that operate outside the existing cumbersome, expensive and time-consuming legal procedures.

Features of this Textbook

The purpose of the book is to understand the economic life around us and also to think about what we would mean by economic development for people. There are many examples and case studies that we have used both as an aid for conceptual clarity and to relate these ideas to real life. These have to be read and used, keeping this overall objective in view.

The chapters start with **Note for the teacher**. Teachers could read this page before they start teaching a chapter. It contains the details of (i) the broad approach and content of the chapter; (ii) some pointers to how the chapter could be taught; and (iii) sources for additional details relating to different topics.

There are several internal exercises in **Let's work this out**, given after each section in the chapters. This contains a few questions to review the section and open-ended questions and activities that can be taken up within and outside the classroom. Some of the internal exercises should be done in the discussion mode. Students can discuss these in groups and present their conclusions and the answers may be put up for debate with the entire class. This will require more time but it is essential as this allows students to explore and learn from each other. The intention is to allow for more interaction than is usually observed but there is no fixed formula for doing this. Each teacher would find his or her own ways and we would like to express our faith in their abilities to do so.

Wherever possible, we have attempted to provide the latest statistics. Not all authentic data is available for the recent years. Also, economic trends do not change in a few years. Rather worrying about the latest data, you may bring to the notice the central idea of what the concept and data related to it convey to us. Questions on the data aspects may be avoided.

We have used many reference material while preparing this book. Besides these, many news clippings, reports from government and non-government organisations were also used. Some of them are mentioned in the **Note for the teacher** and some in **Suggested Readings** given at the end of this book.

It is important that **additional information and readings** be brought into classroom discussion. This could be in the form of short surveys, interviews with people around, reference books, or newspaper clippings, etc. These should then be used for reflection and creative expression by students themselves in the form of making charts, wallpaper displays, skits, debates, etc.



Evaluation

While addressing the need for reforms in education, the *National Curriculum Framework 2005* and the *Position Paper of the National Focus Group on Examination Reforms* call for a change in the way questions are asked in examinations. The questions asked in this book make a departure from an evaluation pattern that encourages rote-memorisation to one that inculcates creative thinking, imagination, reflection and hones the analytical ability of learners. Based on the examples shown here, teachers can formulate additional questions.

Questions that test the understanding of core concepts

- (a) GDP is the total value of _____ produced during a particular year.
- (i) all goods and services
 - (ii) all final goods and services
 - (iii) all intermediate goods and services
 - (iv) all intermediate and final goods and services
- (b) Analyse the role of credit for development.
- (c) In what ways will the production of cars by Ford Motors in India lead to interlinking of production?
- (d) How would flexibility in labour laws help companies?



Questions to assess analytical abilities, interpretation and coherent presentation

- (a) The following table gives the GDP in Rupees (crores) by the three sectors:

Year	primary	secondary	tertiary
2000	52,000	48,500	1,33,500
2013	8,00,500	10,74,000	38,68,000



- (i) Calculate the share of the three sectors in GDP for 2000 and 2013.
- (ii) Show the data as a bar diagram similar to Graph 2 in the chapter 2.
- (iii) What conclusions can we draw from the bar graph?

- (b) In India, about 80 per cent of farmers are small farmers, who need credit for cultivation.
- (i) Why might banks be unwilling to lend to small farmers?
 - (ii) What are the other sources from which small farmers can borrow?
 - (iii) Explain with an example how the terms of credit can be unfavourable for the small farmer.
 - (iv) Suggest some ways by which small farmers can get cheap credit.

(viii)

Questions to test reflective thinking

- (a) Look at the picture (high rise buildings with slums around). What should be the developmental goals for such an area?
- (b) "The Earth has enough resources to meet the needs of all but not enough to satisfy the greed of even one person". How is this statement relevant to the discussion of development? Discuss.
- (c) "Tertiary sector is not playing any significant role in the development of Indian economy". Do you agree? Give reasons in support of your answer.
- (d) People make complaints about the lack of civic amenities such as bad roads or poor water and health facilities but no one listens. Now the RTI Act gives you the power to question. Do you agree? Discuss.



Questions that test the ability to apply concepts and ideas to real life problems / situations

- (a) What can be some of the developmental goals for your village, town or locality?
- (b) Students in a school are often classified into primary and secondary or junior and senior. What is the criterion used here? Do you think this is useful classification?
- (c) In what ways can employment be increased in urban areas?
- (d) What do you understand by disguised unemployment? Explain with an example each from the urban and rural areas.
- (e) Describe some of your duties as consumers if you visit a shopping complex in your locality.



It is also necessary to develop questions that require students to draw from one or more areas of the syllabus for making relevant connections between materials from different chapters. For instance, in Chapter 4 one question links to Chapter 1— *In chapter 1, we saw what may be development for one may be destructive for others. The setting of SEZs has been opposed by some people in India. Find out who are these people and why are they opposing it.*

We hope that you along with your students would look at this textbook itself in a critical manner and send us your critique, questions, clarification, etc. to the following address. AND we could continue this discussion further.

PROGRAMME COORDINATOR

Economics Textbook for Class X

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PREAMBLE

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LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all

FRATERNITY assuring the dignity of the individual and the **[unity and integrity of the Nation]**;

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949 do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

1. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
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NOTES FOR THE TEACHER

CHAPTER I : DEVELOPMENT

Development has many aspects. The purpose of this chapter is to enable students to understand this idea. They have to understand that people have different perspectives on development and there are ways by which we can arrive at common indicators for development. To do this, we have used situations that they can respond to in an intuitive manner; we have also presented analysis that is more complex and macro in nature.

How can countries or states be compared using some selected development indicators is another question that students would read about in this chapter. Economic development can be measured and income is the most common method for measuring development. However, the income method, though useful, has several weaknesses. Hence, we need newer ways of looking at development using indicators of quality of life and environmental sustainability.

It is necessary for you to expect the students to respond actively in the classroom and on a topic such as the above, there would be wide variation in opinion and possibility of debate. Allow students to argue their point of view. At the end of each section there are a few questions and activities. These serve two purposes: first, they recap the ideas discussed in the section and second, they enable better understanding of the themes

discussed by bringing the learners closer to their real-life situations.

There are certain terms used in this chapter that would require clarification — Per Capita Income, Literacy Rate, Infant Mortality Rate, Attendance Ratio, Life Expectancy, Gross Enrolment Ratio, and Human Development Index. Though data pertaining to these terms are provided, these would need further explanation. You may also need to clarify the concept of Purchasing Power Parity that is used to calculate per capita income in Table 1.6. It is necessary to keep in mind that these terms are used as an aid to the discussion and not something to be memorised.

Sources for Information

The data for this chapter is taken from reports published by the Government of India (*Economic Survey*, Report of the National Family Health Survey and Handbook of Statistics on the Indian Economy), United Nations Development Programme (*Human Development Report*) and World Bank (*World Development Indicators*). Many of these reports are being published every year. It may be interesting to look up these reports if they are available in your school library. If not, you may log on to the websites of these institutions (www.budgetindia.nic.in, www.undp.org, www.worldbank.org). Data is also available from the Reserve Bank's *Handbook of Statistics on Indian Economy* (available at www.rbi.org).



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CHAPTER I DEVELOPMENT

The idea of development or progress has always been with us. We have aspirations or desires about what we would like to do and how we would like to live. Similarly, we have ideas about what a country should be like. What are the essential things that we require? Can life be better for all? How should people live together? Can there be more equality? Development involves thinking about these questions and about the ways in which we can work towards achieving these goals. This is a complex task and in this chapter we shall make a beginning at understanding development. You will learn more about these issues in greater depth in higher classes. Also, you will find answers to many of these questions not just in economics but also in your course in history and political science. This is because the way we live today is influenced by the past. We can't desire for change without being aware of this. In the same way, it is only through a democratic political process that these hopes and possibilities can be achieved in real life.



*"Without me **they** cannot develop...
in this system **I** cannot develop!"*

WHAT DEVELOPMENT PROMISES — DIFFERENT PEOPLE, DIFFERENT GOALS

Let us try to imagine what development or progress is likely to mean to different persons listed in Table 1.1. What are their aspirations? You will find that some columns are partially filled. Try to complete the table. You can also add any other category of persons.

YOU WANT A CAR? THE WAY OUR COUNTRY IS SET UP ALL YOU CAN HOPE FOR IS MAY BE TO ONE DAY OWN THE RICKSHAW YOU PULL!



TABLE 1.1 DEVELOPMENTAL GOALS OF DIFFERENT CATEGORIES OF PERSONS

Category of Person	Developmental Goals / Aspirations
Landless rural labourers	More days of work and better wages; local school is able to provide quality education for their children; there is no social discrimination and they too can become leaders in the village.
Prosperous farmers from Punjab	Assured a high family income through higher support prices for their crops and through hardworking and cheap labourers; they should be able to settle their children abroad.
Farmers who depend only on rain for growing crops	
A rural woman from a land owning family	
Urban unemployed youth	
A boy from a rich urban family	
A girl from a rich urban family	She gets as much freedom as her brother and is able to decide what she wants to do in life. She is able to pursue her studies abroad.
An <i>adivasi</i> from Narmada valley	

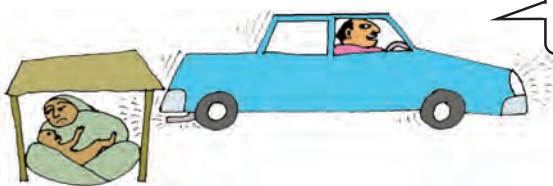
Having filled Table 1.1, let us now examine it. Do all of these persons have the same notion of development or progress? Most likely not. Each one of them seeks different things.

They seek things that are most important for them, i.e., that which can fulfil their aspirations or desires. In fact, at times, two persons or groups of persons may seek things

which are conflicting. A girl expects as much freedom and opportunity as her brother, and that he also shares in the household work. Her brother may not like this. Similarly, to get more electricity, industrialists may want more dams. But this may submerge the land and disrupt the lives of people who are displaced – such as tribals. They might resent this and may prefer small check dams or tanks to irrigate their land.

So, two things are quite clear: one, **different persons can have different developmental goals** and two, **what may be development for one may not be development for the other. It may even be destructive for the other.**

**THOSE PEOPLE
DON'T WANT TO
DEVELOP!**



INCOME AND OTHER GOALS

If you go over Table 1.1 again, you will notice one common thing: what people desire are regular work, better wages, and decent price for their crops or other products that they produce. In other words, they want more income.

Besides seeking more income, one-way or the other, people also seek things like equal treatment, freedom, security, and respect of others. They resent discrimination. All these are important goals. In fact, in some cases, these may be more important than

more income or more consumption because material goods are not all that you need to live.

Money, or material things that one can buy with it, is one factor on which our life depends. But the quality of our life also depends on non-material things mentioned above. If it is not obvious to you, then just think of the role of your friends in your life. You may desire their friendship. Similarly, there are many things that are not easily measured but they mean a lot to our lives. These are often ignored.

A demonstration meeting against raising the height of Sardar Sarovar Dam on Narmada River



However, it will be wrong to conclude that what cannot be measured is not important.

Consider another example. If you get a job in a far off place, before accepting it you would try to consider many factors, apart from income, such as facilities for your family, working atmosphere, or opportunity to learn. In another case, a job may give you less pay but may offer regular employment that enhances your sense of security. Another job, however, may offer high pay but no job security and also leave no time for your family. This will reduce your sense of security and freedom.

Similarly, for development, people look at a mix of goals. It is true that if women are engaged in paid work, their dignity in the household and society increases. However, it is also the case that if there is respect for women there would be more sharing of housework and a greater acceptance of women working outside. A safe and secure environment may allow more women to take up a variety of jobs or run a business.

Hence, the developmental goals that people have are not only about better income but also about other important things in life.

LET'S WORK THESE OUT

1. Why do different persons have different notions of development? Which of the following explanations is more important and why?
 - (a) Because people are different.
 - (b) Because life situations of persons are different.
2. Do the following two statements mean the same? Justify your answer.
 - (a) People have different developmental goals.
 - (b) People have conflicting developmental goals.
3. Give some examples where factors other than income are important aspects of our lives.
4. Explain some of the important ideas of the above section in your own words.

NATIONAL DEVELOPMENT

If, as we have seen above, individuals seek different goals, then their notion of national development is also likely to be different. Discuss among yourselves on what India should do for development.

Most likely, you would find that different students in the class have given different answers to the above question. In fact, you might yourself think of many different answers and not be too sure of any of these. **It is very important to keep in mind that**

different persons could have different as well as conflicting notions of a country's development.

However, can all the ideas be considered equally important? Or, if there are conflicts how does one decide? What would be a fair and just path for all? We also have to think whether there is a better way of doing things. Would the idea benefit a large number of people or only a small group? National development means thinking about these questions.

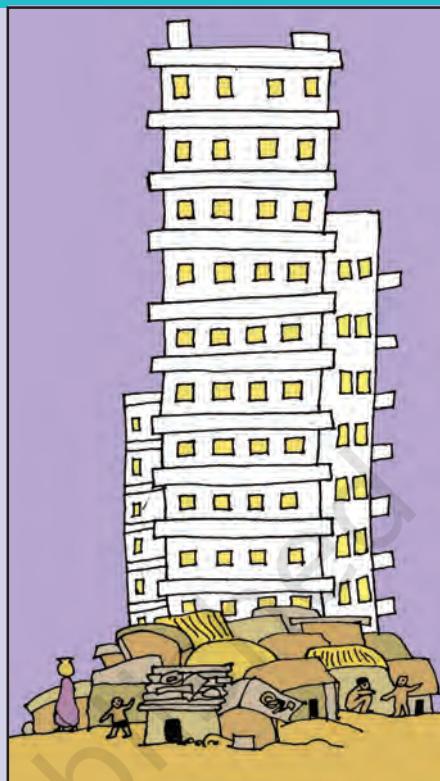
LET'S WORK THESE OUT

Discuss the following situations:

1. Look at the picture on the right. What should be the developmental goals for such an area?
2. Read this newspaper report and answer the questions that follow:

A vessel dumped 500 tonnes of liquid toxic wastes into open-air dumps in a city and in the surrounding sea. This happened in a city called Abidjan in Ivory Coast, a country in Africa. The fumes from the highly toxic waste caused nausea, skin rashes, fainting, diarrhoea etc. After a month seven persons were dead, twenty in hospital and twenty six thousand treated for symptoms of poisoning.

A multinational company dealing in petroleum and metals had contracted a local company of the Ivory Coast to dispose the toxic waste from its ship.



- (i) Who are the people who benefited and who did not?
- (ii) What should be the developmental goal for this country?
3. What can be some of the developmental goals for your village, town or locality?

ACTIVITY 1



If even the idea of what constitutes development can be varied and conflicting, then certainly there can be differences about ways of developing. If you know of any such controversy, try to find out arguments advanced by different people. You may do so by talking to different persons or you may find it from newspapers and television.

HOW TO COMPARE DIFFERENT COUNTRIES OR STATES?

You might ask if development can mean different things, how come some countries are generally called developed and others under-developed? Before we come to this, let us consider another question.

When we compare different things, they could have similarities as well as differences. Which aspects do we use to compare them? Let us look at students in the class itself. How do we compare different students? They differ in their height, health, talents and interests. The healthiest student may not be the most studious one. The most intelligent student may not be the friendliest one. So, how do we compare students? The criterion we may use depends on the purpose of comparison. We use different criterion to choose a sports team, a debate team, a music team or a team to organise a picnic. Still, if for some purpose, we have to choose the criterion for the all-round progress of children in the class, how shall we do it?

Usually we take one or more important characteristics of persons and compare them based on these characteristics. Of course, there can be differences about what are important characteristics that should form the basis of comparison: friendliness and spirit of cooperation, creativity or marks secured?

This is true of development too. **For comparing countries, their income is considered to be one of the most important attributes.** Countries with higher income are

more developed than others with less income. This is based on the understanding that more income means more of all things that human beings need. Whatever people like, and should have, they will be able to get with greater income. So, greater income itself is considered to be one important goal.

Now, what is the income of a country? Intuitively, the income of the country is the income of all the residents of the country. This gives us the total income of the country.

However, for comparison between countries, total income is not such an useful measure. Since, countries have different populations, comparing total income will not tell us what an average person is likely to earn. Are people in one country better off than others in a different country? Hence, we compare the **average income** which is the total income of the country divided by its total population. The average income is also called **per capita income**.

In World Development Reports, brought out by the World Bank, this criterion is used in classifying countries. Countries with per capita income of US\$ 49,300 per annum and above in 2019, are called high income or rich countries and those with per capita income of US\$ 2500 or less are called low-income countries. India comes in the category of low middle income countries because its per capita income in 2019 was just US\$ 6700 per annum. The rich countries, excluding countries of Middle East and certain other small countries, are generally called developed countries.

Average Income

While ‘averages’ are useful for comparison, they also hide disparities

For example, let us consider two countries, A and B. For the sake of simplicity, we have assumed that they have only five citizens each. **Based on data given in Table 1.2, calculate the average income for both the countries.**

TABLE 1.2 COMPARISON OF TWO COUNTRIES

Country	Monthly incomes of citizens (in Rupees)					
	I	II	III	IV	V	Average
Country A	9500	10500	9800	10000	10200	
Country B	500	500	500	500	48000	

Will you be equally happy to live in both these countries? Are both equally developed? Perhaps some of us may like to live in country B if we are

assured of being its fifth citizen but if it is a lottery that decides our citizenship number then perhaps most of us will prefer to live in country A. Even though both the countries have identical average income, country A is preferred because it has more equitable distribution. In this country people are neither very rich nor extremely poor. On the other hand most citizens in country B are poor and one person is extremely rich. Hence, while average income is useful for comparison it does not tell us how this income is distributed among people.

COUNTRY WITH NO RICH AND NO POOR



COUNTRY WITH RICH AND POOR



LET'S WORK THESE OUT

- Give three examples where an average is used for comparing situations.
- Why do you think average income is an important criterion for development? Explain.
- Besides size of per capita income, what other property of income is important in comparing two or more societies?
- Suppose records show that the average income in a country has been increasing over a period of time. From this, can we conclude that all sections of the economy have become better? Illustrate your answer with an example.
- From the text, find out the per capita income level of about 10-15 low-income countries as per World Development Reports.
- Write a paragraph on your notion of what should India do, or achieve, to become a developed country.

INCOME AND OTHER CRITERIA

When we looked at individual aspirations and goals, we found that people not only think of better income but also have goals such as security, respect for others, equal treatment, freedom, etc. in mind. Similarly, when we think of a nation or a region, we may, besides average income, think of other equally important attributes.

What could these attributes be? Let us examine this through an example. Table 1.3 gives the per capita income of Haryana, Kerala and Bihar. Actually, these figures are of Per Capita Net State Domestic Product at Current Prices for 2018–19. Let us ignore what this complicated term exactly means. Roughly, we can take it to be the per capita income of the state. We find that of the three, Haryana has the highest per capita

TABLE 1.3 PER CAPITA INCOME OF SELECT STATES

State	Per Capita Income for 2018–19 (in Rs)
Haryana	2,36,147
Kerala	2,04,105
Bihar	40,982

Source : Economic Survey 2020–21, P.A 29.

income and Bihar is at the bottom. This means that, on an average, a person in Haryana earned Rs 2,36,147 in one year whereas, on an average, a person in Bihar earned only around Rs 40,982. So, if per capita income were to be used as the measure of development, Haryana will be considered the most developed and Bihar the least developed state of the three. Now, let us look at certain other data pertaining to these states given in Table 1.4.

TABLE 1.4 SOME COMPARATIVE DATA ON HARYANA, KERALA AND BIHAR

State	Infant Mortality Rate per 1,000 live births (2018)	Literacy Rate % 2017–18	Net Attendance Ratio (per 100 persons) secondary stage (age 14 and 15 years) 2017–18
			(age 14 and 15 years) 2017–18
Haryana	30	82	61
Kerala	7	94	83
Bihar	32	62	43

Sources : Economic Survey 2020–21, P.A 157, National Sample Survey Organisation (Report No. 585), National statistical office, Government of India.

Explanation of some of the terms used in this table:

Infant Mortality Rate (or IMR) indicates the number of children that die before the age of one year as a proportion of 1000 live children born in that particular year.

Literacy Rate measures the proportion of literate population in the 7-and-above age group.

Net Attendance Ratio is the total number of children of age group 14 and 15 years attending school as a percentage of total number of children in the same age group.

What does this table show? The first column of the table shows that in Kerala, out of 1000 children born, 7 died before completing one year of age but in Haryana the proportion of children dying within one year of birth was 30, which is nearly three times more than that of Kerala. On the other hand, the per capita income of Haryana is more than that of Kerala as shown in Table 1.3. Just think of how dear you are to your parents, think of how every one is so happy when a child is born. Now, try to think of parents whose children die before they even celebrate their first birthday. How painful it must be to these parents? Next, note the year to which this data pertains. It is 2018. So we are not talking of old times; it is 70 years after independence when our metro cities are full of high rise buildings and shopping malls!

PUBLIC FACILITIES

How is it that the average person in Haryana has more income than the average person in Kerala but lags behind in these crucial areas? The reason is — **money in your pocket cannot buy all the goods and services that you may need to live well.** So, income by itself is not a completely adequate indicator of material goods and services that citizens are able to use. For example, normally, your money cannot buy you a pollution-free environment or ensure that you get unadulterated medicines, unless you can afford to shift to a community that already has all these things. Money may also not be able to protect you from infectious diseases, unless the whole of your community takes preventive steps.

The problem does not end with Infant Mortality Rate. The last column of table 1.4 shows that about half of the children aged 14-15 in Bihar are not attending school beyond Class 8. This means that if you went to school in Bihar nearly half of your elementary class friends would be missing. Those who could have been in school are not there! If this had happened to you, you would not be able to read what you are reading now.



Most babies do not get basic healthcare

Actually for many of the important things in life the best way, also the cheapest way, is to provide these goods and services collectively. Just think – will it be cheaper to have collective security for the whole locality or for each house to have its own security staff? What if no one, other than you, in your village or locality is interested in studying? Would you be able to study? Not unless your parents could afford to send you to some private school elsewhere. So you are actually able to study because many other children also want to study and because many people believe that the government should open schools and provide other facilities so that all children have a chance to study. Even now, in many areas, children, particularly girls, are not able to go to high school because the government/society has not provided adequate facilities.





Kerala has a low Infant Mortality Rate because it has adequate provision of basic health and educational facilities. Similarly, in some states, the

Public Distribution System (PDS) functions well. Health and nutritional status of people of such states is certainly likely to be better.

LET'S WORK THESE OUT

1. Look at data in Tables 1.3 and 1.4. Is Haryana ahead of Kerala in literacy rate etc., as it is in terms of per capita income?
2. Think of other examples where collective provision of goods and services is cheaper than individual provision.
3. Does availability of good health and educational facilities depend only on amount of money spent by the government on these facilities? What other factors could be relevant?
4. In Tamil Nadu, 90 per cent of the people living in rural areas use a ration shop, whereas in West Bengal only 35 per cent of rural people do so. Where would people be better off and why?



ACTIVITY 2

Study Table 1.5 carefully and fill in the blanks in the following paragraphs. For this, you may need to make calculations based on the table.

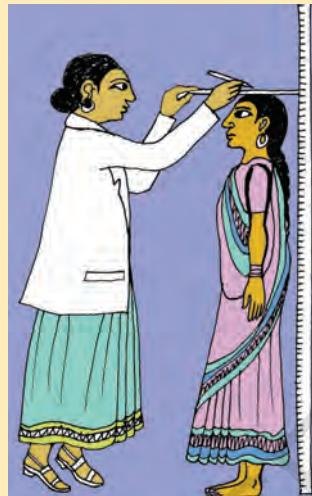
TABLE 1.5 EDUCATIONAL ACHIEVEMENT OF RURAL POPULATION OF UTTAR PRADESH

Category	Male	Female
Literacy rate for rural population	76%	54%
Literacy rate for rural children in age group 10-14 years	90%	87%
Percentage of rural children aged 10-14 attending school	85%	82%

- (a) The literacy rate for all age groups, including young and old, is _____ for rural males and _____ for rural females. However, it is not just that these many adults could not attend school but that there are _____ who are currently not in school.
- (b) It is clear from the table that _____ % of rural girls and _____ % of rural boys are not attending school. Therefore, illiteracy among children in the age group 10-14 is as high as _____ % for rural females and _____ % for rural males.
- (c) This high level of illiteracy among _____ age group, even after more than 70 years of our independence, is most disturbing. In many other states also we are nowhere near realisation of the constitutional goal of free and compulsory education for all children up to the age of 14, which was expected to be achieved by 1960.

ACTIVITY 3

One way to find out if we are properly nourished is to calculate what nutrition scientists call Body Mass Index (BMI). This is easy to calculate. Let each student in the class find out his or her weight and height. Take the weight of each student in kilograms (kg). Then, take the height by drawing up a scale on the wall and measuring accurately with the head straight. Convert the height recorded in centimeters into meters. Divide the weight in kg by the square of the height. The number you get is called BMI. Then, look at the BMI-for-Age tables given on pages 90–91. A student's BMI could be within the normal range or less than that (underweight) or more (obesity). For example, if a girl student is 14 years and 8 month old and the BMI is 15.2, then she is undernourished. Similarly, if the BMI of a boy aged 15 years and 6 months is 28, then he is overweight. Discuss the life situation, food and exercise habits of students, in general, without body shaming anyone.



HUMAN DEVELOPMENT REPORT

Once it is realised that even though the level of income is important, yet it is an inadequate measure of the level of development, we begin to think of other criterion. There could be a long list of such criterion but then it would not be so useful. What we need is a small number of the most important things. Health and education indicators, such as the ones we used in comparison of Kerala and Haryana, are among them. Over the past decade or so, health and education indicators have come to be widely used along with income as a measure of development. For instance, **Human Development Report** published by UNDP compares countries based on the educational levels of the people, their health status and per capita income. It would be interesting to look at certain relevant data regarding India and its neighbours from Human Development Report 2020.

TABLE 1.6 SOME DATA REGARDING INDIA AND ITS NEIGHBOURS FOR 2019

Country	Gross National Income (GNI) per capita (2011 PPP \$)	Life Expectancy at birth	Mean Years of Schooling of People aged 25 and above	HDI Rank in the world (2018)
Sri Lanka	12,707	77	10.6	73
India	6,681	69.7	6.5	130
Myanmar	4,961	67.1	5.0	148
Pakistan	5,005	67.3	5.2	154
Nepal	3,457	70.8	5.0	143
Bangladesh	4,976	72.6	6.2	134

Source : Human Development Report, 2020, United Nations Development Programme, New York.

NOTES

1. HDI stands for Human Development Index. HDI ranks in above table are out of 189 countries in all.
2. Life Expectancy at birth denotes, as the name suggests, average expected length of life of a person at the time of birth.
3. Per Capita Income is calculated in dollars for all countries so that it can be compared. It is also done in a way so that every dollar would buy the same amount of goods and services in any country.

Isn't it surprising that a small country in our neighbourhood, Sri Lanka, is much ahead of India in every respect and a big country like ours has such a low rank in the world? Table 1.6 also shows that though Nepal and Bangladesh have low per capita income than that of India, yet they are better than India in life expectancy.

Many improvements have been suggested in calculating HDI and

many new components have been added to the Human Development Report but, by pre-fixing Human to Development, it has made it very clear that what is important in development is what is happening to citizens of a country. It is people, their health, their well being, that is most important.

Do you think there are certain other aspects that should be considered in measuring human development?

SUSTAINABILITY OF DEVELOPMENT

Suppose for the present that a particular country is quite developed. We would certainly like this level of development to go up further or at least be maintained for future generations. This is obviously desirable. However, since the second half of the twentieth century, a number of scientists have been warning that the present type, and levels, of development are not sustainable.

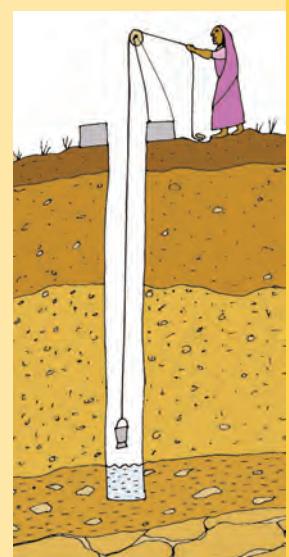
"We have not inherited the world from our forefathers — we have borrowed it from our children."

LET'S UNDERSTAND WHY THIS IS SO THROUGH THE FOLLOWING EXAMPLE:

Example 1: Groundwater in India

"Recent evidence suggests that the groundwater is under serious threat of overuse in many parts of the country. About 300 districts have reported a water level decline of over 4 metres during the past 20 years. Nearly one-third of the country is overusing their groundwater reserves. In another 25 years, 60 per cent of the country would be doing the same if the present way of using this resource continues. Groundwater overuse is particularly found in the agriculturally prosperous regions of Punjab and Western U.P., hard rock plateau areas of central and south India, some coastal areas and the rapidly growing urban settlements."

- (a) Why groundwater is overused?
- (b) Can there be development without overuse?



Groundwater is an example of renewable resources. These resources are replenished by nature as in the case of crops and plants. However, even these resources may be overused. For example, in the case of groundwater, if we use more than what is being replenished by rain then we would be overusing this resource.

Non-renewable resources are those which will get exhausted after a few years of use. We have a fixed stock on earth which cannot be replenished. We do discover new resources that we did not know of earlier. New sources in this way add to the stock. However, over time, even this will get exhausted.

FOR EXAMPLE, CRUDE OIL THAT WE EXTRACT FROM THE EARTH IS A NON-RENEWABLE RESOURCE, HOWEVER WE MAY FIND A SOURCE OF OIL THAT WE DID NOT KNOW OF EARLIER. EXPLORATIONS ARE BEING UNDERTAKEN ALL THE TIME.

Example 2: Exhaustion of Natural Resources

Look at the following data for crude oil.

TABLE 1.7 CRUDE OIL RESERVES

Region/Country	Reserves (2017) (Thousand Million Barrels)	Number of Years Reserves will last
Middle East	808	70
United States of America	50	10.5
World	1697	50.2

Source : BP Statistical Review of World Energy, June 2018, P.12.

The table gives an estimate of reserves of crude oil (column1). More important, it also tells us for how many years the stock of crude oil will last if people continue to extract it at the present rate. The reserves would last only 50 years more. This is for the world as a whole. However, different countries face different situations. Countries like India depend on importing oil from abroad because they do not have enough stocks of their own. If prices of oil increase this becomes a burden for everyone. There are countries like USA which have low reserves and hence want to secure oil through military or economic power.

The question of sustainability of development raises many fundamentally new issues about the nature and process of development.

- (a) Is crude oil essential for the development process in a country? Discuss.
- (b) India has to import crude oil. What problems do you anticipate for the country looking at the above situation?



Consequences of environmental degradation do not respect national or state boundaries; this issue is no longer region or nation specific. Our future is linked together. Sustainability of development is comparatively a new area of knowledge in which scientists, economists, philosophers and other

social scientists are working together.

In general, the question of development or progress is perennial. At all times as a member of society and as individuals we need to ask where we want to go, what we wish to become and what our goals are. So the debate on development continues.

EXERCISES

1. Development of a country can generally be determined by
 - (i) its per capita income
 - (ii) its average literacy level
 - (iii) health status of its people
 - (iv) all the above
2. Which of the following neighbouring countries has better performance in terms of human development than India?
 - (i) Bangladesh
 - (ii) Sri Lanka
 - (iii) Nepal
 - (iv) Pakistan
3. Assume there are four families in a country. The average per capita income of these families is Rs 5000. If the income of three families is Rs 4000, Rs 7000 and Rs 3000 respectively, what is the income of the fourth family?
 - (i) Rs 7500
 - (ii) Rs 3000
 - (iii) Rs 2000
 - (iv) Rs 6000
4. What is the main criterion used by the World Bank in classifying different countries? What are the limitations of this criterion, if any?
5. In what respects is the criterion used by the UNDP for measuring development different from the one used by the World Bank?
6. Why do we use averages? Are there any limitations to their use? Illustrate with your own examples related to development.
7. Kerala, with lower per capita income has a better human development ranking than Haryana. Hence, per capita income is not a useful criterion at all and should not be used to compare states. Do you agree? Discuss.
8. Find out the present sources of energy that are used by the people in India. What could be the other possibilities fifty years from now?
9. Why is the issue of sustainability important for development?

- “The Earth has enough resources to meet the needs of all but not enough to satisfy the greed of even one person”. How is this statement relevant to the discussion of development? Discuss.
- List a few examples of environmental degradation that you may have observed around you.
- For each of the items given in Table 1.6, find out which country is at the top and which is at the bottom.
- The following table shows the proportion of adults (aged 15-49 years) whose BMI is below normal ($BMI < 18.5 \text{ kg/m}^2$) in India. It is based on a survey of various states for the year 2015-16. Look at the table and answer the following questions.

State	Male (%)	Female (%)
Kerala	8.5	10
Karnataka	17	21
Madhya Pradesh	28	28
All States	20	23

Source: National Family Health Survey-4, 2015-16, <http://rchiips.org>

- Compare the nutritional level of people in Kerala and Madhya Pradesh.
- Can you guess why around one-fifth of people in the country are undernourished even though it is argued that there is enough food in the country? Describe in your own words.

ADDITIONAL PROJECT / ACTIVITY

Invite three different speakers to talk to you about the development of your region. Ask them all the questions that come to your mind. Discuss these ideas in groups. Each group should prepare a wall chart, giving reasons about ideas that you agree or do not agree with.

NOTES FOR THE TEACHER

CHAPTER 2: SECTORS OF THE INDIAN ECONOMY

An economy is best understood when we study its components or sectors. Sectoral classification can be done on the basis of several criteria. In this chapter, three types of classifications are discussed: primary/secondary/tertiary; organised/unorganised; and public/private. You can create a discussion about these types by taking examples familiar to the students and relate them to their daily life. It is important to emphasise the changing roles of sectors. This can be highlighted further by drawing attention of the students to the rapid growth of service sector. While elaborating the ideas provided in the chapter, the students may need to be familiarised with a few fundamental concepts such as Gross Domestic Product, Employment etc. Since the students may find this difficult to understand, it is necessary to explain to them through examples. Several activities and exercises are suggested in the chapter to help the students understand how a person's activity could be placed — whether in the primary, secondary or tertiary, organised or unorganised, and public or private sector. You may encourage the students to talk to various working people around them (such as shop owners, casual workers, vegetable vendors, workshop mechanics, domestic workers etc.) to know more about how they live and work. Based on such information, the students can be encouraged to develop their own classification of economic activities.

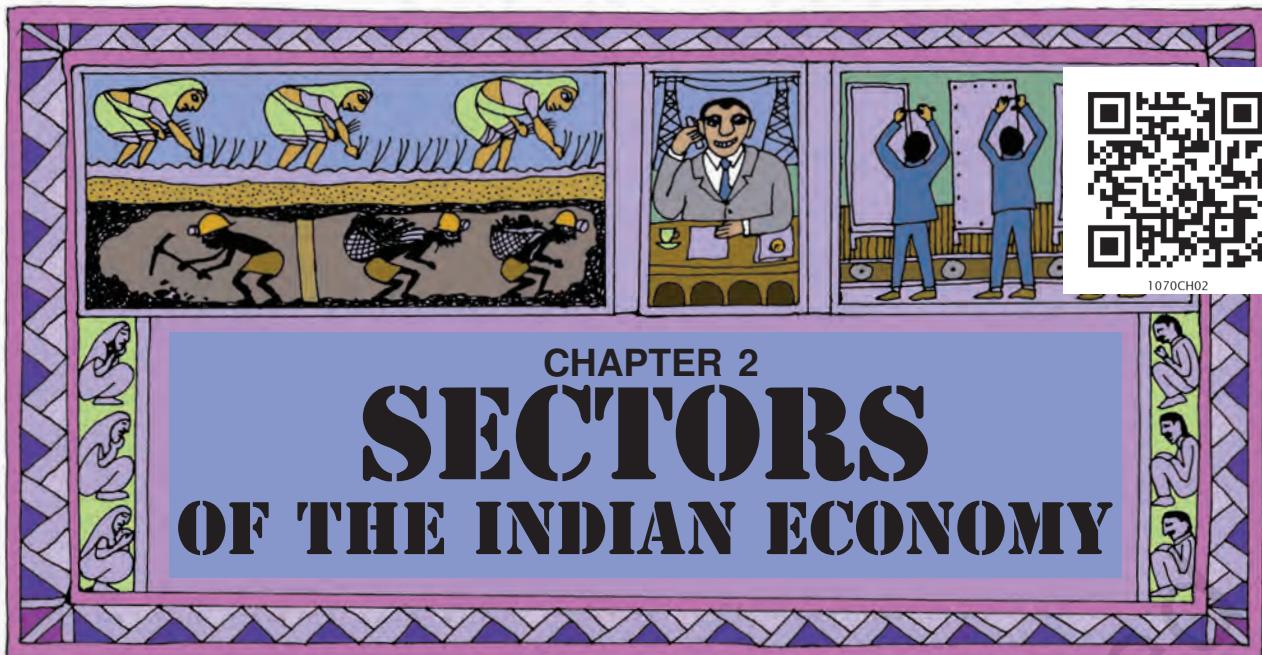
Another important issue to be highlighted is about the problems caused by the changes in the roles of sectors. The chapter has taken the example of unemployment and what the government can do to solve it. The declining importance of agriculture and growing importance of

industry and services should be related to the experience of the children by taking more examples that they may observe in their day-to-day life. Information derived from the media could be used for this purpose. You may encourage the students to bring important cuttings and stories from newspapers, which could be prominently displayed in storyboards, and encourage the class to discuss these issues. While discussing the unorganised sector, the key issue of protecting the workers engaged in the sector should be highlighted. You may also encourage the students to visit persons and enterprises in the unorganised sector and get a first hand experience from real life situation.

Sources for Information

The GDP data used in this chapter pertaining to Gross Domestic Product at Factor Cost by Industry of Origin at 2011–12 prices is taken from *Real Time Handbook of Statistics on Indian Economy*. It is a valuable source of GDP and other information relating to the Indian economy. For evaluation purposes, particularly to develop the analytical ability of learners, teachers can refer to this report through the Internet to get data for different years. Due to change in methodology, latest data is not used in the chapter.

The employment figures are based on data taken from the five-yearly surveys on employment and unemployment conducted by the National Sample Survey Organisation (NSSO) now known as National Statistical Office (NSO). NSO is an organisation under the Ministry of Statistics and Programme Implementation, Government of India. The website you can log onto is: <http://mospi.gov.in>. Employment data is also available from other sources such as Census of India.



CHAPTER 2

SECTORS OF THE INDIAN ECONOMY

SECTORS OF ECONOMIC ACTIVITIES

Let us look at these pictures. You will find that people are engaged in various economic activities. Some of these are activities producing goods. Some others are producing services. These activities are happening around us every minute even as we speak. How do we understand these activities? One way of doing this is to group them (classify them) using some important criterion. These groups are also called sectors.



We begin by looking at different kind of economic activities.

Primary (Agriculture) Sector



produces natural goods

Tertiary (Service) Sector



helps to develop other sectors

called **agriculture and related sector.**

The **secondary sector** covers activities in which natural products are changed into other forms through ways of manufacturing that we associate with industrial activity. It is the next step after primary. The product is not produced by nature but has to be made and therefore some process of manufacturing is essential. This could be in a factory, a workshop or at home. For example, using cotton fibre from the plant, we

Secondary (Industrial) Sector



produces manufactured goods

spin yarn and weave cloth. Using sugarcane as a raw material, we make sugar or *gur*. We convert earth into bricks and use bricks to make houses and buildings. Since this sector gradually became associated with the different kinds of industries that came up, it is also called as **industrial** sector.

After primary and secondary, there is a third category of activities that falls under **tertiary sector** and is different from the above two. These are activities that help in the development of the primary and secondary sectors. These activities, by themselves, do not produce a good but they are an aid or a support for the production process. For example, goods that are produced in the primary or secondary sector would need to be transported by trucks or trains and then sold in wholesale and retail shops. At times, it may be necessary to store these in godowns. We also may need to talk to others over telephone or send letters (communication) or borrow money from banks (banking) to help production and trade. Transport, storage, communication, banking, trade are some examples of tertiary activities. Since these activities generate services rather than goods, the tertiary sector is also called the **service sector**.

Service sector also includes some essential services that may not directly help in the production of goods. For example, we require teachers, doctors, and those who provide personal services such as washermen, barbers, cobblers, lawyers, and people to do administrative and accounting works. In recent times, certain new services based on information technology such as internet cafe, ATM booths, call centres, software companies etc have become important.

Economic activities, though, are grouped into three different categories, are highly **interdependent**. Let us look at some examples.

TABLE 2.1 EXAMPLES OF ECONOMIC ACTIVITIES

EXAMPLE	WHAT DOES THIS SHOW?
Imagine what would happen if farmers refuse to sell sugarcane to a particular sugar mill. The mill will have to shut down.	This is an example of the secondary or industrial sector being dependent on the primary.
Imagine what would happen to cotton cultivation if companies decide not to buy from the Indian market and import all cotton they need from other countries. Indian cotton cultivation will become less profitable and the farmers may even go bankrupt, if they cannot quickly switch to other crops. Cotton prices will fall.	
Farmers buy many goods such as tractors, pumpsets, electricity, pesticides and fertilisers. Imagine what would happen if the price of fertilisers or pumpsets go up. Cost of cultivation of the farmers will rise and their profits will be reduced.	
People working in industrial and service sectors need food. Imagine what would happen if there is a strike by transporters and lorries refuse to take vegetables, milk, etc. from rural areas. Food will become scarce in urban areas whereas farmers will be unable to sell their products.	

LET'S WORK THESE OUT

1. Complete the above table to show how sectors are dependent on each other.
2. Explain the difference between primary, secondary and tertiary sectors using examples other than those mentioned in the text.
3. Classify the following list of occupations under primary, secondary and tertiary sectors:

<ul style="list-style-type: none"> • Tailor • Basket weaver • Flower cultivator • Milk vendor • Fishermen • Priest • Courier 	<ul style="list-style-type: none"> • Workers in match factory • Moneylender • Gardener • Potter • Bee-keeper • Astronaut • Call centre employee
---	--
4. Students in a school are often classified into primary and secondary or junior and senior. What is the criterion that is used? Do you think this is a useful classification? Discuss.

COMPARING THE THREE SECTORS

The various production activities in the primary, secondary and tertiary sectors produce a very large number of goods and services. Also, the three sectors have a large number of people working in them to produce these goods and services. The next step, therefore, is to see how much goods and services are produced and how many people work in each sector. In an economy there could be one or more sectors which are dominant in terms of total production and employment, while other sectors are relatively small in size.

How do we count the various goods and services and know the total production in each sector?

With so many thousands of goods and services produced, you might think this is an impossible task! Not only would the task be enormous, you might also wonder how we can add up cars and computers and nails and furniture. It won't make sense!!!

You are right in thinking so. To get around this problem, economists suggest that the values of goods and services should be used rather than adding up the actual numbers. For example, if 10,000 kgs of wheat is sold at Rs 20 per kg, the value of wheat will be Rs 2,00,000. The value of 5000 coconuts at Rs 15 per coconut will be Rs 75,000. Similarly, the value of goods and services in the three sectors are calculated, and then added up.

Remember, there is one precaution one has to take. Not every good (or service) that is produced and sold needs to be counted. It makes sense only to include the **final goods and services**. Take, for instance, a farmer who sells wheat to a flour mill for Rs 20 per kg. The mill grinds the wheat and sells the flour to a biscuit company for Rs 25 per kg. The biscuit company uses the flour and things such as sugar and oil to make four packets of biscuits. It sells biscuits in the market to the consumers for Rs 80 (Rs 20 per packet). Biscuits are the final goods, i.e., goods that reach the consumers.

Why are only 'final goods and services' counted? In contrast to final goods, goods such as wheat and the wheat flour in this example are intermediate goods. Intermediate goods are used up in producing final goods and services. The value of final goods **already includes** the value of all the intermediate goods that are used in making the final good. Hence, the value of Rs 80 for the biscuits (final good) already includes the value of flour (Rs 25). Similarly, the value of all other intermediate goods would have been included. To count the value of the flour and wheat



separately is therefore not correct because then we would be counting the value of the same things a number of times. First as wheat, then as flour and finally as biscuits.

The value of final goods and services produced in each sector during a particular year provides the total production of the sector for that year. And the sum of production in the three sectors gives what is called the **Gross Domestic Product (GDP)** of a country. It is the value of all final goods and services produced **within a country** during a particular year. GDP shows how big the economy is.

In India, the mammoth task of measuring GDP is undertaken by a central government ministry. This Ministry, with the help of various government departments of all the Indian states and union territories, collects information relating to total volume of goods and services and their prices and then estimates the GDP.

Historical Change in Sectors

Generally, it has been noted from the histories of many, now developed, countries that at initial stages of development, primary sector was the most important sector of economic activity.

As the methods of farming changed and agriculture sector began to prosper, it produced much more food than before. Many people could now take up other activities. There were increasing number of craftpersons and traders. Buying and selling activities increased many times. Besides, there were also transporters, administrators, army etc. However, at this stage, most of the goods produced were natural products from the primary sector and most people were also employed in this sector.

Over a long time (more than hundred years), and especially because new methods of manufacturing were introduced, factories came up and started expanding. Those people who had earlier worked on farms now began to work in factories in large numbers. They were forced to do so as you read in history chapters. People began to use many more goods that were produced in factories at cheap rates. Secondary sector gradually became the most important in total production and employment. Hence, over time, a shift had taken place. This means that the importance of the sectors had changed.

In the past 100 years, there has been a further shift from secondary to tertiary sector in developed countries. The service sector has become the most important in terms of total production. Most of the working people are also employed in the service sector. This is the general pattern observed in developed countries.

What is the total production and employment in the three sectors in India? Over the years have there been changes similar to the pattern observed for the developed countries? We shall see in the next section.

LET'S WORK THESE OUT

1. What does the history of developed countries indicate about the shifts that have taken place between sectors?
2. Correct and arrange the important aspects for calculating GDP from this Jumble.
To count goods and services we add the numbers that are produced. We count all those that were produced in the last five years. Since we shouldn't leave out anything we add up all these goods and services.
3. Discuss with your teacher how you could calculate the total value of a good or service by using the method of value added at each stage.

PRIMARY, SECONDARY AND TERTIARY SECTORS IN INDIA

Graph 1 shows the production of goods and services in the three sectors. This is shown for two years, 1973-74 and 2013-14. We have used the data for these two years because the data are comparable and authentic. You can see how the total production has grown over the forty years.

LET'S WORK THESE OUT

Answer the following questions by looking at the graph:

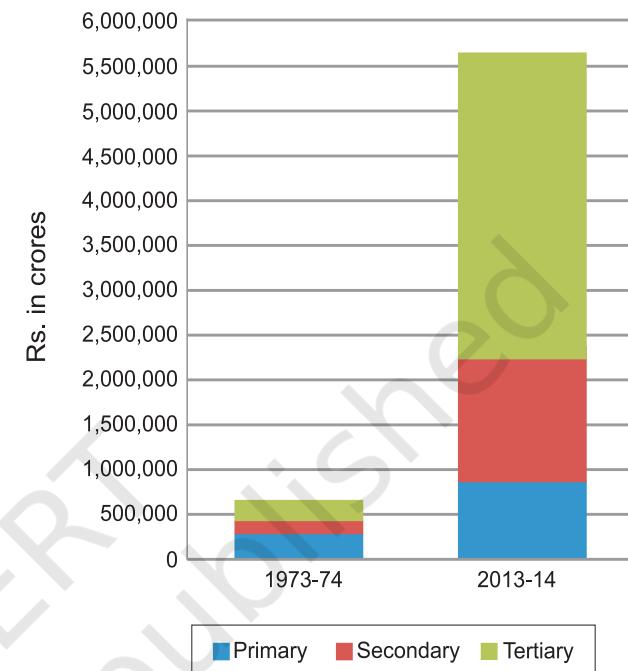
1. Which was the largest producing sector in 1973-74?
2. Which is the largest producing sector in 2013-14?
3. Can you say which sector has grown the most over forty years?
4. What was the GDP of India in 2013-14?

What does the comparison between 1973-74 and 2013-14 show?
What conclusions can we draw from the comparison?
Let's find out.

Rising Importance of the Tertiary Sector in Production

Over the forty years between 1973-74 and 2013-14, while production in all the three sectors has increased, it has increased the most in the tertiary sector. As a result, in the year 2013-14, the tertiary sector has emerged as the largest producing sector in India replacing the primary sector.

Graph 1 : GDP by Primary, Secondary and Tertiary Sectors



Why is the tertiary sector becoming so important in India? There could be several reasons.

First, in any country several services such as hospitals, educational institutions, post and telegraph services, police stations, courts, village administrative offices, municipal corporations, defence, transport, banks, insurance companies, etc. are required. These can be considered as *basic services*. In a developing country the government has to take responsibility for the provision of these services.

Second, the development of agriculture and industry leads to the development of services such as

transport, trade, storage and the like, as we have already seen. Greater the development of the primary and secondary sectors, more would be the demand for such services.

Third, as income levels rise, certain sections of people start demanding many more services like eating out, tourism, shopping, private hospitals, private schools, professional training etc. You can see this change quite sharply in cities, especially in big cities.

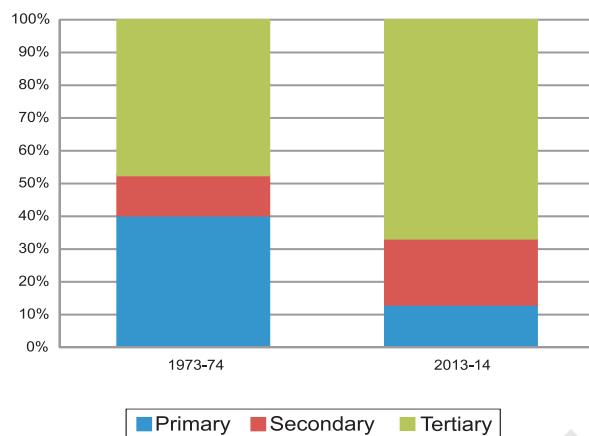
Fourth, over the past decade or so, certain new services such as those based on information and communication technology have become important and essential. The production of these services has been rising rapidly. In Chapter 4, we shall see examples of these new services and the reasons for their expansion.

However, you must remember that not all of the service sector is growing equally well. Service sector in India employs many different kinds of people. At one end there are a limited number of services that employ highly skilled and educated workers. At the other end, there are a very large number of workers engaged in services such as small shopkeepers, repair persons, transport persons, etc. These people barely manage to earn a living and yet they perform these services because no alternative opportunities for work are available to them. Hence, only a part of this sector is growing in importance. You shall read more about this in the next section.

Where are most of the people employed?

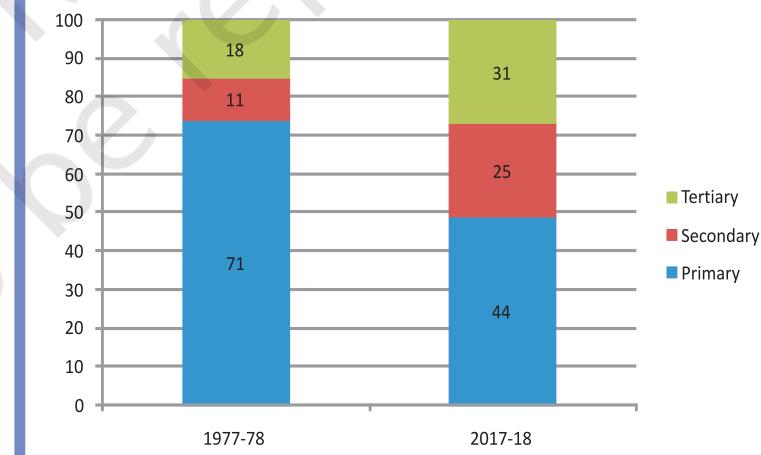
Graph 2 presents percentage share of the three sectors in GDP. Now you can directly see the changing importance of the sectors over the forty years.

Graph 2 : Share of Sectors in GDP (%)



A remarkable fact about India is that while there has been a change in the share of the three sectors in GDP, a similar shift has not taken place in employment. Graph 3 shows the share of employment in the three sectors in 1977-78 and 2017-18. The primary sector continues to be the largest employer even now.

Graph 3 : Share of Sectors in Employment (%)



Why didn't a similar shift out of primary sector happen in case of employment? It is because not enough jobs were created in the secondary and tertiary sectors. Even

though industrial output or the production of goods went up by more than nine times during the period, employment in the industry went up by around three times. The same applies to the tertiary sector as well. While production in the service sector rose by 14 times, employment in the service sector rose around five times.

As a result, more than half of the workers in the country are working in the primary sector, mainly in agriculture, producing only about one sixth of the GDP. In contrast to this, the secondary and tertiary sectors produce the rest of the produce whereas they employ less about half the people. Does this mean that the workers in agriculture are not producing as much as they could?

What it means is that there are more people in agriculture than is necessary. So, even if you move a few people out, production will not be affected. In other words, workers in the agricultural sector are **underemployed**.

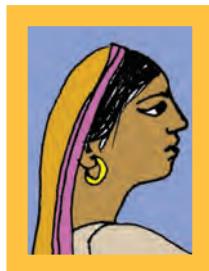
For instance, take the case of a small farmer, Laxmi, owning about two hectares of unirrigated land dependent only on rain and growing crops, like *jowar* and *arhar*. All five members of her family work in the plot throughout the year. Why? They have nowhere else to go for work. You will see that everyone is working, none remains idle, but in actual fact, their **labour effort** gets divided. Each one is doing some work but no one is fully employed. This is the situation of underemployment, where people are apparently working but all of them are made to work less than their potential. **This kind of**

underemployment is hidden in contrast to someone who does not have a job and is clearly visible as unemployed. Hence, it is also called disguised unemployment.

Now, supposing a landlord, Sukhram, comes and hires one or two members of the family to work on his land. Laxmi's family is now able to earn some extra income through wages. Since you do not need five people to look after that small plot, two people moving out does not affect production on their farm. In the above example, two people may move to work in a factory. Once again the earnings of the family would increase and they would also continue to produce as much from their land.

There are lakhs of farmers like Laxmi in India. This means that even if we remove a lot of people from agricultural sector and provide them with proper work elsewhere, agricultural production will not suffer. The incomes of the people who take up other work would increase the total family income.

This underemployment can also happen in other sectors. For example there are thousands of casual workers in the service sector in urban areas who search for daily employment. They are employed as painters, plumbers, repair persons and others doing odd jobs. Many of them don't find work everyday. Similarly, we see other people of the service sector on the street pushing a cart or selling something where **they may spend the whole day but earn very little**. They are doing this work because they do not have better opportunities.



LET'S WORK THESE OUT

1. Complete the table using the data given in Graphs 2 and 3 and answer the question that follows. Ignore if data are not available for some years.

TABLE 2.2 SHARE OF PRIMARY SECTOR IN GDP AND EMPLOYMENT

	1973-74	1977-78	2013-14	2017-18
Share in GDP				
Share in employment				

What are the changes that you observe in the primary sector over a span of forty years?

2. Choose the correct answer:

Underemployment occurs when people

- (i) do not want to work
- (ii) are working in a lazy manner
- (iii) are working less than what they are capable of doing
- (iv) are not paid for their work

3. Compare and contrast the changes in India with the pattern that was observed for developed countries. What kind of changes between sectors were desired but did not happen in India?

4. Why should we be worried about underemployment?

How to Create More Employment?

From the above discussion, we can see that there continues to be considerable underemployment in agriculture. There are also people who are not employed at all. In what ways can one increase employment for people? Let us look at some of them.

Take the case of Laxmi with her two-hectare plot of unirrigated land. The government can spend some money or banks can provide a loan, to construct a well for her family to irrigate the land. Laxmi will then be able to irrigate her land and take a second crop, wheat, during the *rabi* season. Let us suppose that one hectare of wheat can provide employment to two people for 50 days (including sowing, watering, fertiliser



application and harvesting). So, two more members of the family can be employed in her own field. Now suppose a new dam is constructed and canals are dug to irrigate many such farms. This could lead to a lot of employment generation within the agricultural sector itself reducing the problem of underemployment.

Now, suppose Laxmi and other farmers produce much more than before. They would also need to sell some of this. For this they may be required to transport their products to a nearby town. If the government invests some money in transportation and storage of crops, or makes better rural roads so that mini-trucks reach everywhere several farmers like Laxmi, who now have access to water, can continue to grow and sell these crops. This activity can provide productive employment to not just farmers but also others such as those in services like transport or trade.

Laxmi's need is not confined to water alone. To cultivate the land, she also needs seeds, fertilisers, agricultural equipment and pumpsets to draw water. Being a poor farmer, she cannot afford many of these. So, she will have to borrow money from moneylenders and pay a high rate of

interest. If the local bank gives her credit at a reasonable rate of interest, she will be able to buy all these in time and cultivate her land. This means that along with water, we also need to provide cheap agricultural credit to the farmers for farming to improve. We will look at some of these needs in Chapter 3, Money and Credit.

Another way by which we can tackle this problem is to identify, promote and locate industries and services in semi-rural areas where a large number of people may be employed. For instance, suppose many farmers decide to grow *arhar* and chickpea (pulse crops). Setting up a *dal* mill to procure and process these and sell in the cities is one such example. Opening a cold storage could give an opportunity for farmers to store their products like potatoes and onions and sell them when the price is good. In villages near forest areas, we can start honey collection centres where farmers can come and sell wild honey. It is also possible to set up industries that process vegetables and agricultural produce like potato, sweet potato, rice, wheat, tomato, fruits, which can be sold in outside markets. This will provide employment in industries located in semi-rural areas and not necessarily in large urban centres.

Gur Making in Haryana



What groups of people do you think are unemployed or underemployed in your area? Can you think of some measures that could be taken up for them?

Do you know that in India about 60 per cent of the population belongs to the age group 5-29 years? Out of this, only about 51 per cent are attending educational institutions. The rest and particularly those aged less than 18 years may be at home or

many of them may be working as child labourers. If these children are to attend schools, we will require more buildings, more teachers and other staff. A study conducted by the erstwhile Planning Commission (now known as NITI Aayog) estimates that nearly 20 lakh jobs can be created in the education sector alone. Similarly, if we are to improve the health situation, we need many more doctors, nurses, health workers etc. to work in rural areas. These are some ways by which jobs would be created and we would also be able to address the important aspects of development talked about in Chapter 1.

Every state or region has potential for increasing the income and employment for people in that area. It could be tourism, or regional craft industry, or new services like IT. Some of these would require proper planning and support from the government. For example, the same study by the Planning Commission says that if tourism as a sector is improved, every year we can give additional employment to more than 35 lakh people.

We must realise that some of the suggestions discussed above would take a long time to implement. For the short-term, we need some quick measures. Recognising this, the central government in India made a law implementing the **Right to Work**.



in about 625 districts of India. It is called **Mahatma Gandhi National Rural Employment Guarantee Act 2005 (MGNREGA 2005)**. Under MGNREGA 2005, all those who are able to, and are in need of, work in rural areas are guaranteed 100 days of employment in a year by the government. If the government fails in its duty to provide employment, it will give unemployment allowances to the people. The types of work that would in future help to increase the production from land will be given preference under the Act.

LET'S WORK THESE OUT

1. Why do you think MGNREGA 2005 is referred to as ' Right to work' ?
2. Imagine that you are the village head. In that capacity suggest some activities that you think should be taken up under this Act that would also increase the income of people? Discuss.
3. How would income and employment increase if farmers were provided with irrigation and marketing facilities?
4. In what ways can employment be increased in urban areas?

DIVISION OF SECTORS AS ORGANISED AND UNORGANISED

Let us examine another way of classifying activities in the economy. This looks at the way people are employed. What are their conditions of work? Are there any rules and regulations that are followed as regards their employment?

Kanta

Kanta works in an office. She attends her office from 9.30 a.m. to 5.30 p.m. She gets her salary regularly at the end of every month. In addition to the salary, she also gets provident fund as per the rules laid down by the government. She also gets medical and other allowances. Kanta does not go to office on Sundays. This is a paid holiday. When she joined work, she was given an appointment letter stating all the terms and conditions of work.



Kamal

Kamal is Kanta's neighbour. He is a daily wage labourer in a nearby grocery shop. He goes to the shop at 7:30 in the morning and works till 8:00 p.m. in the evening. He gets no other allowances apart from his wages. He is not paid for the days he does not work. He has therefore no leave or paid holidays. Nor was he given any formal letter saying that he has been employed in the shop. He can be asked to leave anytime by his employer.

Do you see the differences in the conditions of work between Kanta and Kamal?

Kanta works in the **organised** sector. Organised sector covers those enterprises or places of work where the terms of employment are regular and therefore, people have assured work. They are registered by the government and have to follow its rules and regulations which are given in various laws such as the Factories Act, Minimum Wages Act, Payment of Gratuity Act, Shops and Establishments Act etc. It is called

organised because it has some formal processes and procedures. Some of these people may not be employed by anyone but may work on their own but they too have to register themselves with the government and follow the rules and regulations.

Workers in the organised sector enjoy security of employment. They are expected to work only a fixed number of hours. If they work more, they have to be paid overtime by the employer. They also get several other benefits from the employers. What are

these benefits? They get paid leave, payment during holidays, provident fund, gratuity etc. They are supposed to get medical benefits and, under the laws, the factory manager has to ensure facilities like drinking water and a safe working environment. When they retire, these workers get pensions as well.

In contrast, Kamal works in the unorganised sector. The **unorganised sector** is characterised by small and scattered units which are largely outside the control of the government. There are rules and regulations but these are not followed. Jobs here are

low-paid and often not regular. There is no provision for overtime, paid leave, holidays, leave due to sickness etc. Employment is not secure. People can be asked to leave without any reason. When there is less work, such as during some seasons, some people may be asked to leave. A lot also depends on the whims of the employer. This sector includes a large number of people who are employed on their own doing small jobs such as selling on the street or doing repair work. Similarly, farmers work on their own and hire labourers as and when they require.

LET'S WORK THESE OUT

1. Look at the following examples. Which of these are unorganised sector activities?
 - (i) A teacher taking classes in a school
 - (ii) A headload worker carrying a bag of cement on his back in a market
 - (iii) A farmer irrigating her field
 - (iv) A doctor in a hospital treating a patient
 - (v) A daily wage labourer working under a contractor
 - (vi) A factory worker going to work in a big factory
 - (vii) A handloom weaver working in her house
2. Talk to someone who has a regular job in the organised sector and another who works in the unorganised sector. Compare and contrast their working conditions in all aspects.
3. How would you distinguish between organised and unorganised sectors? Explain in your own words.
4. The table below shows the estimated number of workers in India in the organised and unorganised sectors. Read the table carefully. Fill in the missing data and answer the questions that follow.

TABLE 2.3 WORKERS IN DIFFERENT SECTORS (IN MILLIONS)

Sector	Organised	Unorganised	Total
Primary	1		232
Secondary	41	74	115
Tertiary	40	88	128
Total	82		
Total in Percentage			100%

- What is the percentage of people in the unorganised sector in agriculture?
- Do you agree that agriculture is an unorganised sector activity? Why?
- If we look at the country as a whole, we find that _____% of the workers in India are in the unorganised sector. Organised sector employment is available to only about _____% of the workers in India.

How to Protect Workers in the Unorganised Sector?

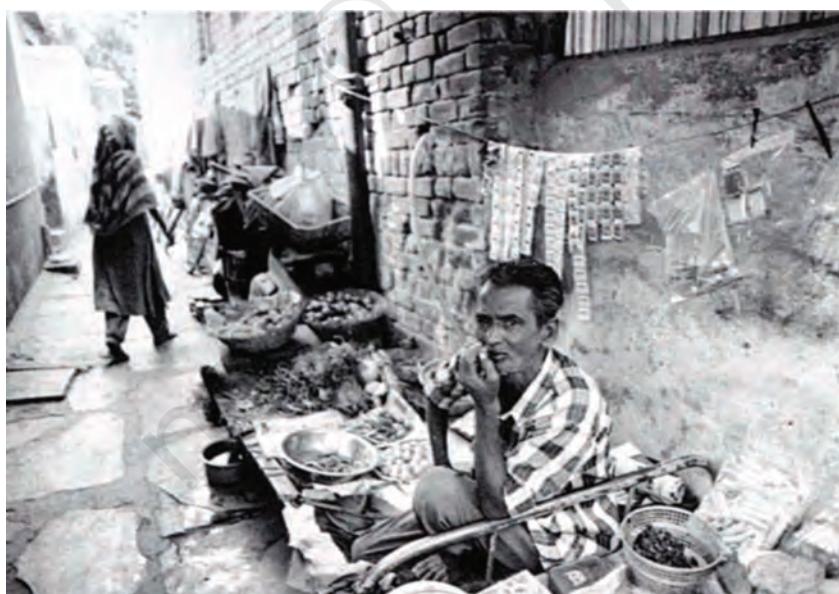
The organised sector offers jobs that are the most sought-after. But the employment opportunities in the organised sector have been expanding very slowly. It is also common to find many organised sector enterprises in the unorganised sector. They adopt such strategies to evade taxes and refuse to follow laws that protect labourers. As a result, a large number of workers are forced to enter the unorganised sector jobs, which pay a very low salary. They are often exploited and not paid a fair wage. Their earnings are low and not regular. These jobs are not secure and have no other benefits.

Since the 1990s, it is also common to see a large number of workers losing their jobs in the organised sector. These workers are forced to take up jobs in the unorganised sector with low earnings. Hence, besides the need for more work, there is also a need for protection and support of the workers in the unorganised sector.

Who are these vulnerable people who need protection? In the rural areas, the unorganised sector mostly comprises of landless agricultural labourers, small and marginal farmers, sharecroppers and artisans (such as weavers, blacksmiths, carpenters and goldsmiths). Nearly 80 per cent of rural households in India are in small and marginal farmer category. These farmers need to be supported through adequate facility for timely delivery of seeds, agricultural inputs, credit, storage facilities and marketing outlets.

In the urban areas, unorganised sector comprises mainly of workers in small-scale industry, casual workers in construction, trade and transport etc., and those who work as street vendors, head load workers, garment makers, rag pickers etc. Small-scale industry also needs government's support for procuring raw material and marketing of output. The casual workers in both rural and urban areas need to be protected.

We also find that majority of workers from scheduled castes, tribes and backward communities find themselves in the unorganised sector. Besides getting the irregular and low paid work, these workers also face social discrimination. Protection and support to the unorganised sector workers is thus necessary for both economic and social development.



When factories close down, many once regular workers are found selling goods or pushing a cart or doing some other odd job

LET'S RECALL

With so many activities taking place around us, one needs to use the process of classification to think in a useful manner. The criterion for classification could be many depending on what we desire to find out. The process of classification helps to analyse a situation.

In dividing the economic activities into three sectors — primary, secondary, tertiary — the criterion used was the 'nature of activity'. On the basis of this classification, we were able to analyse the pattern of total production and employment in India. Similarly, we divided the economic activities into organised and unorganised and used the classification to look at employment in the two sectors.

What was the most important conclusion that was derived from the classification exercises? What were the problems and solutions that were indicated? Can you summarise the information in the following table?

TABLE 2.4 CLASSIFYING ECONOMIC ACTIVITIES

Sector	Criteria used	Most important conclusion	Problems indicated and how they can be tackled
Primary, Secondary, Tertiary	Nature of activity		
Organised, Unorganised			

SECTORS IN TERMS OF OWNERSHIP: PUBLIC AND PRIVATE SECTORS

Another way of classifying economic activities into sectors could be on the basis of who owns assets and is responsible for the delivery of services. In the **public** sector, the government owns most of the assets and provides all the services. In the **private** sector, ownership of assets and delivery of services is in the hands of private individuals or companies. Railways or post office is an example of the public sector whereas companies like Tata Iron and Steel Company Limited (TISCO) or Reliance Industries Limited (RIL) are privately owned.

Activities in the private sector are guided by the motive to earn profits.

To get such services we have to pay money to these individuals and companies. The purpose of the public sector is not just to earn profits. Governments raise money through taxes and other ways to meet expenses on the services rendered by it. Modern day governments spend on a whole range of activities. What are these activities? Why do governments spend on such activities? Let's find out.

There are several things needed by the society as a whole but **which the private sector will not provide at a reasonable cost**. Why? Some of these need spending large sums of money, which is beyond the capacity

of the private sector. Also, collecting money from thousands of people who use these facilities is not easy. Even if they do provide these things they would charge a high rate for their use. Examples are construction of roads, bridges, railways, harbours, generating electricity, providing irrigation through dams etc. Thus, governments have to undertake such heavy spending and ensure that these facilities are available for everyone.

There are some activities, **which the government has to support**. The private sector may not continue their production or business unless government encourages it. For example, selling electricity at the cost of generation may push up the costs of production of goods in many industries. Many units, especially small-scale units, might have to shut down. Government here steps in by producing and supplying electricity at rates which these industries can afford. Government has to bear part of the cost.

Similarly, the Government in India buys wheat and rice from farmers at a 'fair price'. This it stores in its godowns and sells at a lower price to consumers through ration shops. You have read about this in the chapter on Food Security in Class IX. The

government has to bear some of the cost. In this way, the government supports both farmers and consumers.

There are a large number of activities which are the primary responsibility of the government. **The government must spend on these.** Providing health and education facilities for all is one example. We have discussed some of these issues in the first chapter. Running proper schools and providing quality education, particularly elementary education, is the duty of the government. India's size of illiterate population is one of the largest in the world.

Similarly, we know that nearly half of India's children are malnourished and a quarter of them are critically ill. We have read about Infant Mortality Rates. The infant mortality rate of Odisha (40) or Madhya Pradesh (48) is higher than some of the poorest regions of the world. Government also needs to pay attention to aspects of human development such as availability of safe drinking water, housing facilities for the poor and food and nutrition. It is also the duty of the government to take care of the poorest and most ignored regions of the country through increased spending in such areas.

SUMMING UP

In this chapter we have looked at ways of classifying economic activities into some meaningful groups. One way of doing this is to examine whether the activity relates to the primary, secondary or tertiary sectors. The data for India, for the last thirty years, shows that while goods and services produced in the tertiary sector contribute the most to GDP, the employment remains in the primary sector. We have also seen

what all can be done for increasing employment opportunities in the country. Another classification is to consider whether people are working in organised or unorganised sectors. Most people are working in the unorganised sectors and protection is necessary for them. We also looked at the difference between private and public activities, and why it is important for public activities to focus on certain areas.

EXERCISES

1. Fill in the blanks using the correct option given in the bracket:
 - (i) Employment in the service sector _____ increased to the same extent as production. (has / has not)
 - (ii) Workers in the _____ sector do not produce goods. (tertiary / agricultural)
 - (iii) Most of the workers in the _____ sector enjoy job security. (organised / unorganised)
 - (iv) A _____ proportion of labourers in India are working in the unorganised sector. (large / small)
 - (v) Cotton is a _____ product and cloth is a _____ product. [natural / manufactured]
 - (vi) The activities in primary, secondary and tertiary sectors are _____. [independent / interdependent]
2. Choose the most appropriate answer.
 - (a) The sectors are classified into public and private sector on the basis of:
 - (i) employment conditions
 - (ii) the nature of economic activity
 - (iii) ownership of enterprises
 - (iv) number of workers employed in the enterprise
 - (b) Production of a commodity, mostly through the natural process, is an activity in _____ sector.
 - (i) primary
 - (ii) secondary
 - (iii) tertiary
 - (iv) information technology
 - (c) GDP is the total value of _____ produced during a particular year.
 - (i) all goods and services
 - (ii) all final goods and services
 - (iii) all intermediate goods and services
 - (iv) all intermediate and final goods and services
 - (d) In terms of GDP the share of tertiary sector in 2013-14 is between _____ per cent.
 - (i) 20 to 30
 - (ii) 30 to 40
 - (iii) 50 to 60
 - (iv) 60 to 70

3. Match the following:

Problems faced by farming sector

1. Unirrigated land
2. Low prices for crops
3. Debt burden
4. No job in the off season
5. Compelled to sell their grains to the local traders soon after harvest

Some possible measures

- (a) Setting up agro-based mills
- (b) Cooperative marketing societies
- (c) Procurement of food grains by government
- (d) Construction of canals by the government
- (e) Banks to provide credit with low interest

4. Find the odd one out and say why.

- (i) Tourist guide, dhobi, tailor, potter
- (ii) Teacher, doctor, vegetable vendor, lawyer
- (iii) Postman, cobbler, soldier, police constable
- (iv) MTNL, Indian Railways, Air India, Jet Airways, All India Radio

5. A research scholar looked at the working people in the city of Surat and found the following.

Place of work	Nature of employment	Percentage of working people
In offices and factories registered with the government	Organised	15
Own shops, office, clinics in marketplaces with formal license		15
People working on the street, construction workers, domestic workers		20
Working in small workshops usually not registered with the government		

Complete the table. What is the percentage of workers in the unorganised sector in this city?

6. Do you think the classification of economic activities into primary, secondary and tertiary is useful? Explain how.
7. For each of the sectors that we came across in this chapter why should one focus on employment and GDP? Could there be other issues which should be examined? Discuss.
8. Make a long list of all kinds of work that you find adults around you doing for a living. In what way can you classify them? Explain your choice.
9. How is the tertiary sector different from other sectors? Illustrate with a few examples.
10. What do you understand by disguised unemployment? Explain with an example each from the urban and rural areas.
11. Distinguish between open unemployment and disguised unemployment.
12. "Tertiary sector is not playing any significant role in the development of Indian economy." Do you agree? Give reasons in support of your answer.

13. Service sector in India employs two different kinds of people. Who are these?
14. Workers are exploited in the unorganised sector. Do you agree with this view? Give reasons in support of your answer.
15. How are the activities in the economy classified on the basis of employment conditions?
16. Compare the employment conditions prevailing in the organised and unorganised sectors.
17. Explain the objective of implementing the NREGA 2005.
18. Using examples from your area compare and contrast the activities and functions of private and public sectors.
19. Discuss and fill the following table giving one example each from your area.

	Well managed organisation	Badly managed organisation
Public sector		
Private Sector		

20. Give a few examples of public sector activities and explain why the government has taken them up.
21. Explain how public sector contributes to the economic development of a nation.
22. The workers in the unorganised sector need protection on the following issues : wages, safety and health. Explain with examples.
23. A study in Ahmedabad found that out of 15,00,000 workers in the city, 11,00,000 worked in the unorganised sector. The total income of the city in this year (1997-1998) was Rs 60,000 million. Out of this Rs 32,000 million was generated in the organised sector. Present this data as a table. What kind of ways should be thought of for generating more employment in the city?
24. The following table gives the GDP in Rupees (Crores) by the three sectors:

Year	Primary	Secondary	Tertiary
2000	52,000	48,500	1,33,500
2013	8,00,500	10,74,000	38,68,000

- (i) Calculate the share of the three sectors in GDP for 2000 and 2013.
- (ii) Show the data as a bar diagram similar to Graph 2 in the chapter.
- (iii) What conclusions can we draw from the bar graph?

NOTES FOR THE TEACHER

CHAPTER 3 : MONEY AND CREDIT

Money is a fascinating subject and full of curiosities. It is important to capture this element for the students. The history of money and how various forms were used at different times is an interesting story. At this stage the purpose is to allow students to realise the social situation in which these forms were used. Modern forms of money are linked to the banking system. This is the central idea of the first part of the chapter.

The present situation in India, where newer forms of money are slowly spreading with computerisation of the banking system, offers many opportunities to students to explore on their own. We need not get into a formal discussion of the 'functions of money' but let it come up as questions. There are certain areas that are not covered, such as 'creation of money' (money multiplier) or the backing of the modern system that may be discussed if you desire.

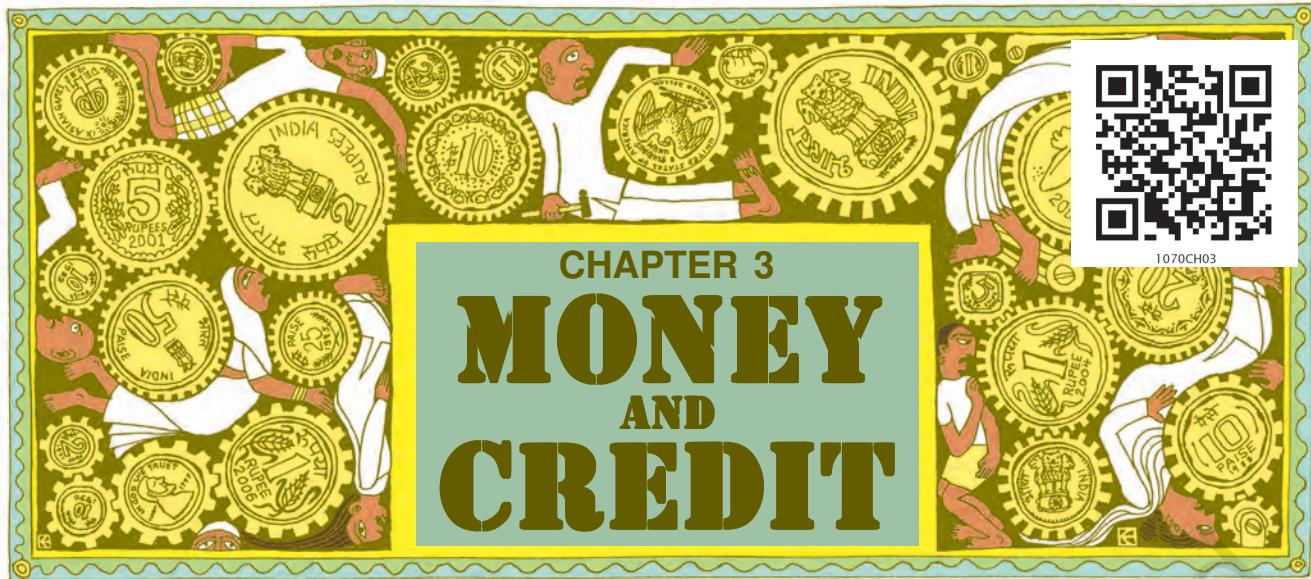
As you would see in the chapter, the stock of money consists of currency held by the public and the demand deposits that they hold with the banks. This is the money that people can use as they wish and the government has to ensure that the system works smoothly. What would happen when the government declares that some of the currency notes used by people would be made invalid and would be replaced by new currency? In India, during November 2016, currency notes in the denomination of Rs. 500 and Rs. 1,000 were declared invalid. People were asked to surrender these notes to the bank by a specific period and receive new Rs. 500, Rs. 2,000 or other currency notes. This is known as 'demonetisation'. Since then, people were also encouraged to use their bank deposits rather than cash for transactions. Hence, digital transactions started by using bank-to-bank transfer through the internet or mobile phones, cheques, ATM cards, credit cards, and Point of Sale (POS) swipe machines at shops. This is promoted to reduce the requirement of cash for transactions and also control corruption. Students could be asked to debate on the process and the impact of demonetisation. They can be guided to make

a collage of the major areas where people use digital and cash transactions which are legitimate and legal. They can also discuss the transactions which are legal and why. It is also important to intimate students that different types of plastic cards are used in place of cash transactions but not all of them money *per se*.

Credit is a crucial element in economic life and it is, therefore, important to first understand this in a conceptual manner. What are the aspects that one looks at in any credit arrangement and how this affects people is the main focus of the second part of the chapter. The world around us offers a tremendous variety of such arrangements and it would be ideal to explain these aspects of credit from situations that are familiar to your students. The other crucial issue of credit is its availability to all, especially the poor, and on reasonable terms. We need to emphasise that this is a right of the people and without which a large section of them would be kept out of the development process. There are many innovative interventions, such as that of Grameen Bank, of which students may be made familiar with but it is important to realise that we don't have answers to all questions. We need to find new ways and this is one of the social challenges that developing countries face.

Sources for Information

The data on formal and informal sector credit used in this chapter is drawn from the survey on rural debt by the National Sample Survey Organisation (*All India Debt and Investment Survey, 70th Round 2013*, conducted by NSSO) now known as National Statistical Office (NSO). The information and data on Grameen Bank is taken from newspaper reports and websites. In order to get the details of bank-related statistics or a particular detail of a bank, you can log on to the websites of the Reserve Bank of India (www.rbi.org) and the concerned banks. Data on self-help groups is provided on the website of the National Bank for Agriculture and Rural Development (NABARD) (www.nabard.org).



MONEY AS A MEDIUM OF EXCHANGE

The use of money spans a very large part of our everyday life. Look around you and you would easily be able to identify several transactions involving money in any single day. Can you make a list of these? In many of these transactions, goods are being bought and sold with the use of money. In some of these transactions, services are being exchanged with money. For some, there might not be any actual transfer of money taking place now but a promise to pay money later.

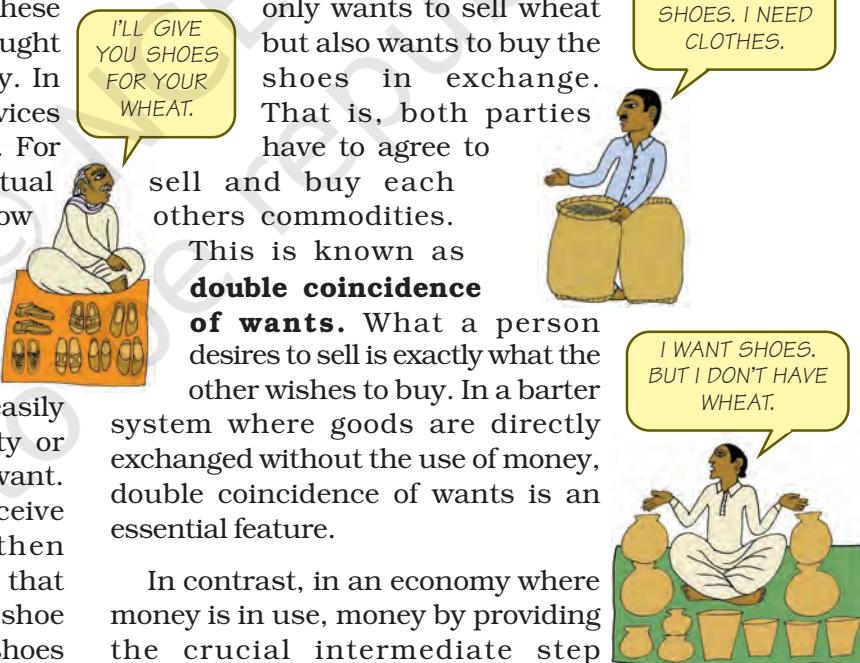
Have you ever wondered why transactions are made in money? The reason is simple. A person holding money can easily exchange it for any commodity or service that he or she might want. Thus everyone prefers to receive payments in money and then exchange the money for things that they want. Take the case of a shoe manufacturer. He wants to sell shoes in the market and buy wheat. The shoe manufacturer will first exchange shoes that he has produced for money, and then exchange the money for wheat. Imagine how much more

difficult it would be if the shoe manufacturer had to directly exchange shoes for wheat without the use of money. He would have to look for a wheat growing farmer who not only wants to sell wheat but also wants to buy the shoes in exchange. That is, both parties have to agree to sell and buy each others commodities.

This is known as **double coincidence of wants**.

What a person desires to sell is exactly what the other wishes to buy. In a barter system where goods are directly exchanged without the use of money, double coincidence of wants is an essential feature.

In contrast, in an economy where money is in use, money by providing the crucial intermediate step eliminates the need for double coincidence of wants. It is no longer necessary for the shoe manufacturer to look for a farmer who will buy his shoes and at the same time sell him



wheat. All he has to do is find a buyer for his shoes. Once he has exchanged his shoes for money, he can purchase wheat or any other commodity in the market. Since money acts as an intermediate in the exchange process, it is called a **medium of exchange**.



LET'S WORK THESE OUT

- How does the use of money make it easier to exchange things?
- Can you think of some examples of goods / services being exchanged or wages being paid through barter?

MODERN FORMS OF MONEY



Early punch-marked coins (may be 2500 years old)



We have seen that money is something that can act as a medium of exchange in transactions. Before the introduction of coins, a variety of objects was used as money. For example, since the very early ages, Indians used grains and cattle as money. Thereafter came the use of metallic coins — gold, silver, copper coins — a phase which continued well into the last century.



Gupta coins



Tughlaq coin



Gold Mohar from Akbar's reign



Modern coin

Currency

Modern forms of money include currency — paper notes and coins. Unlike the things that were used as money earlier, modern currency is not made of precious metal such as gold, silver and copper. And unlike grain and cattle, they are neither of everyday use. The modern currency is without any use of its own.

Then, why is it accepted as a medium of exchange? It is accepted as a medium of exchange because the currency is authorised by the government of the country.

In India, the Reserve Bank of India issues currency notes on behalf of the central government. As per Indian law, no other individual or

organisation is allowed to issue currency. Moreover, the law legalises the use of rupee as a medium of payment that cannot be refused in settling transactions in India. No individual in India can legally refuse a payment made in rupees. Hence, the rupee is widely accepted as a medium of exchange.

Deposits with Banks

The other form in which people hold money is as deposits with banks. At a point of time, people need only some currency for their day-to-day needs. For instance, workers who receive their salaries at the end of each month have extra cash at the beginning of the month. What do people do with this extra cash? They deposit it with the banks by opening a bank account in their name. Banks accept the deposits and also pay an amount as interest on the deposits. In this way people's money is safe with the banks and it earns an amount as interest. People also have the provision to withdraw the money as and when they require. Since the deposits in the bank accounts can be withdrawn on demand, these deposits are called demand deposits.

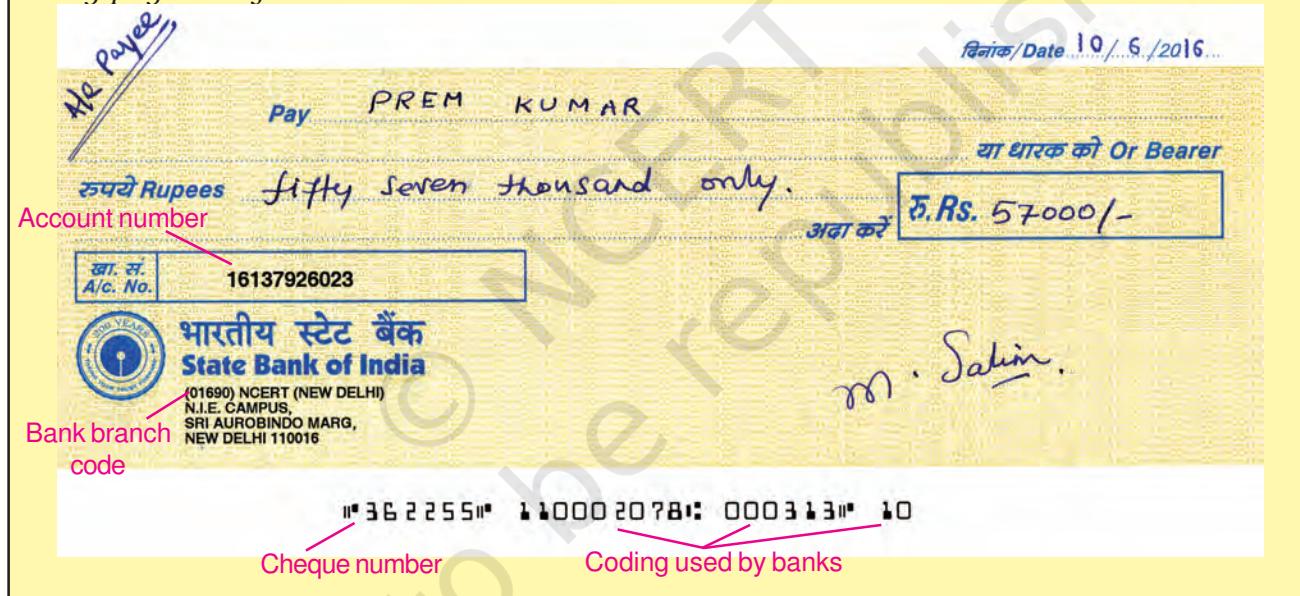
Demand deposits offer another interesting facility. It is this facility which lends it the essential characteristics of money (that of a medium of exchange). You would have heard of payments being

LET US TRY AND UNDERSTAND
HOW CHEQUE PAYMENTS ARE
MADE AND REALISED WITH
AN EXAMPLE.

made by cheques instead of cash. For payment through cheque, the payer who has an account with the bank, makes out a cheque for a specific amount. A cheque is a paper instructing the bank to pay a specific amount from the person's account to the person in whose name the cheque has been issued.

Cheque Payments

A shoe manufacturer, M. Salim has to make a payment to the leather supplier and writes a cheque for a specific amount. This means that the shoe manufacturer instructs his bank to pay this amount to the leather supplier. The leather supplier takes this cheque, and deposits it in his own account in the bank. The money is transferred from one bank account to another bank account in a couple of days. The transaction is complete without any payment of cash.



Thus we see that demand deposits share the essential features of money. The facility of cheques against demand deposits makes it possible to directly settle payments without the use of cash. Since demand deposits are accepted widely as a means of payment, along with currency, they constitute money in the modern economy.

You must remember the role that the banks play here. But for the banks, there would be no demand deposits and no payments by cheques against these deposits. The modern forms of money — currency and deposits — are closely linked to the working of the modern banking system.



LET'S WORK THESE OUT

1. M. Salim wants to withdraw Rs 20,000 in cash for making payments. How would he write a cheque to withdraw money?
2. Tick the correct answer.
After the transaction between Salim and Prem,
 - (i) Salim's balance in his bank account increases, and Prem's balance increases.
 - (ii) Salim's balance in his bank account decreases and Prem's balance increases.
 - (iii) Salim's balance in his bank account increases and Prem's balance decreases.
3. Why are demand deposits considered as money?

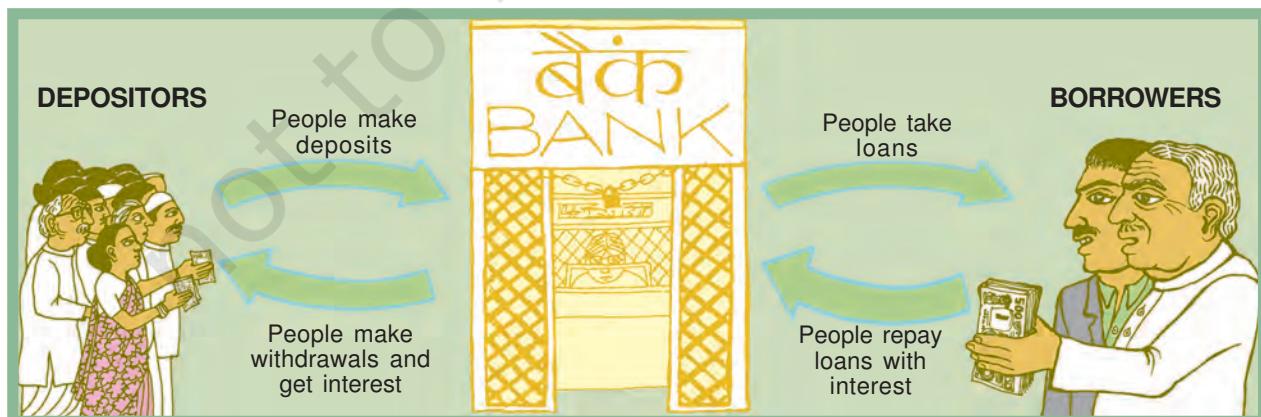
LOAN ACTIVITIES OF BANKS

Let us take the story of banks further. What do the banks do with the deposits which they accept from the public? There is an interesting mechanism at work here. Banks keep only a small proportion of their deposits as cash with themselves. For example, banks in India these days hold about 15 per cent of their deposits as cash. This is kept as provision to pay the depositors who might come to withdraw money from the bank on any given day. Since, on any particular day, only some of its many depositors come to withdraw cash, the bank is able to manage with this cash.

Banks use the major portion of the deposits to extend loans. There is a

huge demand for loans for various economic activities. We shall read more about this in the following sections. Banks make use of the deposits to meet the loan requirements of the people. In this way, banks mediate between those who have surplus funds (the depositors) and those who are in need of these funds (the borrowers). Banks charge a higher interest rate on loans than what they offer on deposits. The difference between what is charged from borrowers and what is paid to depositors is their main source of income.

What do you think would happen if all the depositors went to ask for their money at the same time?



TWO DIFFERENT CREDIT SITUATIONS

A large number of transactions in our day-to-day activities involve credit in some form or the other. Credit (loan) refers to an agreement in which the lender supplies the borrower with money, goods or services in return for the promise of future payment. Let us see how credit works through the following two examples.

(1) Festival Season

It is festival season two months from now and the shoe manufacturer, Salim, has received an order from a large trader in town for 3,000 pairs of shoes to be delivered in a month time. To complete production on time, Salim has to hire a few more workers for stitching and pasting work. He has to purchase the raw materials. To meet these expenses, Salim obtains loans from two sources. First, he asks the leather supplier to supply leather

now and promises to pay him later. Second, he obtains loan in cash from the large trader as advance payment for 1000 pairs of shoes with a promise to deliver the whole order by the end of the month.

At the end of the month, Salim is able to deliver the order, make a good profit, and repay the money that he had borrowed.



In this case, Salim obtains credit to meet the working capital needs of production. The credit helps him to meet the ongoing expenses of production, complete production on time, and thereby increase his earnings. **Credit therefore plays a vital and positive role in this situation.**

(2) Swapna's Problem

Swapna, a small farmer, grows groundnut on her three acres of land. She takes a loan from the moneylender to meet the expenses of cultivation, hoping that her harvest would help repay the loan. Midway through the season the crop is hit by pests and the crop fails. Though Swapna sprays her crops with expensive pesticides, it makes little difference. She is unable to repay the moneylender and the debt grows over the year into a large amount. Next year, Swapna takes a fresh loan for cultivation. It is a normal crop this year. But the earnings are not enough to cover the old loan. She is caught in debt. She has to sell a part of the land to pay off the debt.



In rural areas, the main demand for credit is for crop production. Crop production involves considerable costs on seeds, fertilisers, pesticides, water, electricity, repair of equipment, etc. There is a minimum stretch of three to four months between the time when the farmers buy these inputs and when they sell the crop. Farmers usually take crop loans at the beginning of the season and repay the loan after harvest. Repayment of the loan is crucially dependent on the income from farming.

In Swapna's case, the failure of the crop made loan repayment impossible. She had to sell part of the land to repay the loan. Credit, instead of helping Swapna improve her earnings, left her worse off. This is an example of what is commonly called debt-trap. **Credit in this case pushes the borrower into a situation from which recovery is very painful.**

In one situation credit helps to increase earnings and therefore the person is better off than before. In another situation, because of the crop failure, credit pushes the person into a debt trap. To repay her loan she has to sell a portion of her land. She is clearly much worse off than before. Whether credit would be useful or not, therefore, depends on the risks in the situation and whether there is some support, in case of loss.

LET'S WORK THESE OUT

- Fill the following table.

	Salim	Swapna
Why did they need credit?		
What was the risk?		
What was the outcome?		

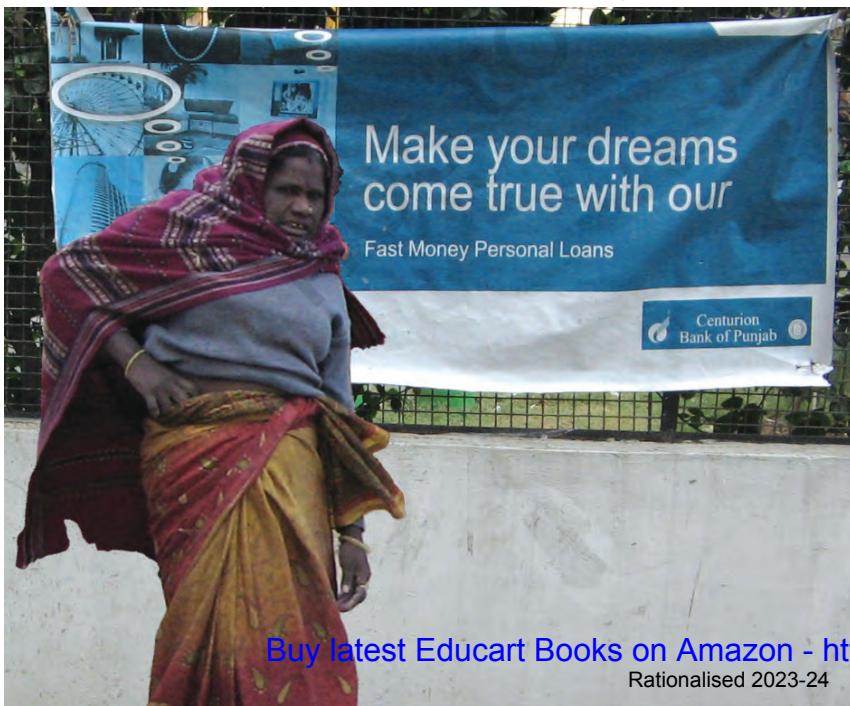
- Supposing Salim continues to get orders from traders. What would be his position after 6 years?
- What are the reasons that make Swapna's situation so risky? Discuss factors – pesticides; role of moneylenders; climate.

TERMS OF CREDIT

Every loan agreement specifies an interest rate which the borrower must pay to the lender along with the

repayment of the principal. In addition, lenders may demand collateral (security) against loans.

Collateral is an asset that the borrower owns (such as land, building, vehicle, livestocks, deposits with banks) and uses this as a guarantee to a lender until the loan is repaid. If the borrower fails to repay the loan, the lender has the right to sell the asset or collateral to obtain payment. Property such as land titles, deposits with banks, livestock are some common examples of collateral used for borrowing.



A House Loan

Megha has taken a loan of Rs 5 lakhs from the bank to purchase a house. The annual interest rate on the loan is 12 per cent and the loan is to be repaid in 10 years in monthly instalments. Megha had to submit to the bank, documents showing her employment records and salary before the bank agreed to give her the loan. The bank retained as collateral the papers of the new house, which will be returned to Megha only when she repays the entire loan with interest.

Fill the following details of Megha's housing loan.

Loan amount (in Rupees)	
Duration of loan	
Documents required	
Interest rate	
Mode of repayment	
Collateral	



Interest rate, collateral and documentation requirement, and the mode of repayment together comprise what is called the **terms of credit**. The terms of credit vary substantially from one credit arrangement to another. They may vary depending on the nature of the lender and the borrower. The next section will provide examples of the varying terms of credit in different credit arrangements.

LET'S WORK THESE OUT

1. Why do lenders ask for collateral while lending?
2. Given that a large number of people in our country are poor, does it in any way affect their capacity to borrow?
3. Fill in the blanks choosing the correct option from the brackets.

While taking a loan, borrowers look for easy terms of credit. This means _____ (low/high) interest rate, _____(easy/tough) conditions for repayment, _____(less/more) collateral and documentation requirements.

Variety of Credit Arrangements

Example of a Village

Rohit and Ranjan had finished reading about the terms of credit in class. They were eager to know the various credit arrangements that existed in their area: who were the people who provided credit? Who were the borrowers? What were the terms of credit? They decided to talk to some people in their village. Read what they record...



15th Nov, 2019.

We head directly for the fields where most farmers and labourers would be working at this time of the day. The fields are planted with potato crops. We first meet Shyamal, a small farmer in Sonpur, a small irrigated village.

Shyamal tells us that every season he needs loans for cultivation on his 1.5 acres of land. Till a few years back, he would borrow money from the village moneylender at an interest rate of five per cent per month (60% per annum). For the last few years, Shyamal has been borrowing from an agricultural trader in the village at an interest rate of three per cent per month. At the beginning of the cropping season, the trader supplies the farm inputs on credit, which is to be repaid when the crops are ready for harvest.

Besides the interest charge on the loan, the trader also makes the farmers promise to sell the crop to him. This way the trader can ensure that the money is repaid promptly. Also, since the crop prices are low after the harvest, the trader is able to make a profit from buying the crop at a low price from the farmers and then selling it later when the price has risen.



We next meet Arun who is supervising the work of one farm labourer. Arun has seven acres of land. He is one of the few persons in Sonpur to receive bank loan for cultivation. The interest rate on the loan is 8.5 per cent per annum, and can be repaid anytime in the next three years. Arun plans to repay the loan after harvest by selling a part of the crop. He then intends to store the rest of the potatoes in a cold storage and apply for a fresh loan from the bank against the cold storage receipt. The bank offers this facility to farmers who have taken crop loan from them.

Rama is working in a neighbouring field. She works as an agricultural labourer. There are several months in the year when Rama has no work, and needs credit to meet the daily expenses. Expenses on sudden illnesses or functions in the family are also met through loans. Rama has to depend on her employer, a medium landowner in Sonpur, for credit. The landowner charges an interest rate of 5 per cent per month. Rama repays the money by working for the landowner. Most of the time, Rama has to take a fresh loan, before the previous loan has been repaid. At present, she owes the landowner Rs 5,000. Though the landowner doesn't treat her well, she continues to work for him since she can get loans from him when in need. Rama tells us that the only source of credit for the landless people in Sonpur are the landowner-employers.

Loans from Cooperatives

Besides banks, the other major source of cheap credit in rural areas are the cooperative societies (or cooperatives). Members of a cooperative pool their resources for cooperation in certain areas. There are several types of cooperatives possible such as farmers cooperatives, weavers cooperatives, industrial workers cooperatives, etc. Krishak Cooperative functions in a village not very far away from Sonpur. It has 2300 farmers as members. It accepts deposits from its members. With these deposits as collateral, the Cooperative has obtained a large loan from the bank. These funds are used to provide loans to members. Once these loans are repaid, another round of lending can take place.

Krishak Cooperative provides loans for the purchase of agricultural implements, loans for cultivation and agricultural trade, fishery loans, loans for construction of houses and for a variety of other expenses.



LET'S WORK THESE OUT

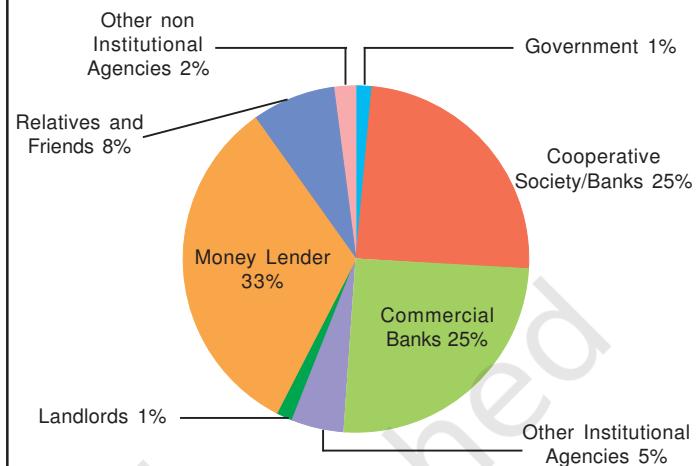
1. List the various sources of credit in Sonpur.
2. Underline the various uses of credit in Sonpur in the above passages.
3. Compare the terms of credit for the small farmer, the medium farmer and the landless agricultural worker in Sonpur.
4. Why will Arun have a higher income from cultivation compared to Shyamal?
5. Can everyone in Sonpur get credit at a cheap rate? Who are the people who can?
6. Tick the correct answer.
 - (i) Over the years, Rama's debt
 - will rise.
 - will remain constant.
 - will decline.
 - (ii) Arun is one of the few people in Sonpur to take a bank loan because
 - other people in the village prefer to borrow from the moneylenders.
 - banks demand collateral which everyone cannot provide.
 - interest rate on bank loans is same as the interest rate charged by the traders.
7. Talk to some people to find out the credit arrangements that exist in your area. Record your conversation. Note the differences in the terms of credit across people.

FORMAL SECTOR CREDIT IN INDIA

We have seen in the above examples that people obtain loans from various sources. The various types of loans can be conveniently grouped as **formal sector loans** and **informal sector loans**. Among the former are loans from banks and cooperatives. The informal lenders include moneylenders, traders, employers, relatives and friends, etc. In Graph 1 you can see the various sources of credit to rural households in India. Is more credit coming from the formal sector or the informal sector?

The Reserve Bank of India supervises the functioning of formal sources of loans. For instance, we have seen that the banks maintain a minimum cash balance out of the deposits they receive. The RBI monitors the banks in actually maintaining cash balance. Similarly,

Graph 1 : Sources of Credit per Rs 1000 of Rural Households in India in 2012



the RBI sees that the banks give loans not just to profit-making businesses and traders but also to small cultivators, small scale industries, to small borrowers etc. Periodically, banks have to submit information to the RBI on how much they are lending, to whom, at what interest rate, etc.

There is no organisation which supervises the credit activities of lenders in the informal sector. They can lend at whatever interest rate they

BUT WHY SHOULD
A BANK WANT US TO
HAVE A HIGHER INCOME?



choose. There is no one to stop them from using unfair means to get their money back.

Compared to the formal lenders, most of the informal lenders charge a much higher interest on loans. Thus, the cost to the borrower of informal loans is much higher.

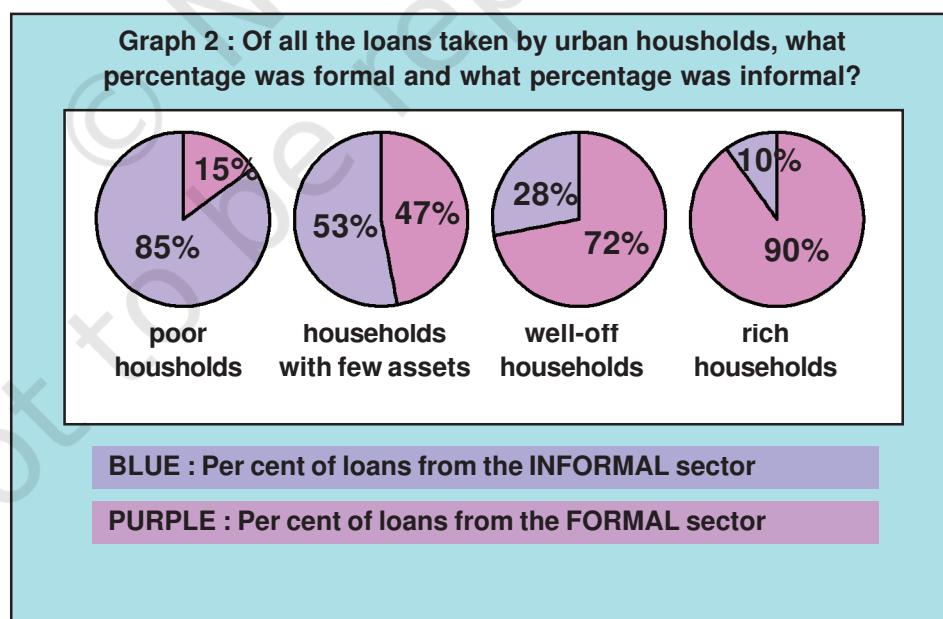
Higher cost of borrowing means a larger part of the earnings of the borrowers is used to repay the loan. Hence, borrowers have less income left for themselves (as we saw for Shyamal in Sonpur). In certain cases, the high interest rate for borrowing can mean that the amount to be repaid is greater than the income of the borrower. This could lead to increasing debt (as we saw for Rama in Sonpur) and debt trap. Also, people who might wish to start an enterprise by borrowing may not do so because of the high cost of borrowing.

For these reasons, banks and cooperative societies need to lend more. This would lead to higher incomes and many people could then borrow cheaply for a variety of needs. They could grow crops, do business, set up small-scale industries etc. They could set up new industries or trade in goods. **Cheap and affordable credit is crucial for the country's development.**

Formal and Informal Credit: Who gets what?

Graph 2 shows the importance of formal and informal sources of credit for people in urban areas. The people are divided into four groups, from poor to rich, as shown in the figure. You can see that 85 per cent of the loans taken by poor households in the urban areas are from informal sources. Compare this with the rich urban households. What do you find? Only 10 per cent of their loans are from informal sources, while 90 per cent are from formal sources. A similar pattern is also found in rural areas. The rich households are availing cheap credit from formal lenders whereas the poor households have to pay a large amount for borrowing.

What does all this suggest? First, the formal sector still meets only about half of the total credit needs of the rural people. The remaining credit needs are met from informal sources.



Most loans from informal lenders carry a very high interest rate and do little to increase the income of the borrowers. **Thus, it is necessary that banks and cooperatives increase their lending particularly in the rural areas, so that the dependence on informal sources of credit reduces.**

Secondly, while formal sector loans need to expand, it is also necessary that everyone receives these loans. At present, it is the richer households who receive formal credit whereas the poor have to depend on the informal sources. It is important that the formal credit is distributed more equally so that the poor can benefit from the cheaper loans.

LET'S WORK THESE OUT

1. What are the differences between formal and informal sources of credit?
2. Why should credit at reasonable rates be available for all?
3. Should there be a supervisor, such as the Reserve Bank of India, that looks into the loan activities of informal lenders? Why would its task be quite difficult?
4. Why do you think that the share of formal sector credit is higher for the richer households compared to the poorer households?

A worker stitching a quilt



SELF-HELP GROUPS FOR THE POOR

In the previous section we have seen that poor households are still dependent on informal sources of credit. Why is it so? Banks are not present everywhere in rural India. Even when they are present, getting a loan from a bank is much more difficult than taking a loan from informal sources. As we saw for Megha, bank loans require proper

documents and collateral. Absence of collateral is one of the major reasons which prevents the poor from getting bank loans. Informal lenders such as moneylenders, on the other hand, know the borrowers personally and hence are often willing to give a loan without collateral. The borrowers can, if necessary, approach the moneylenders even without repaying

their earlier loans. However, the moneylenders charge very high rates of interest, keep no records of the transactions and harass the poor borrowers.

In recent years, people have tried out some newer ways of providing loans to the poor. The idea is to organise rural poor, in particular women, into small Self Help Groups (SHGs) and pool (collect) their savings. A typical SHG has 15-20 members, usually belonging to one neighbourhood, who meet and save regularly. Saving per member varies from Rs 25 to Rs 100 or more, depending on the ability of the people to save. Members can take small loans from the group itself to meet their needs. The group charges interest on these loans but this is still less than what the moneylender charges. After a year or two, if the group is regular in savings, it becomes eligible for availing loan from the bank. Loan is sanctioned in the name of the group and is meant to create self-employment opportunities for the members. For instance, small loans are provided to the members for releasing mortgaged land, for meeting working capital needs (e.g. buying seeds, fertilisers, raw materials like bamboo and cloth), for housing materials, for acquiring assets like sewing machine, handlooms, cattle, etc.

Most of the important decisions regarding the savings and loan activities are taken by the group members. The group decides as regards the loans

to be granted — the purpose, amount, interest to be charged, repayment schedule etc. Also, it is the group which is responsible for the repayment of the loan. Any case of non-repayment of loan by any one member is followed up seriously by other members in the group. Because of this feature, banks are willing to lend to the poor women when organised in SHGs, even though they have no collateral as such.

Thus, the SHGs help borrowers overcome the problem of lack of collateral. They can get timely loans for a variety of purposes and at a reasonable interest rate. Moreover, SHGs are the building blocks of organisation of the rural poor. Not only does it help women to become financially self-reliant, the regular meetings of the group provide a platform to discuss and act on a variety of social issues such as health, nutrition, domestic violence, etc.

A women's self-help group meeting in Gujarat



Grameen Bank of Bangladesh

Grameen Bank of Bangladesh is one of the biggest success stories in reaching the poor to meet their credit needs at reasonable rates. Started in the 1970s as a small project, Grameen Bank in 2018 had over 9 million members in about 81,600 villages spread across Bangladesh. Almost all of the borrowers are women and belong to poorest sections of the society. These borrowers have proved that not only are poor women reliable borrowers, but that they can start and run a variety of small income-generating activities successfully.

"If credit can be made available to the poor people on terms and conditions that are appropriate and reasonable these millions of small people with their millions of small pursuits can add up to create the biggest development wonder."

*Professor Muhammad Yunus,
the founder of Grameen Bank,
and recipient of 2006 Nobel Prize for Peace*

SUMMING UP

In this chapter we have looked at the modern forms of money and how they are linked with the banking system. On one side are the depositors who keep their money in the banks and on the other side are the borrowers who take loans from these banks. Economic activities require loans or credit. Credit, as we saw can have a positive impact, or in certain situations make the borrower worse off.

Credit is available from a variety of sources. These can be either formal sources or informal sources. Terms of

credit vary substantially between formal and informal lenders. At present, it is the richer households who receive credit from formal sources whereas the poor have to depend on the informal sources. It is essential that the total formal sector credit increases so that the dependence on the more expensive informal credit becomes less. Also, the poor should get a much greater share of formal loans from banks, cooperative societies etc. Both these steps are important for development.

EXERCISES

1. In situations with high risks, credit might create further problems for the borrower. Explain.
2. How does money solve the problem of double coincidence of wants? Explain with an example of your own.
3. How do banks mediate between those who have surplus money and those who need money?
4. Look at a 10 rupee note. What is written on top? Can you explain this statement?
5. Why do we need to expand formal sources of credit in India?
6. What is the basic idea behind the SHGs for the poor? Explain in your own words.
7. What are the reasons why the banks might not be willing to lend to certain borrowers?

8. In what ways does the Reserve Bank of India supervise the functioning of banks? Why is this necessary?
9. Analyse the role of credit for development.
10. Manav needs a loan to set up a small business. On what basis will Manav decide whether to borrow from the bank or the moneylender? Discuss.
11. In India, about 80 per cent of farmers are small farmers, who need credit for cultivation.
 - (a) Why might banks be unwilling to lend to small farmers?
 - (b) What are the other sources from which the small farmers can borrow?
 - (c) Explain with an example how the terms of credit can be unfavourable for the small farmer.
 - (d) Suggest some ways by which small farmers can get cheap credit.
12. Fill in the blanks:
 - (i) Majority of the credit needs of the _____ households are met from informal sources.
 - (ii) _____ costs of borrowing increase the debt-burden.
 - (iii) _____ issues currency notes on behalf of the Central Government.
 - (iv) Banks charge a higher interest rate on loans than what they offer on _____.
 - (v) _____ is an asset that the borrower owns and uses as a guarantee until the loan is repaid to the lender.
13. Choose the most appropriate answer.
 - (i) In a SHG most of the decisions regarding savings and loan activities are taken by
 - (a) Bank.
 - (b) Members.
 - (c) Non-government organisation.
 - (ii) Formal sources of credit does not include
 - (a) Banks.
 - (b) Cooperatives.
 - (c) Employers.

ADDITIONAL PROJECT / ACTIVITY

The following table shows people in a variety of occupations in urban areas. What are the purposes for which the following people might need loans? Fill in the column.

Occupations	Reason for needing a Loan
Construction worker	
Graduate student who is computer literate	
A person employed in government service	
Migrant labourer in Delhi	
Household maid	
Small trader	
Autorickshaw driver	
A worker whose factory has closed down	

Next, classify the people into two groups based on whom you think might get a bank loan and those who might not. What is the criterion that you have used for classification?

NOTES FOR THE TEACHER

CHAPTER 4 : GLOBALISATION AND THE INDIAN ECONOMY

Most regions of the world are getting increasingly interconnected. While this interconnectedness across countries has many dimensions — cultural, political, social and economic — this chapter looks at globalisation in a more limited sense. It defines globalisation as the integration between countries through foreign trade and foreign investments by multinational corporations (MNCs). As you will notice, the more complex issues of portfolio investment have been left out.

If we look at the past thirty years or so, we find that MNCs have been a major force in the globalisation process connecting distant regions of the world. Why are the MNCs spreading their production to other countries and what are the ways in which they are doing so? The first part of the chapter discusses this. Rather than relying on quantitative estimates, the rapid rise and influence of the MNCs has been shown through a variety of examples, mainly drawn from the Indian context. Note that the examples are an aid to explain a more general point. While teaching, the emphasis should be on the ideas and examples are to be used as illustrations. You can also creatively use comprehension passages like the one given after Section II to test and reinforce new concepts.

Integration of production and integration of markets is a key idea behind understanding the process of globalisation and its impact. This has been dealt with at length in this chapter, highlighting the role of MNCs in the process. You have to ensure that the students grasp this idea with sufficient clarity, before moving on to the next topic.

Globalisation has been facilitated by several factors. Three of these have been highlighted: rapid improvements in technology, liberalisation

of trade and investment policies and, pressures from international organisations such as the WTO. Improvement in technology is a fascinating area for students and you may, with a few directions, encourage them to do their own explorations. While discussing liberalisation, you have to keep in mind that the students are unaware of what India was like in the pre-liberalisation era. A role-play could be conceived to compare and contrast the pre and post-liberalisation era. Similarly, international negotiations under WTO and the uneven balances in power are interesting subjects that can be covered in a discussion mode rather than as lectures.

The final section covers the impact of globalisation. To what extent has globalisation contributed to the development process? This section draws on the topics covered in Chapters 1 and 2 (for example, what is a fair development goal), which you can refer to. Also, examples and activities drawn from the local environment are a must while discussing this section. This might include contexts that have not been covered in the chapter, such as the impact of imports on local farmers, etc. Collective brainstorming sessions can be conducted to analyse such situations.

Sources for Information

The call for a fairer globalisation has been given, among others, by the International Labour Organisation — www.ilo.org. Another interesting resource is the WTO website <http://www.wto.org>. It gives access to the variety of agreements that are being negotiated at the WTO. For company related information, most MNCs have their own websites. If you want to critically look at the MNCs, one recommended website is www.corporatewatch.org.uk.



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CHAPTER 4

GLOBALISATION AND THE INDIAN ECONOMY

As consumers in today's world, some of us have a wide choice of goods and services before us. The latest models of digital cameras, mobile phones and televisions made by the leading manufacturers of the world are within our reach. Every season, new models of automobiles can be seen on Indian roads. Gone are the days when Ambassador and Fiat were the only cars on Indian roads. Today, Indians are buying cars produced by nearly all the top companies in the world. A similar explosion of brands can be seen for many other goods: from shirts to televisions to processed fruit juices.

Such wide-ranging choice of goods in our markets is a relatively recent phenomenon. You wouldn't have found such a wide variety of goods in Indian markets even two decades back. **In a matter of years, our markets have been transformed!**

How do we understand these rapid transformations? What are the factors that are bringing about these changes? And, how are these changes affecting the lives of the people? We shall dwell on these questions in this chapter.



PRODUCTION ACROSS COUNTRIES

Until the middle of the twentieth century, production was largely organised within countries. What crossed the boundaries of these countries were raw material, food stuff and finished products. Colonies such as India exported raw materials and food stuff and imported finished goods. Trade was the main channel connecting distant countries. This was before large companies called

multinational corporations (MNCs) emerged on the scene. A MNC is a company that owns or controls production in more than one nation. MNCs set up offices and factories for production in regions where they can get cheap labour and other resources. This is done so that the cost of production is low and the MNCs can earn greater profits. Consider the following example.

Spreading of Production by an MNC

A large MNC, producing industrial equipment, designs its products in research centres in the United States, and then has the components manufactured in China. These are then shipped to Mexico and Eastern Europe where the products are assembled and the finished products are sold all over the world. Meanwhile, the company's customer care is carried out through call centres located in India.

This is a call centre in Bengaluru, equipped with telecom facilities and access to the Internet to provide information and support to customers abroad.



In this example the MNC is not only selling its finished products globally, but more important, **the goods and services are produced globally**. As a result, **production is organised in increasingly complex ways**. The production process is divided into small parts and spread out across the globe. In the above example, China provides the advantage of being a cheap manufacturing location. Mexico and Eastern Europe are useful

for their closeness to the markets in the US and Europe. India has highly skilled engineers who can understand the technical aspects of production. It also has educated English speaking youth who can provide customer care services. And all this probably can mean 50-60 per cent cost-savings for the MNC! The advantage of spreading out production across the borders to the multinationals can be truly immense.

LET'S WORK THIS OUT

Complete the following statement to show how the production process in the garment industry is spread across countries.

The brand tag says 'Made in Thailand' but they are not Thai products. We dissect the manufacturing process and look for the best solution at each step. We are doing it globally. In making garments, the company may, for example, get cotton fibre from Korea,

INTERLINKING PRODUCTION ACROSS COUNTRIES

In general, MNCs set up production where it is close to the markets; where there is skilled and unskilled labour available at low costs; and where the availability of other factors of production is assured. In addition, MNCs might look for government policies that look after their interests. You will read more about the policies later in the chapter.

Having assured themselves of these conditions, MNCs set up factories and offices for production. The money that is spent to buy assets such as land, building, machines and other equipment is called **investment**. Investment made by MNCs is called **foreign investment**. Any investment is made with the hope that these assets will earn profits.

At times, MNCs set up production jointly with some of the local companies of these countries. The benefit to the local company of such joint production is two-fold. First, MNCs can provide money for additional investments, like buying new machines for faster production. Second, MNCs might bring with them the latest technology for production.

WE WILL SHIFT
THIS FACTORY TO
ANOTHER COUNTRY.
IT HAS BECOME
EXPENSIVE HERE!



But the most common route for MNC investments is to buy up local companies and then to expand production. MNCs with huge wealth can quite easily do so. To take an example, *Cargill Foods*, a very large American MNC, has bought over smaller Indian companies such as *Parakh Foods*. *Parakh Foods* had built a large marketing network in various parts of India, where its brand was well-reputed. Also, *Parakh Foods* had four oil refineries, whose control has now shifted to *Cargill*. *Cargill* is now the largest producer of edible oil in India, with a capacity to make 5 million pouches daily!

In fact, many of the top MNCs have wealth exceeding the entire budgets of the developing country governments. With such enormous wealth, imagine the power and influence of these MNCs!

There's another way in which MNCs control production. Large MNCs in developed countries place orders for production with small producers. Garments, footwear, sports items are examples of industries where production is carried out by a large number of small producers around the world.

Women at home in Ludhiana making footballs for large MNCs



Jeans produced in developing countries being sold in USA for Rs 6500 (\$145)

The products are supplied to the MNCs, which then sell these under their own brand names to the customers. These large MNCs have tremendous power to determine price, quality, delivery, and labour conditions for these distant producers.

Thus, we see that there are a variety of ways in which the MNCs are spreading their production and interacting with local producers in various countries across the globe. By setting up partnerships with local companies, by using the local companies for supplies, by closely competing with the local companies or buying them up, MNCs are exerting a strong influence on production at these distant locations. As a result, **production in these widely dispersed locations is getting interlinked**.

LET'S WORK THESE OUT

Ford Motors, an American company, is one of the world's largest automobile manufacturers with production spread over 26 countries of the world. Ford Motors came to India in 1995 and spent Rs. 1700 crore to set up a large plant near Chennai. This was done in collaboration with Mahindra and Mahindra, a major Indian manufacturer of jeeps and trucks. By the year 2017, Ford Motors was selling 88,000 cars in the Indian markets, while another 1,81,000 cars were exported from India to South Africa, Mexico, Brazil and United States of America. The company wants to develop Ford India as a component supplying base for its other plants across the globe.

Read the passage on the left and answer the questions.

1. Would you say Ford Motors is a MNC? Why?
2. What is foreign investment? How much did Ford Motors invest in India?
3. By setting up their production plants in India, MNCs such as Ford Motors tap the advantage not only of the large markets that countries such as India provide, but also the lower costs of production. Explain the statement.
4. Why do you think the company wants to develop India as a base for manufacturing car components for its global operations? Discuss the following factors:
 - (a) cost of labour and other resources in India
 - (b) the presence of several local manufacturers who supply auto-parts to Ford Motors
 - (c) closeness to a large number of buyers in India and China
5. In what ways will the production of cars by Ford Motors in India lead to interlinking of production?
6. In what ways is a MNC different from other companies?
7. Nearly all major multinationals are American, Japanese or European, such as Nike, Coca-Cola, Pepsi, Honda, Nokia. Can you guess why?



Cars made by Indian workers being transported to be sold abroad by MNCs.

FOREIGN TRADE AND INTEGRATION OF MARKETS

For a long time foreign trade has been the main channel connecting countries. In history you would have read about the trade routes connecting India and South Asia to markets both in the East and West and the extensive trade that took place along these routes. Also, you would remember that it was trading interests which attracted various trading companies such as the East India Company to India. What then is the basic function of foreign trade?

To put it simply, foreign trade creates an opportunity for the producers to reach beyond the domestic markets, i.e., markets of their own countries. Producers can sell their produce not only in markets located within the country but can also compete in markets located in other countries of the world. Similarly, for the buyers, import of goods produced in another country is one way of expanding the choice of goods beyond what is domestically produced.



Let us see the effect of foreign trade through the example of Chinese toys in the Indian markets.

Chinese Toys in India

Chinese manufacturers learn of an opportunity to export toys to India, where toys are sold at a high price. They start exporting plastic toys to India. Buyers in India now have the option of choosing between Indian and the Chinese toys. Because of the cheaper prices and new designs, Chinese toys become more popular in the Indian markets. Within a year, 70 to 80 per cent of the toy shops have replaced Indian toys with Chinese toys. Toys are now cheaper in the Indian markets than earlier.

What is happening here? As a result of trade, Chinese toys come into the Indian markets. In the competition between Indian and Chinese toys, Chinese toys prove better. Indian buyers have a greater choice of toys and at lower prices. For the Chinese toy makers, this provides an opportunity to expand business. The opposite is true for Indian toy makers. They face losses, as their toys are selling much less.



In general, with the opening of trade, goods travel from one market to another. Choice of goods in the markets rises. Prices of similar goods in the two markets tend to become equal. And, producers in the two countries now closely compete against each other even though they are separated by thousands of miles! **Foreign trade thus results in connecting the markets or integration of markets in different countries.**



Small traders of readymade garments facing stiff competition from both the MNC brands and imports.

LET'S WORK THESE OUT

1. What was the main channel connecting countries in the past? How is it different now?
2. Distinguish between foreign trade and foreign investment.
3. In recent years China has been importing steel from India. Explain how the import of steel by China will affect.
 - (a) steel companies in China.
 - (b) steel companies in India.
 - (c) industries buying steel for production of other industrial goods in China.
4. How will the import of steel from India into the Chinese markets lead to integration of markets for steel in the two countries? Explain.

WHAT IS GLOBALISATION?

In the past two to three decades, more and more MNCs have been looking for locations around the world which would be cheap for their production. Foreign investment by MNCs in these countries has been rising. At the same time, foreign trade between countries has been rising rapidly. A large part of the foreign trade is also controlled by MNCs. For instance, the car manufacturing plant of Ford Motors in India not only produces cars for the Indian markets, it also exports cars to other developing countries and exports car components for its many factories around the world. Likewise, activities of most MNCs involve substantial trade in goods and also services.



The result of greater foreign investment and greater foreign trade has been greater integration of production and markets across countries. **Globalisation is this process of rapid integration or interconnection between countries.** MNCs are playing a major role in the globalisation process. **More and more goods and services, investments and technology are moving between countries.** Most regions of the world are in closer

LET'S WORK THESE OUT

1. What is the role of MNCs in the globalisation process?
2. What are the various ways in which countries can be linked?
3. Choose the correct option.

Globalisation, by connecting countries, shall result in

- (a) lesser competition among producers.
- (b) greater competition among producers.
- (c) no change in competition among producers.

contact with each other than a few decades back.

Besides the movements of goods, services, investments and technology, there is one more way in which the countries can be connected. This is through the movement of people between countries. People usually move from one country to another in search of better income, better jobs or better education. In the past few decades, however, there has not been much increase in the movement of people between countries due to various restrictions.



...WE'VE SEEN GREAT IMPROVEMENTS
IN TRANSPORTATION...

FACTORS THAT HAVE ENABLED GLOBALISATION

Technology

Rapid improvement in technology has been one major factor that has stimulated the globalisation process. For instance, the past fifty years have seen several improvements in transportation technology. This has made much faster delivery of goods across long distances possible at lower costs.



Containers for transport of goods

Goods are placed in containers that can be loaded intact onto ships, railways, planes and trucks. Containers have led to huge reduction in port handling costs and increased the speed with which exports can reach markets. Similarly, the cost of air transport has fallen. This has enabled much greater volumes of goods being transported by airlines.

Even more remarkable have been the developments in **information and communication technology**. In recent times, technology in the areas of telecommunications, computers, Internet has been changing rapidly. Telecommunication facilities (telegraph, telephone including mobile phones, fax) are used to contact one another around the world, to access information instantly, and to communicate from remote areas. This has been facilitated by satellite communication devices. As you would be aware, computers have now entered almost every field of activity. You might have also ventured into the

amazing world of internet, where you can obtain and share information on almost anything you want to know. Internet also allows us to send instant electronic mail (e-mail) and talk (voice-mail) across the world at negligible costs.



Information and communication technology (or IT in short) has played a major role in spreading out **production of services** across countries. Let us see how.



Using IT in Globalisation

A news magazine published for London readers is to be designed and printed in Delhi. The text of the magazine is sent through Internet to the Delhi office. The designers in the Delhi office get orders on how to design the magazine from the office in London using telecommunication facilities. The designing is done on a computer. After printing, the magazines are sent by air to London. Even the payment of money for designing and printing from a bank in London to a bank in Delhi is done instantly through the Internet (e-banking)!

LET'S WORK THESE OUT

1. In the above example, underline the words describing the use of technology in production.
2. How is information technology connected with globalisation? Would globalisation have been possible without expansion of IT?

Liberalisation of foreign trade and foreign investment policy

Let us return to the example of imports of Chinese toys in India. Suppose the Indian government puts a tax on import of toys. What would happen? Those who wish to import these toys would have to pay tax on this. Because of the tax, buyers will have to pay a higher price on imported toys. Chinese toys will no longer be as cheap in the Indian markets and imports from China will automatically reduce. Indian toy-makers will prosper.

Tax on imports is an example of **trade barrier**. It is called a barrier because some restriction has been set up. Governments can use trade barriers to increase or decrease (regulate) foreign trade and to decide what kinds of goods and how much of each, should come into the country.

The Indian government, after Independence, had put barriers to foreign trade and foreign investment. This was considered necessary to protect the producers within the country from foreign competition. Industries were just coming up in the 1950s and 1960s, and competition from imports at that stage would not have allowed these industries to come up. Thus, India allowed imports of only essential items such as

machinery, fertilisers, petroleum etc. Note that all developed countries, during the early stages of development, have given protection to domestic producers through a variety of means.

Starting around 1991, some far-reaching changes in policy were made in India. The government decided that the time had come for Indian producers to compete with producers around the globe. It felt that competition would improve the performance of producers within the country since they would have to improve their quality. This decision was supported by powerful international organisations.

Thus, barriers on foreign trade and foreign investment were removed to a large extent. This meant that goods could be imported and exported easily and also foreign companies could set up factories and offices here.

Removing barriers or restrictions set by the government is what is known as liberalisation. With liberalisation of trade, businesses are allowed to make decisions freely about what they wish to import or export. The government imposes much less restrictions than before and is therefore said to be more liberal.

LET'S WORK THESE OUT

1. What do you understand by liberalisation of foreign trade?
2. Tax on imports is one type of trade barrier. The government could also place a limit on the number of goods that can be imported. This is known as quotas. Can you explain, using the example of Chinese toys, how quotas can be used as trade barriers? Do you think this should be used? Discuss.

WORLD TRADE ORGANISATION

We have seen that the liberalisation of foreign trade and investment in India was supported by some very powerful international organisations. These organisations say that all barriers to foreign trade and investment are harmful. There should be no barriers. Trade between countries should be 'free'. All countries in the world should liberalise their policies.

World Trade Organisation (WTO) is one such organisation whose aim is to liberalise international trade. Started at the initiative of the

developed countries, WTO establishes rules regarding international trade, and sees that these rules are obeyed. About 160 countries of the world are currently members of the WTO.

Though WTO is supposed to allow free trade for all, in practice, it is seen that the developed countries have unfairly retained trade barriers. On the other hand, WTO rules have forced the developing countries to remove trade barriers. An example of this is the current debate on trade in agricultural products.

Debate on Trade Practices

You have seen in Chapter 2, that the agriculture sector provides the bulk of employment and a significant portion of the GDP in India. Compare this to a developed country such as the US with the share of agriculture in GDP at 1% and its share in total employment a tiny 0.5%! And yet this very small percentage of people who are engaged in agriculture in the US receive massive sums of money from the US government for production and for exports to other countries. Due to this massive money that they receive, US farmers can sell the farm products at abnormally low prices. The surplus farm products are sold in other country markets at low prices, adversely affecting farmers in these countries.

Developing countries are, therefore, asking the developed country governments, "We have reduced trade barriers as per WTO rules. But you have ignored the rules of WTO and have continued to pay your farmers vast sums of money. You have asked our governments to stop supporting our farmers, but you are doing so yourselves. **Is this free and fair trade?**"

A typical cotton farm in USA consists of thousands of acres owned by a huge corporation that will sell cotton abroad at lowered prices.



LET'S WORK THESE OUT

- Fill in the blanks.

WTO was started at the initiative of _____ countries. The aim of the WTO is to _____. WTO establishes rules regarding _____ for all countries, and sees that _____. In practice, trade between countries is not _____. Developing countries like India have _____, whereas developed countries, in many cases, have continued to provide protection to their producers.

- What do you think can be done so that trade between countries is more fair?
- In the above example, we saw that the US government gives massive sums of money to farmers for production. At times, governments also give support to promote production of certain types of goods, such as those which are environmentally friendly. Discuss whether these are fair or not.

IMPACT OF GLOBALISATION IN INDIA

In the last twenty years, globalisation of the Indian economy has come a long way. What has been its effect on the lives of people? Let us look at some of the evidence.

Globalisation and greater competition among producers - both local and foreign producers - has been of advantage to consumers, particularly the well-off sections in the urban areas. There is greater choice before these consumers who now enjoy improved quality and lower prices for several products. As a result, these people today, enjoy much higher standards of living than was possible earlier.

Among producers and workers, the impact of globalisation has not been uniform.

Firstly, **MNCs** have increased their investments in India over the past 20 years, which means investing in India has been beneficial for them. MNCs have been interested in industries such as cell phones, automobiles, electronics, soft drinks, fast food or services such as banking in urban areas. These products have a large number of well-off buyers. In these industries and services, new jobs have been created. Also, local companies supplying raw materials, etc. to these industries have prospered.



Steps to Attract Foreign Investment

In recent years, the central and state governments in India are taking special steps to attract foreign companies to invest in India. Industrial zones, called Special Economic Zones (SEZs), are being set up. SEZs are to have world class facilities: electricity, water, roads, transport, storage, recreational and educational facilities. Companies who set up production units in the SEZs do not have to pay taxes for an initial period of five years.

Government has also allowed **flexibility** in the labour laws to attract foreign investment. You have seen in Chapter 2 that the companies in the organised sector have to obey certain rules that aim to protect the workers'

rights. In the recent years, the government has allowed companies to ignore many of these. Instead of hiring workers on a regular basis, companies hire workers 'flexibly' for short periods when there is intense pressure of work. This is done to reduce the cost of labour for the company. However, still not satisfied, foreign companies are demanding more flexibility in labour laws.



Secondly, several of the **top Indian companies** have been able to benefit from the increased competition. They have invested in newer technology and production methods and raised their production standards. Some have gained from successful collaborations with foreign companies.

Moreover, globalisation has enabled some large Indian companies to emerge as multinationals themselves! Tata Motors (automobiles), Infosys (IT), Ranbaxy (medicines), Asian Paints (paints), Sundaram Fasteners (nuts and bolts)

are some Indian companies which are spreading their operations worldwide.

Globalisation has also created new opportunities for companies providing services, particularly those involving IT. The Indian company producing a magazine for the London based company and call centres are some examples. Besides, a host of services such as data entry, accounting, administrative tasks, engineering are now being done cheaply in countries such as India and are exported to the developed countries.

LET'S WORK THESE OUT

1. How has competition benefited people in India?
2. Should more Indian companies emerge as MNCs? How would it benefit the people in the country?
3. Why do governments try to attract more foreign investment?
4. In Chapter 1, we saw what may be development for one may be destructive for others. The setting of SEZs has been opposed by some people in India. Find out who are these people and why are they opposing it.

Small producers: Compete or perish

For a large number of small producers and workers globalisation has posed major challenges.



Rising Competition

Ravi did not expect that he would have to face a crisis in such a short period of his life as industrialist. Ravi took a loan from the bank to start his own company producing capacitors in 1992 in Hosur, an industrial town in Tamil Nadu. Capacitors are used in many electronic home appliances including tube lights, television etc. Within three years, he was able to expand production and had 20 workers working under him.

His struggle to run his company started when the government removed restrictions on imports of capacitors as per its agreement at WTO in 2001. His main clients, the television companies,

used to buy different components including capacitors in bulk for the manufacture of television sets. However, competition from the MNC brands forced the Indian television companies to move into assembling activities for MNCs. Even when some of them bought capacitors, they would prefer to import as the price of the imported item was half the price charged by people like Ravi.

Ravi now produces less than half the capacitors that he produced in the year 2000 and has only seven workers working for him. Many of Ravi's friends in the same business in Hyderabad and Chennai have closed their units.

Batteries, capacitors, plastics, toys, tyres, dairy products, and vegetable oil are some examples of industries where the small manufacturers have been hit hard due to competition. Several of the units have shut down rendering many workers jobless. The small industries in India employ the largest number of workers (20 million) in the country, next only to agriculture.

LET'S WORK THESE OUT

1. What are the ways in which Ravi's small production unit was affected by rising competition?
2. Should producers such as Ravi stop production because their cost of production is higher compared to producers in other countries? What do you think?
3. Recent studies point out that small producers in India need three things to compete better in the market
(a) better roads, power, water, raw materials, marketing and information network (b) improvements and modernisation of technology (c) timely availability of credit at reasonable interest rates.
 - Can you explain how these three things would help Indian producers?
 - Do you think MNCs will be interested in investing in these? Why?
 - Do you think the government has a role in making these facilities available? Why?
 - Can you think of any other step that the government could take? Discuss.

Competition and Uncertain Employment

Globalisation and the pressure of competition have substantially changed the lives of workers. Faced with growing competition, most employers these days prefer to employ workers 'flexibly'. This means that workers' jobs are no longer secure.

Let us see how the workers in the garment export industry in India are having to bear this pressure of competition.



Factory workers folding garments for export. Though globalisation has created opportunities for paid work for women, the condition of employment shows that women are denied their fair share of benefits.

Large MNCs in the garment industry in Europe and America order their products from Indian exporters. These large MNCs with worldwide network look for the cheapest goods in order to maximise their profits. To get these large orders, Indian garment exporters try hard to cut their own costs. As cost of raw materials cannot be reduced, exporters try to cut labour costs. Where earlier a factory used to employ workers on a permanent basis, now they employ workers only on a temporary basis so that they do not have to pay workers for the whole year. Workers also have to put in very long working hours and work night shifts on a regular basis during the peak season. Wages are low and workers are forced to work overtime to make both ends meet.

While this competition among the garment exporters has allowed the MNCs to make large profits, workers are denied their fair share of benefits brought about by globalisation.

A Garment Worker

35 year old Sushila has spent many years as a worker in garment export industry of Delhi. She was employed as a 'permanent worker' entitled to health insurance, provident fund, overtime at a double rate, when Sushila's factory closed in the late 1990s. After searching for a job for six months, she finally got a job 30 km. away from where she lives. Even after working in this factory for several years, she is a temporary worker and earns less than half of what she was earning earlier. Sushila leaves her house every morning, seven days a week at 7:30 a.m. and returns at 10 p.m. A day off from work means no wage. She has none of the benefits she used to get earlier. Factories closer to her home have widely fluctuating orders and therefore pay even less.

The conditions of work and the hardships of the workers described above have become common to many industrial units and services in India. Most workers, today, are employed in the unorganised sector. Moreover, increasingly conditions of work in the organised sector have come to resemble the unorganised sector. Workers in the organised sector such as Sushila no longer get the protection and benefits that they enjoyed earlier.

LET'S WORK THESE OUT

1. In what ways has competition affected workers, Indian exporters and foreign MNCs in the garment industry?
2. What can be done by each of the following so that the workers can get a fair share of benefits brought by globalisation?
 - (a) government
 - (b) employers at the exporting factories
 - (c) MNCs
 - (d) workers.
3. One of the present debates in India is whether companies should have flexible policies for employment. Based on what you have read in the chapter, summarise the point of view of the employers and workers.

THE STRUGGLE FOR A FAIR GLOBALISATION

The above evidence indicates that not everyone has benefited from globalisation. People with education, skill and wealth have made the best use of the new opportunities. On the other hand, there are many people who have not shared the benefits.

Since globalisation is now a reality, the question is how to make globalisation more 'fair'? Fair globalisation would create opportunities for all, and also ensure that the benefits of globalisation are shared better.

The government can play a major role in making this possible. Its policies must protect the interests, not only of the rich and the powerful, but all the people in the country. You have read about some of the possible steps that the government can take. For instance, the government can ensure

that labour laws are properly implemented and the workers get their rights. It can support small producers to improve their performance till the time they become strong enough to compete. If necessary, the government can use trade and investment barriers. It can negotiate at the WTO for 'fairer rules'. It can also align with other developing countries with similar interests to fight against the domination of developed countries in the WTO.

In the past few years, massive campaigns and representation by people's organisations have influenced important decisions relating to trade and investments at the WTO. This has demonstrated that people also can play an important role in the struggle for fair globalisation.



A demonstration against WTO in Hong Kong, 2005

SUMMING UP

In this chapter, we looked at the present phase of globalisation. Globalisation is the process of rapid integration of countries. This is happening through greater foreign trade and foreign investment. MNCs are playing a major role in the globalisation process. More and more MNCs are looking for locations around the world that are cheap for their production. As a result, production is being organised in complex ways.

Technology, particularly IT, has played a big role in organising production across countries. In addition, liberalisation of trade and

investment has facilitated globalisation by removing barriers to trade and investment. At the international level, WTO has put pressure on developing countries to liberalise trade and investment.

While globalisation has benefited well-off consumers and also producers with skill, education and wealth, many small producers and workers have suffered as a result of the rising competition. Fair globalisation would create opportunities for all, and also ensure that the benefits of globalisation are shared better.

EXERCISES

1. What do you understand by globalisation? Explain in your own words.
2. What were the reasons for putting barriers to foreign trade and foreign investment by the Indian government? Why did it wish to remove these barriers?
3. How would flexibility in labour laws help companies?
4. What are the various ways in which MNCs set up, control or produce in other countries?
5. Why do developed countries want developing countries to liberalise their trade and investment? What do you think should the developing countries demand in return?
6. "The impact of globalisation has not been uniform." Explain this statement.
7. How has liberalisation of trade and investment policies helped the globalisation process?
8. How does foreign trade lead to integration of markets across countries? Explain with an example other than those given here.
9. Globalisation will continue in the future. Can you imagine what the world would be like twenty years from now? Give reasons for your answer.
10. Supposing you find two people arguing: One is saying globalisation has hurt our country's development. The other is telling, globalisation is helping India develop. How would you respond to these arguments?

11. Fill in the blanks.

Indian buyers have a greater choice of goods than they did two decades back. This is closely associated with the process of _____. Markets in India are selling goods produced in many other countries. This means there is increasing _____ with other countries. Moreover, the rising number of brands that we see in the markets might be produced by MNCs in India. MNCs are investing in India because _____. While consumers have more choices in the market, the effect of rising _____ and _____ has meant greater _____ among the producers.

12. Match the following.

- | | |
|--|--------------------------------------|
| (i) MNCs buy at cheap rates from small producers | (a) Automobiles |
| (ii) Quotas and taxes on imports are used to regulate trade | (b) Garments, footwear, sports items |
| (iii) Indian companies who have invested abroad | (c) Call centres |
| (iv) IT has helped in spreading of production of services | (d) Tata Motors, Infosys, Ranbaxy |
| (v) Several MNCs have invested in setting up factories in India for production | (e) Trade barriers |

13. Choose the most appropriate option.

- (i) The past two decades of globalisation has seen rapid movements in
 - (a) goods, services and people between countries.
 - (b) goods, services and investments between countries.
 - (c) goods, investments and people between countries.
- (ii) The most common route for investments by MNCs in countries around the world is to
 - (a) set up new factories.
 - (b) buy existing local companies.
 - (c) form partnerships with local companies.
- (iii) Globalisation has led to improvement in living conditions
 - (a) of all the people
 - (b) of people in the developed countries
 - (c) of workers in the developing countries
 - (d) none of the above

ADDITIONAL ACTIVITY / PROJECT

- I. Take some branded products that we use everyday (soaps, toothpaste, garments, electronic goods, etc.). Check which of these are produced by MNCs.
- II. Take any Indian industry or service of your choice. Collect information and photographs from newspapers, magazine clippings, books, television, internet, interviews with people on the following aspects of the industry.
 - (i) Various producers/companies in the industry
 - (ii) Is the product exported to other countries?
 - (iii) Are there MNCs among the producers?
 - (iv) Competition in the industry
 - (v) Conditions of work in the industry
 - (vi) Has there been any major change in the industry in the past 15 years?
 - (vii) Problems that people in the industry face.

NOTES FOR THE TEACHER

CHAPTER 5 : CONSUMER RIGHTS

This chapter proposes to discuss the issue of consumer rights within the context of the ways markets operate in our country. There are many aspects of unequal situations in a market and poor enforcement of rules and regulations. Hence, there is a need to sensitise learners and encourage them to participate in the consumer movement. This chapter provides case histories — how some consumers were exploited in real life situation and how legal institutions helped consumers in getting compensated and in upholding their rights. The case histories would enable the students to link these narratives to their life experiences. We have to enable students to understand that the awareness of being a well-informed consumer arose out of consumer movement and active participation of people through their struggles over a long period. This chapter also provides details of a few organisations helping consumers in different ways. Finally, it ends with some critical issues of the consumer movement in India.

Aspects of Teaching / Sources of Information

This chapter has questions, case studies and activities. It would be preferred that students discuss these in groups orally. Some of these could be answered in writing individually.

While carrying out each activity you could start with a brainstorming session about the activity. Similarly, there are many opportunities for roleplay in this chapter and this could be a useful way to share their experiences and understand the issues at a deeper level. Making

posters collectively is another way to think about these issues. This lesson contains activities, which require visits — visit to consumer protection councils, consumer organisations, District/State/National level Consumer Disputes Redressal Commissions, retail shops, marketplaces, etc. Organise the visits to maximise learners' experience. Have a discussion with them about the purpose of the visit, things they need to do beforehand and things that need to be collected and the task (report/ project / article, etc.) they would carry out after the visit. As part of this chapter, the learners may do letter-writing and speaking activities. We may have to be sensitive to the language aspect of exercises.

This chapter contains material collected from authenticated websites, books, newspapers and magazines. For example, <https://consumeraffairs.nic.in> is a website of Central Government Ministry of Consumer Affairs, Food & Public Distribution. Another website www.cuts-international.org is the website of a consumer organisation working in India for 40 years. It publishes a variety of material to create consumer awareness in India. They need to be shared among learners so that they can also collect material as part of their activities. For example, case histories were taken from newspaper clippings and consumers who fought in Consumer Disputes Redressal Commissions. Let learners collect and read such material from different sources: consumer protection councils, Consumer Disputes Redressal Commissions and internet.

THE CONSUMER IN THE MARKETPLACE

We participate in the market both as producers and consumers. As producers of goods and services we could be working in any of the sectors discussed earlier such as agriculture, industry, or services. Consumers participate in the market when they purchase goods and services that they need. These are the final goods that people as consumers use.

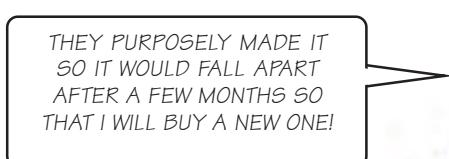
In the preceding chapters we discussed the need for rules and regulations or steps that would promote development. These could be for the protection of workers in the unorganised sector or to protect people from high interest rates charged by moneylenders in the informal sector. Similarly, rules and regulations are also required for protecting the environment.

For example, moneylenders in the informal sector that you read about in Chapter 3 adopt various tricks to bind the borrower: they could make the producer sell the produce to them at a low rate in return for a timely loan; they could force a small farmer like Swapna to sell her land to pay back the loan. Similarly, many people who work in the unorganised sector have to work at a low wage and accept conditions that are not fair and are also often harmful to their health. To prevent such exploitation, we have talked of rules and regulations for their protection. There are organisations that have struggled for long to ensure that these rules are followed.

Likewise, rules and regulations are required for the protection of the consumers in the marketplace. Individual consumers often find themselves in a weak position. Whenever there is a complaint regarding a good or service that had been bought, the seller tries to shift all the responsibility on to the buyer. Their position usually is – “If you didn’t like what you bought, please go elsewhere”. As if the seller has no responsibility once a sale is completed! The consumer movement, as we shall discuss later, is an effort to change this situation.

Exploitation in the marketplace happens in various ways. For example, sometimes traders indulge in unfair trade practices such as when shopkeepers weigh less than what they should or when traders add charges that were not mentioned before, or when adulterated/defective goods are sold.

Markets do not work in a fair manner when producers are few and powerful whereas consumers purchase in small amounts and are scattered. This happens especially when large companies are producing these goods. These companies with huge wealth, power and reach can manipulate the market in various ways. At times false information is passed on through the media, and other sources to attract consumers. For example, a company for years sold powder milk for babies all over



the world as the most scientific product claiming this to be better than mother's milk. It took years of struggle before the company was forced to accept that it had been making false claims. Similarly, a long battle had to be fought with court cases to make cigarette-manufacturing companies accept that their product could cause cancer. Hence, there is a need for rules and regulations to ensure protection for consumers.



LET'S WORK THESE OUT

1. What are the various ways by which people may be exploited in the market?
2. Think of one example from your experience where you thought that there was some 'cheating' in the market. Discuss in the classroom.
3. What do you think should be the role of government to protect consumers?

CONSUMER MOVEMENT

The consumer movement arose out of dissatisfaction of the consumers as many unfair practices were being indulged in by the sellers. There was no legal system available to consumers to protect them from exploitation in the marketplace. For a long time, when a consumer was not happy with a particular brand product or shop, he or she generally avoided buying that brand product, or would stop purchasing from that shop. It was presumed that it was the responsibility of consumers to be careful while buying a commodity or service. It took many years for organisations in India, and around the world, to create awareness amongst people. This has also shifted the responsibility of ensuring

quality of goods and services on the sellers.

In India, the consumer movement as a 'social force' originated with the necessity of protecting and promoting the interests of consumers against unethical and unfair trade practices. Rampant food shortages, hoarding, black marketing, adulteration of food and edible oil gave birth to the consumer movement in an organised form in the 1960s. Till the 1970s, consumer organisations were largely engaged in writing articles and holding exhibitions. They formed consumer groups to look into the malpractices in ration shops and overcrowding in the road passenger transport. More recently, India witnessed an upsurge in the number of consumer groups.

Consumers International

In 1985 United Nations adopted the UN Guidelines for Consumer Protection. This was a tool for nations to adopt measures to protect consumers and for consumer advocacy groups to press their governments to do so. At the international level, this has become the foundation for consumer movement. Today, Consumers International has become an umbrella body to over 200 member organisations from over 100 countries.



Because of all these efforts, the movement succeeded in bringing pressure on business firms as well as government to correct business conduct which may be unfair and against the interests of consumers at large. A major step taken in 1986 by the Indian government was the enactment of the Consumer Protection Act 1986, popularly known as COPRA. You will learn more about COPRA later.

LET'S WORK THESE OUT

1. What could have been the steps taken by consumer groups?
2. There may be rules and regulations but they are often not followed. Why? Discuss.



CONSUMER RIGHTS

SAFETY IS EVERYONE'S RIGHT

Reji's Suffering

Reji Mathew, a healthy boy studying in Class IX, was admitted in a private clinic in Kerala for removal of tonsils. An ENT surgeon performed the tonsillectomy operation under general anaesthesia. As a result of improper anaesthesia Reji showed symptoms of some brain abnormalities because of which he was crippled for life.

His father filed a complaint in the State Consumer Disputes Redressal Commission claiming compensation of Rs 5,00,000 for medical negligence and deficiency, in service. The State Commission, saying that the evidence was not sufficient, dismissed it. Reji's father appealed again in the National Consumer Disputes Redressal



Commission located in New Delhi. The National Commission after looking into the complaint, held the hospital responsible for medical negligence and directed it to pay the compensation.

Reji's suffering shows how a hospital, due to negligence by the doctors and staff in giving anaesthesia, crippled a student for life. While using many goods and services, we as consumers, have the right to be protected against the marketing of goods and delivery of services that are hazardous to life and property. Producers need to strictly follow the required safety rules and regulations. There are many goods and services that we purchase that require special attention to safety. For example, pressure cookers have a safety valve which, if it is defective, can cause a serious accident. The manufacturers of the safety valve have to ensure high quality. You also need public or government action to see that this quality is maintained. However, we do find bad quality products in the market because the supervision of these rules is weak and the consumer movement is also not strong enough.

LET'S WORK THESE OUT

1. For the following (you can add to the list) products/services discuss what safety rules should be observed by the producer?
(a) LPG cylinder (b) cinema theatre (c) circus (d) medicines (e) edible oil
(f) marriage pandal (g) a high-rise building.
2. Find out any case of accident or negligence from people around you, where you think that the responsibility lay with the producer. Discuss.

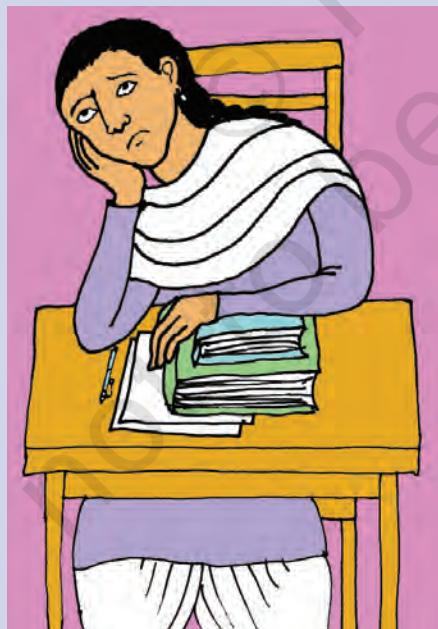
Information about goods and services

When you buy any commodity, you will find certain details given on the packing. These details are about ingredients used, price, batch number, date of manufacture, expiry date and the address of the manufacturer. When we buy medicines, on the packets, you might find 'directions for proper use' and information relating to side effects and risks associated with usage of that medicine. When you buy garments, you will find information on 'instructions for washing'.

Why is it that rules have been made so that the manufacturer displays this information? It is because consumers have the **right to be informed** about the particulars of goods and services that they purchase. Consumers can then complain and ask for compensation or replacement if the product proves to be defective in any manner. For example, if we buy a

product and find it defective well within the expiry period, we can ask for a replacement. If the expiry period was not printed, the manufacturer would blame the shopkeeper and will not accept the responsibility. If people sell medicines that have expired severe action can be taken against them. Similarly, one can protest and complain if someone sells a good at more than the printed price on the packet. This is indicated by 'MRP' — maximum retail price. In fact consumers can bargain with the seller to sell at less than the MRP.

In recent times, the right to information has been expanded to cover various services provided by the Government. In October 2005, the Government of India enacted a law, popularly known as RTI (Right to Information) Act, which ensures its citizens all the information about the functions of government departments. The effect of the RTI Act can be understood from the following case.



Waiting...

Amritha, an engineering graduate after submitting all the certificates and attending the interview for a job in a government department, did not receive any news of the result. The officials also refused to comply with her queries. She therefore filed an application using the RTI Act saying that it was her right to know the result in a reasonable time so that she could plan her future. She was not only informed about the reasons for delay in the declaration of results but also got her call letter for appointment as she performed well in the interview.

LET'S WORK THESE OUT

- When we buy commodities we find that the price charged is sometimes higher or lower than the Maximum Retail Price printed on the pack. Discuss the possible reasons. Should consumer groups do something about this?
- Pick up a few packaged goods that you want to buy and examine the information given. In what ways are they useful? Is there some information that you think should be given on those packaged goods but is not? Discuss.
- People make complaints about the lack of civic amenities such as bad roads or poor water and health facilities but no one listens. Now the RTI Act gives you the power to question. Do you agree? Discuss.

When choice is denied

A Refund

Abirami, a student of Ansari Nagar, joined a two-year course at a local coaching institute for professional courses in New Delhi. At the time of joining the course, she paid the fees Rs 61,020 as lumpsum for the entire course of two years. However, she decided to opt out of the course at the end of one year as she found that the quality of teaching was not up to the mark. When she asked for a refund of the fee for one year, it was denied to her.

When she filed the case in the District Consumer Disputes Redressal Commission, the Commission directed the Institute to refund Rs 28,000 saying that she had the right to choose. The



Institute again appealed in the State Consumer Com-mission. The State Commission upheld the District Commission's direction and further fined the institute Rs 25,000 for a frivolous appeal. It also directed the institute to pay

Rs 7000 as compensation and litigation cost.

The State Commission also restrained all the educational and professional institutions in the state from charging fees from students for the entire duration of the course in advance and that too at one go. Any violation of this order may invite penalties and imprisonment, the commission said.

What do we understand from this incident? Any consumer who receives a service in whatever capacity, regardless of age, gender and nature of service, has the **right to choose** whether to continue to receive the service.

Suppose you want to buy toothpaste, and the shop owner says that she can sell the toothpaste only

if you buy a toothbrush. If you are not interested in buying the brush, your right to choice is denied. Similarly, sometimes gas supply dealers insist that you have to buy the stove from them when you take a new connection. In this way many a times you are forced to buy things that you may not wish to and you are left with no choice.

LET'S WORK THIS OUT

The following are some of the catchy advertisements of products that we purchase from the market. Which of the following offers would really benefit consumers? Discuss.

- 15 gm more in every 500 gm pack.
- Subscribe for a newspaper with a gift at the end of a year.
- Scratch and win gifts worth Rs 10 lakhs.
- A milk chocolate inside a 500 gram glucose box.
- Win a gold coin inside a pack.
- Buy shoes worth Rs 2000 and get one pair of shoes worth Rs 500 free.

Where should consumers go to get justice?

Read again the cases of Reji Mathew and Abirami given earlier in the chapter.

These are some examples in which consumers are denied their rights. Such instances occur quite often in our country. Where should these consumers go to get justice?

Consumers have the **right to seek redressal** against unfair trade practices and exploitation. If any damage is done to a consumer, she has the right to get compensation depending on the degree of damage. There is a need to provide an easy and effective public system by which this can be done.

The consumer can file a complaint before the appropriate consumer forum on his/her own with or without the services of lawyers. You might be interested in knowing how an aggrieved person gets his or her compensation. Let us take the case of Prakash. He had sent a money-order to his village for his daughter's marriage. The money did not reach his daughter at the time when she needed it nor did it reach months later. Prakash filed a case in a district level Consumer Disputes Redressal Commission in New Delhi. All the steps he undertook are illustrated here. These days consumer as an individual or as a group (called class action suit) file a complaint both Physically or through internet and conduct the case through video conferencing.

1. PRAKASH GOES TO THE POST OFFICE TO SEND MONEY ORDER TO HIS DAUGHTER



2. PRAKASH COMES TO KNOW THAT THE MONEY HAS NOT REACHED HIS DAUGHTER



3. PRAKASH ENQUIRIES ABOUT THE MONEY ORDER IN THE POST OFFICE



5. PRAKASH GOES TO THE LOCAL CONSUMER PROTECTION COUNCIL FOR ADVICE



7. HE HIMSELF PLEADS THE CASE IN THE COMMISSION OFFICE



4. THE POST OFFICE DOES NOT RESPOND TO THE QUERY SATISFACTORILY



6. PRAKASH GOES TO A CONSUMER DISPUTES REDRESSAL COMMISSION TO FILE A CASE. HE FILLS A REGISTRATION FORM. THE COMMISSION SENDS NOTICE TO THE OTHER PARTY

CONSUMER DISPUTES REDRESSAL COMMISSION GOVERNMENT OF DELHI Udyog Sadan, C-22 & C-23 Institutional Area, Behind Qutab Hotel, New Delhi-110016	
DATED:- 30.1.2006	
REGISTRATION NO. 53/06	
Name of Complainant	JEB PRAKASH PANDEY T.GND MAIDAN GARDI NEW DELHI
Name of respondent (1)	POST OFFICE T.GND MAIDAN GARDI NEW DELHI
(2)
(3)
Police Station	Mehrault, NEW DELHI
Value	Rs. 4000/-
Subject	DEFICIENCY IN SERVICE.
(Signature of complainant)	

8. THE COMMISSION OFFICE JUDGE VERIFIES THE DOCUMENTS AND HEARS THE ARGUMENTS OF BOTH THE AGGRIEVED PARTY AND THE OTHER PARTY

9. THE JUDGE ANNOUNCES THE DISPUTES REDRESSAL COMMISSION VERDICT.



The consumer movement in India has led to the formation of various organisations, locally known as consumer forums or consumer protection councils. They guide consumers on how to file cases in the Consumer Disputes Redressal Commissions. On many occasions, they also represent individual consumers in these commissions. These voluntary organisations also receive financial support from the government for creating awareness among people.

If you are living in a residential colony, you might have noticed boards of Residents' Welfare Associations. If there is any unfair trade practice meted out to their members, they take up the case on their behalf.

Under COPRA, a three-tier quasi-judicial machinery at the district, state

and national levels was set up for redressal of consumer disputes. The district-level authority called District Consumer Disputes Redressal Commission deals with the cases involving claims up to Rs 1 crore, the state-level Consumer Disputes Redressal Commissions called State Commission between Rs 1 crore and Rs 10 crore and the national-level commission — National Commission — deals with cases involving claims exceeding Rs 10 crore. If a case is dismissed in district-level commission, a consumer can also appeal in the state and then in national-level commissions.

Thus, the Act has enabled us as consumers to have the **right to represent** in the Consumer Disputes Redressal Commissions.

Ensure consumer rights to healthy environment as against air pollution- water pollution- noise pollution

Look for products/brands which satisfy the criteria for Ecomark

Complain to

- Consumer group
- Pollution Control Board

For all your consumer related information and guidance : Call toll free National Consumer Helpline numbers 1800 123 4567 (Vodafone / MTNL, Lines, Monday to Saturday 9:30 am to 5:30 pm) or log onto www.core.nic.in or write to: P.O. Box No. 3366, New Delhi-110014 for consumer information

What you can do

- Prevent discharge of effluents into rivers
- Use energy efficient products
- Use renewable energy such as solar and wind energy
- Prevent waste of water
- Harvest rain water
- Use unleaded petrol
- Use biodegradable packaging material

An initiative by the
Ministry of Consumer Affairs,
Food and Public Distribution,
Department of Consumer Affairs, Govt. of India
Log on to website: icamin.nic.in

Catch Consumer Awareness programme on every Sunday at 10 am on Doordarshan
Courtesy: Consumer Education Research Center- Ahmedabad

ASSERT RIGHTS. PURSUE REMEDIES

LET'S WORK THIS OUT

Arrange the following in the correct order.

- (a) Arita files a case in the District Consumer Disputes Redressal Commission.
- (b) She engages a professional person.
- (c) She realises that the dealer has given her defective material.
- (d) She starts attending the commission proceedings.
- (e) She goes and complains to the dealer and the Branch office, to no effect.
- (f) She is asked to produce the bill and warranty before the commission.
- (g) She purchases a wall clock from a retail outlet.
- (h) Within a few months, the dealer was ordered by the commission to replace her old wall clock with a brand new one at no extra cost.

LEARNING TO BECOME WELL-INFORMED CONSUMERS

When we as consumers become conscious of our rights, while purchasing various goods and services, we will be able to discriminate and make informed choices. This

calls for acquiring the knowledge and skill to become a well-informed consumer. How do we become conscious of our rights? Look at the posters on the right and in the previous page. What do you think?

The enactment of COPRA has led to the setting up of separate Departments of Consumer Affairs in central and state governments. The posters that you have seen are one example through which government spread information about legal process which people can use. You might also be seeing such advertisements on television channels.



"A customer is the most important visitor on our premises. He is not dependant on us. We are dependant on him. He is not an outsider on our business. He is part of it. We are not doing him a favour by serving him. He is doing us a favour by giving us an opportunity to do so."

-Mahatma Gandhi

 Ministry of Consumer Affairs, Food & Public Distribution
Department of Consumer Affairs, Government of India,
Kohli Bhawan, New Delhi-110 001
Log on to Website: www.ccasnic.nic.in

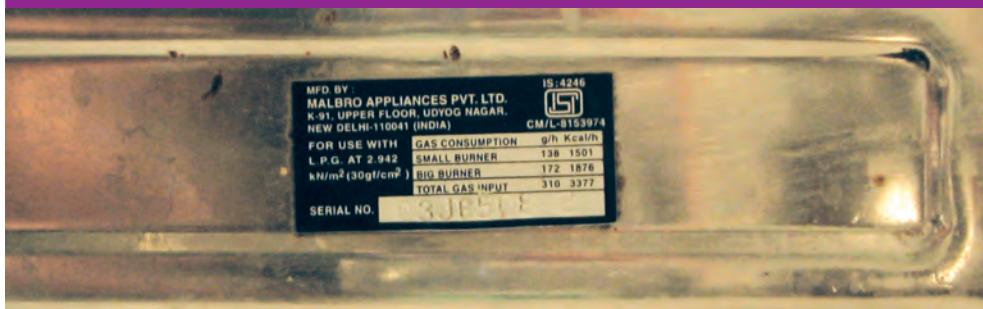
For consumer information: Call toll free National Consumer Helpline No 1800-11-4000 (From BSNL, MTNL lines) or log on to: www.ccasnic.nic.in, or write to P.O. Box 3306, New Delhi-14

200606

ISI and Agmark

While buying many commodities, on the cover, you might have seen a logo with the letters ISI, Agmark, Hallmark or +F. These logos and certification help consumers get assured of quality while purchasing the goods and services. The organisations that monitor and issue these certificates allow producers to use their logos provided they follow certain quality standards.

Though these organisations develop quality standards for many products, it is not compulsory for all the producers to follow standards. However, for some products that affect the health and safety of consumers or of products of mass consumption like LPG cylinders, food colours and additives, cement, packaged drinking water, it is mandatory on the part of the producers to get certified by these organisations.



LET'S WORK THESE OUT

1. Look at the posters and cartoons in this chapter. Think of any particular commodity and the aspects that need to be looked at as a consumer. Design a poster for this.
2. Find out the nearest Consumer Disputes Redressal Commission for your area.
3. What is the difference between consumer protection council and Consumer Disputes Redressal Commission?
4. The Consumer Protection Act 1986 ensures the following as rights which every consumer in India should possess
 - (i) Right to choice.
 - (ii) Right to information.
 - (iii) Right to redressal.
 - (iv) Right to representation.
 - (v) Right to safety.
 - (vi) Right to consumer education.

Categorise the following cases under different heads and mark against each in brackets.

- (a) Lata got an electric shock from a newly purchased iron. She complained to the shopkeeper immediately. ()
 - (b) John is dissatisfied with the services provided by MTNL/BSNL/TATA INDICOM for the past few months. He files a case in the District Level Consumer Commission. ()
 - (c) Your friend has been sold a medicine that has crossed the expiry date and you are advising her to lodge a complaint ().
 - (d) Iqbal makes it a point to scan through all the particulars given on the pack of any item that he buys. ()
 - (e) You are not satisfied with the services of the cable operator catering to your locality but you are unable to switch over to anybody else. ()
 - (f) You realise that you have received a defective camera from a dealer. You are complaining to the head office persistently ().
5. If the standardisation ensures the quality of a commodity, why are many goods available in the market without ISI or Agmark certification?
 6. Find out the details of who provides Hallmark and ISO certification.

TAKING THE CONSUMER MOVEMENT FORWARD

India has been observing 24 December as the National Consumers' Day. It was on this day that the Indian Parliament enacted the Consumer Protection Act in 1986. India is one of the countries that have exclusive authority for consumer redressal.

The consumer movement in India has made some progress in terms of numbers of organised groups and

their activities. There are today more than 2000 consumer groups in the country of which only about 50-60 are well organised and recognised for their work.

However, the consumer redressal process is becoming cumbersome, expensive and time consuming. Many a time, consumers are required to engage lawyers. These cases require



time for filing and attending the commission proceedings etc. In most purchases cash memos are not issued hence evidence is not easy to gather. Moreover most purchases in the market are small retail sales. The COPRA was amended in the year 2019 to further strengthen consumers in India. Buying through internet is now included. If there is any service deficiency or defective product, service provider or manufacturer is also held responsible and would be penalized or even imprisoned. Settlement of disputes with the help of a neutral intermediary outside the Consumer Disputes Redressal Commission, called mediator, is now

encouraged at all the three tiers Consumer Commissions. After more than 30 years of the enactment of COPRA, consumer awareness in India is spreading but slowly. Besides this the enforcement of laws that protect workers, especially in the unorganised sectors is weak. Similarly, rules and regulations for working of markets are often not followed.

Nevertheless, there is scope for consumers to realise their role and importance. It is often said that consumer movements can be effective only with the consumers' active involvement. It requires a voluntary effort and struggle involving the participation of one and all.

EXERCISES

1. Why are rules and regulations required in the marketplace? Illustrate with a few examples.
2. What factors gave birth to the consumer movement in India? Trace its evolution.
3. Explain the need for consumer consciousness by giving two examples.
4. Mention a few factors which cause exploitation of consumers.
5. What is the rationale behind the enactment of Consumer Protection Act 1986?
6. Describe some of your duties as consumers if you visit a shopping complex in your locality.
7. Suppose you buy a bottle of honey and a biscuit packet. Which logo or mark you will have to look for and why?
8. What legal measures were taken by the government to empower the consumers in India?
9. Mention some of the rights of consumers and write a few sentences on each.
10. By what means can the consumers express their solidarity?
11. Critically examine the progress of consumer movement in India.
12. Match the following.

(i) Availing details of ingredients of a product	(a) Right to safety
(ii) Agmark	(b) Dealing with consumer cases
(iii) Accident due to faulty engine in a scooter	(c) Certification of edible oil and cereals
(iv) District Consumer Commission	(d) Agency that develop standards for goods and services
(v) Food fortification	(e) Right to information
(vi) Consumers International	(f) Global level institution of consumer welfare organisations
(vii) Bureau of Indian Standards	(g) Addition of key nutrients to staple foods

13. Say True or False.

- (i) COPRA applies only to goods.
- (ii) India is one of the many countries in the world which has exclusive authorities established for consumer disputes redressal.
- (iii) When a consumer feels that he has been exploited, he must file a case in the District Consumer Commission.
- (iv) It is worthwhile to move to consumer commissions only if the damages incurred are of high value.
- (v) Hallmark is the certification maintained for standardisation of jewellery.
- (vi) The consumer redressal process is very simple and quick.
- (vii) A consumer has the right to get compensation depending on the degree of the damage.

ADDITIONAL PROJECTS / ACTIVITIES

1. Your school organises a consumer awareness week. As the Secretary of the Consumer Awareness Forum, draft a poster covering all the consumer rights. You may use the clues and ideas given in the poster on page 84 and 85. This activity can be done with the help of your English teacher.
2. Mrs. Krishna bought a colour television (CTV) against six months warranty. The CTV stopped working after three months. When she complained to the dealer / shop where it was purchased, they sent an engineer to set it right. The CTV continues to give trouble and Mrs Krishna no longer gets any reply to the complaint she made to the dealer / shop. She decides to write to the Consumer Commission in her area. Write a letter on her behalf. You may discuss with your partner / group members before you write it.
3. Establish a consumer club in your school. Organise mock consumer awareness workshops like monitoring bookshops, canteen, and shops in your school area.
4. Prepare posters with catchy slogans like:
 - An alert consumer is a safe consumer
 - Buyers, Beware
 - Consumers be cautious
 - Be aware of your rights
 - As consumers, assert your right
 - Arise, awake and stop not till _____ (Complete it)
5. Interview 4-5 persons in your neighbourhood and collect varied experiences regarding how they have been victims of such exploitation and their responses.
6. Conduct a survey in your locality by supplying the following questionnaire to get an idea as to how alert they are as consumers.

For each question, tick one.

Always Sometimes Never

A B C

1. When you buy some item, do you insist on a bill?
2. Do you keep the bill carefully?
3. If you realise that you have been tricked by the shopkeeper, have you bothered to complain to him or her?
4. Have you been able to convince him or her that you've been cheated?
5. Do you simply grumble to yourself reconciling that it is your fate that you are often being victimised so and it is nothing new?
6. Do you look for ISI mark, expiry date etc.?
7. If the expiry date mentioned is just a month or so away, do you insist on a fresh packet?
8. Do you weigh the new gas cylinder/old newspapers yourself before buying/selling?
9. Do you raise an objection if a vegetable seller uses stones in place of the exact weight?
10. Do excessively bright coloured vegetables arouse your suspicion?
11. Are you brand-conscious?
12. Do you associate high price with good quality (to reassure yourself that after all you have not paid a higher price just like that)?
13. Do you unhesitatingly respond to catchy offers?
14. Do you compare the price paid by you with those of others?
15. Do you strongly believe that your shopkeeper never cheats a regular customer like you?
16. Do you favour 'home delivery' of provision items without any doubt regarding weight etc.?
17. Do you insist on 'paying by meter' when you travel by auto?

Note

- (i) You are extremely aware as a consumer if your answers for Qns. 5, 12, 13, 15 and 16 are (C) and for the rest (A).
- (ii) If your answers are (A) for Qns. 5, 12, 13, 15 and 16 and the rest (C), then you have to wake up as consumer.
- (iii) If your answer is (B) for all the questions – you are somewhat aware.

Appendix 1: Body Mass Index for Adolescent Girls (Age 14-18)

Years	Month	Malnourished (underweight)	Normal	Malnourished (obesity)
14	0	Less than 15.4	15.4 to 27.3	More than 27.3
14	1	Less than 15.5	15.5 to 27.4	More than 27.4
14	2	Less than 15.5	15.5 to 27.5	More than 27.5
14	3	Less than 15.6	15.6 to 27.6	More than 27.6
14	4	Less than 15.6	15.6 to 27.7	More than 26.3
14	5	Less than 15.6	15.6 to 27.7	More than 27.7
14	6	Less than 15.7	15.7 to 27.8	More than 27.8
14	7	Less than 15.7	15.7 to 27.9	More than 27.9
14	8	Less than 15.7	15.7 to 28.0	More than 28.0
14	9	Less than 15.8	15.8 to 28.0	More than 28.0
14	10	Less than 15.8	15.8 to 28.1	More than 28.1
14	11	Less than 15.8	15.8 to 28.2	More than 28.2
15	0	Less than 15.9	15.9 to 28.2	More than 28.2
15	1	Less than 15.9	15.9 to 28.3	More than 28.3
15	2	Less than 15.9	15.9 to 28.4	More than 28.4
15	3	Less than 16.0	16.0 to 28.4	More than 28.4
15	4	Less than 16.0	16.0 to 28.5	More than 28.5
15	5	Less than 16.0	16.0 to 28.6	More than 28.5
15	6	Less than 16.0	16.0 to 28.6	More than 28.6
15	7	Less than 16.1	16.1 to 28.7	More than 28.6
15	8	Less than 16.1	16.1 to 28.7	More than 28.7
15	9	Less than 16.1	16.1 to 28.7	More than 28.7
15	10	Less than 16.1	16.1 to 28.8	More than 28.8
15	11	Less than 16.2	16.2 to 28.8	More than 28.8
16	0	Less than 16.2	16.2 to 28.9	More than 28.9
16	1	Less than 16.2	16.2 to 28.9	More than 28.9
16	2	Less than 16.2	16.2 to 29.0	More than 29.0
16	3	Less than 16.2	16.2 to 29.0	More than 29.0
16	4	Less than 16.2	16.2 to 29.0	More than 29.0
16	5	Less than 16.3	16.3 to 29.1	More than 29.1
16	6	Less than 16.3	16.3 to 29.1	More than 29.1
16	7	Less than 16.3	16.3 to 29.1	More than 29.1
16	8	Less than 16.3	16.3 to 29.2	More than 29.2
16	9	Less than 16.3	16.3 to 29.2	More than 29.2
16	10	Less than 16.3	16.3 to 29.2	More than 29.2
16	11	Less than 16.3	16.3 to 29.3	More than 29.3
17	0	Less than 16.4	16.3 to 29.3	More than 29.3
17	1	Less than 16.4	16.3 to 29.3	More than 29.3
17	2	Less than 16.4	16.3 to 29.3	More than 29.3
17	3	Less than 16.4	16.4 to 29.4	More than 29.4
17	4	Less than 16.4	16.4 to 29.4	More than 29.4
17	5	Less than 16.4	16.4 to 29.4	More than 29.4
17	6	Less than 16.4	16.4 to 29.4	More than 29.4
17	7	Less than 16.4	16.4 to 29.4	More than 29.4
17	8	Less than 16.4	16.4 to 29.4	More than 29.5
17	9	Less than 16.4	16.4 to 29.4	More than 29.5
17	10	Less than 16.4	16.4 to 29.4	More than 29.5
17	11	Less than 16.4	16.4 to 29.4	More than 29.5
18	0	Less than 16.4	16.4 to 29.4	More than 29.5

Appendix 2: Body Mass Index for Adolescent Boys (Age 14-18)

Years	Month	Malnourished (underweight)	Normal	Malnourished (obesity)
14	0	Less than 15.5	15.5 to 25.9	More than 25.9
14	1	Less than 15.5	15.5 to 26.0	More than 26.0
14	2	Less than 15.6	15.6 to 26.1	More than 26.1
14	3	Less than 15.6	15.6 to 26.2	More than 26.2
14	4	Less than 15.7	15.7 to 26.3	More than 26.3
14	5	Less than 15.7	15.7 to 26.4	More than 26.4
14	6	Less than 15.7	15.7 to 26.5	More than 26.5
14	7	Less than 15.8	15.8 to 26.5	More than 26.5
14	8	Less than 15.8	15.8 to 26.6	More than 26.6
14	9	Less than 15.9	15.9 to 26.7	More than 26.7
14	10	Less than 15.9	15.9 to 26.8	More than 26.8
14	11	Less than 16.0	16.0 to 26.9	More than 26.9
15	0	Less than 16.0	16.0 to 27.0	More than 27.0
15	1	Less than 16.1	16.1 to 27.1	More than 27.1
15	2	Less than 16.1	16.1 to 27.1	More than 27.1
15	3	Less than 16.1	16.1 to 27.2	More than 27.2
15	4	Less than 16.2	16.2 to 27.3	More than 27.3
15	5	Less than 16.2	16.2 to 27.4	More than 27.4
15	6	Less than 16.3	16.3 to 27.4	More than 27.4
15	7	Less than 16.3	16.3 to 27.5	More than 27.5
15	8	Less than 16.3	16.3 to 27.6	More than 27.6
15	9	Less than 16.4	16.4 to 27.7	More than 27.7
15	10	Less than 16.4	16.4 to 27.7	More than 27.7
15	11	Less than 16.5	16.5 to 27.8	More than 27.8
16	0	Less than 16.5	16.5 to 27.9	More than 27.9
16	1	Less than 16.5	16.5 to 27.9	More than 27.9
16	2	Less than 16.6	16.6 to 28.0	More than 28.0
16	3	Less than 16.6	16.6 to 28.1	More than 28.1
16	4	Less than 16.7	16.7 to 28.1	More than 28.1
16	5	Less than 16.7	16.7 to 28.2	More than 28.2
16	6	Less than 16.7	16.7 to 28.3	More than 28.3
16	7	Less than 16.8	16.8 to 28.3	More than 28.3
16	8	Less than 16.8	16.8 to 28.4	More than 28.4
16	9	Less than 16.8	16.8 to 28.5	More than 28.5
16	10	Less than 16.9	16.9 to 28.5	More than 28.5
16	11	Less than 16.9	16.9 to 28.6	More than 28.6
17	0	Less than 16.9	16.9 to 28.6	More than 28.6
17	1	Less than 17.0	17.0 to 28.7	More than 28.7
17	2	Less than 17.0	17.0 to 28.7	More than 28.7
17	3	Less than 17.0	17.1 to 28.8	More than 28.8
17	4	Less than 17.1	17.1 to 28.9	More than 28.9
17	5	Less than 17.1	17.1 to 28.9	More than 28.9
17	6	Less than 17.1	17.1 to 29.0	More than 29.0
17	7	Less than 17.1	17.1 to 29.0	More than 29.0
17	8	Less than 17.2	17.2 to 29.1	More than 29.1
17	9	Less than 17.2	17.2 to 29.1	More than 29.1
17	10	Less than 17.2	17.2 to 29.2	More than 29.2
17	11	Less than 17.3	17.3 to 29.2	More than 29.2
18	0	Less than 17.3	17.3 to 29.2	More than 29.2

Source: Based on chart published by the World Health Organization

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आवरण, सज्जा एवं चित्र

केरन हेडॉक

आमुख

राष्ट्रीय पाठ्यचर्चा की रूपरेखा (2005) सुझाती है कि बच्चों के स्कूली जीवन को बाहर के जीवन से जोड़ा जाना चाहिए। यह सिद्धांत किंतु ज्ञान की उस विरासत के विपरीत है, जिसके प्रभाववश हमारी व्यवस्था आज तक स्कूल और घर के बीच अंतराल बनाये हुए है। नयी राष्ट्रीय पाठ्यचर्चा पर आधारित पाठ्यक्रम और पाठ्यपुस्तकें इस बुनियादी विचार पर अमल करने का प्रयास है। इस प्रयास में हर विषय को एक मजबूत दीवार से घेर देने और जानकारी को रटा देने की प्रवृत्ति का विरोध शामिल है। आशा है कि ये कदम हमें राष्ट्रीय शिक्षा नीति (1986) में वर्णित बाल-केंद्रित व्यवस्था की दिशा में काफ़ी दूर तक ले जाएँगे।

इस प्रयत्न की सफलता अब इस बात पर निर्भर है कि स्कूलों के प्राचार्य और अध्यापक बच्चों को कल्पनाशील गतिविधियों और सवालों की मदद से सीखने और सीखने के दौरान अपने अनुभवों पर विचार करने का अवसर देते हैं। हमें यह मानना होगा कि यदि जगह, समय और आज्ञादी दी जाए तो बच्चे बड़ों द्वारा सौंपी गई सूचना-सामग्री से जुड़कर और ज़ूँझकर नये ज्ञान का सृजन करते हैं। शिक्षा के विविध साधनों एवं स्रोतों की अनदेखी किए जाने का प्रमुख कारण पाठ्यपुस्तक को परीक्षा का एकमात्र आधार बनाने की प्रवृत्ति है। सर्जना और पहल को विकसित करने के लिए ज़रूरी है कि हम बच्चों को सीखने की प्रक्रिया में पूरा भागीदार मानें और बनाएँ, उन्हें ज्ञान की निर्धारित खुराक का ग्राहक मानना छोड़ दें।

ये उद्देश्य स्कूल की दैनिक जिंदगी और कार्यशैली में काफ़ी फेरबदल की माँग करते हैं। दैनिक समय-सारणी में लचीलापन उतना ही ज़रूरी है जितनी वार्षिक कैलेंडर के अमल में चुस्ती, जिससे शिक्षण के लिए नियत दिनों की संख्या हकीकत बन सके। शिक्षण और मूल्यांकन की विधियाँ भी इस बात को तय करेंगी कि यह पाठ्यपुस्तक स्कूल में बच्चों के जीवन को मानसिक दबाव तथा बोरियत की जगह खुशी का अनुभव कराने में कितनी प्रभावी सिद्ध होती है। बोझ की समस्या से निपटने के लिए पाठ्यक्रम निर्माताओं ने विभिन्न चरणों में ज्ञान का पुनर्निर्धारण करते समय बच्चों के मनोविज्ञान एवं अध्यापन के लिए उपलब्ध समय का ध्यान रखने की पहले से अधिक सचेत कोशिश की है। इस कोशिश को सार्थक बनाने के यत्न में यह पाठ्यपुस्तक सोच-विचार और विस्मय, छोटे समूहों में बातचीत एवं बहस और हाथ से की जानेवाली गतिविधियों को प्राथमिकता देती है।

एन.सी.ई.आर.टी. इस पुस्तक की रचना के लिए बनाई गई पाठ्यपुस्तक निर्माण समिति के परिश्रम के लिए कृतज्ञता व्यक्त करती है। परिषद् सामाजिक विज्ञान पाठ्यपुस्तक सलाहकार समिति के अध्यक्ष प्रोफेसर हरि वासुदेवन और इस पाठ्यपुस्तक समिति के मुख्य सलाहकार प्रोफेसर तापस मजूमदार की विशेष आभारी है। इस

पाठ्यपुस्तक के विकास में कई शिक्षकों ने योगदान किया, इस योगदान को संभव बनाने के लिए हम उनके प्राचार्यों के आभारी हैं। हम उन सभी संस्थाओं और संगठनों के प्रति कृतज्ञ हैं जिन्होंने अपने संसाधनों, सामग्री और सहयोगियों की मदद लेने में हमें उदारतापूर्वक सहयोग दिया। हम माध्यमिक शिक्षा विभाग, मानव संसाधन विकास मंत्रालय द्वारा प्रोफ़ेसर मृणाल मीरी एवं प्रोफ़ेसर जी.पी. देशपांडे की अध्यक्षता में गठित निगरानी समिति (मॉनिटरिंग कमेटी) के सदस्यों को अपना मूल्यवान समय और सहयोग देने के लिए धन्यवाद देते हैं। व्यवस्थागत सुधारों और अपने प्रकाशनों में निरंतर निखार लाने के प्रति समर्पित एन.सी.ई.आर.टी. टिप्पणियों एवं सुझावों का स्वागत करेगी, जिनसे भावी संशोधनों में मदद ली जा सके।

निदेशक

नयी दिल्ली

20 नवंबर 2006

राष्ट्रीय शैक्षिक अनुसंधान

और प्रशिक्षण परिषद्

शिक्षक हेतु कुछ परिचयात्मक बातें

यह पुस्तक भारतीय अर्थव्यवस्था की विकास-प्रक्रिया के सरलीकृत रूप से परिचय करती है। अर्थशास्त्र में हम प्रायः विकास को वस्तुओं और सेवाओं के उत्पादक या उपभोक्ता के रूप में लोगों के आर्थिक जीवन में परिवर्तन की प्रक्रिया के रूप में देखते हैं। कभी-कभी विकास का अध्ययन मुख्यतः एक परिधिटना के रूप में किया जाता है जिसे केवल आधुनिक औद्योगिक सभ्यता की संवृद्धि के साथ महत्व प्राप्त हुआ है। ऐसा इसलिए किया जाता है क्योंकि किसी देश का विकास (या अल्पविकास) अक्सर युद्धों और विजयों के परिणामों पर एवं एक देश द्वारा दूसरे देश के औपनिवेशिक शोषण पर निर्भर रहा है। परन्तु इस पुस्तक में हमने बाह्य कारकों पर बल नहीं दिया है। हमने विकास-प्रक्रिया के लम्बे परिदृश्य को लिया है: ऐसी प्रक्रिया जो किसी बाह्य कारकों के हस्तक्षेप या उससे बाधित होने से पहले आरम्भ हो सके। विकास की प्रक्रिया ऐसी बाधाओं के बाद भी पुनः आरंभ हो सकती है और पराधीनता की समाप्ति के बाद स्वतंत्र रूप से जारी रह सकती है। अपने देश भारत का विकास इसी प्रकार हुआ है।



इस पुस्तक में सर्वप्रथम देश में विकास की शुरुआत को अर्थव्यवस्था के तीन क्षेत्रों—कृषि, विनिर्माण और सेवा—के उदय के रूप में देखते हैं। हमने आर्थिक विकास को पृथक रूप में नहीं, बल्कि मानव-विकास की सामान्य अवधारणा, जिसमें स्वास्थ्य, शिक्षा और लोगों के जीवन की गुणवत्ता को व्यापक रूप से परिभाषित करनेवाले (आय सहित) अन्य संकेतकों को भी शामिल किया है, के अंग के रूप में देखने की कोशिश की है।



प्रथम अध्याय में, हम अध्ययन करेंगे कि लोग वास्तव में विकास की अवधारणा को कैसे समझते हैं और इसका मापन कैसे किया जा सकता है? इस उद्देश्य के लिए कई मापदंड उपलब्ध हैं। हम देखेंगे कि विकास को समझने में कुछ महत्वपूर्ण विकास संकेतक कहाँ तक सहायक हैं और विकास-प्रक्रिया अलग-अलग लोगों को कैसे अलग-अलग रूप में प्रभावित कर सकती है।



एक प्रक्रिया के रूप में विकास की शुरुआत संभवतः अतीत में कुछ पहले हुई। विकास को हम जिस अर्थ में समझते हैं उस अर्थ में शायद किसी भी देश को विकसित नहीं कहा जा सकता। विकास-प्रक्रिया की शुरुआत संभवतः मानव-बसावटों से हुई होगी, जब लोग अपेक्षाकृत शांति से एवं कम या अधिक निश्चित निवास स्थानों में बड़े पैमाने पर कृषि संभव नहीं होने के बावजूद रहने लगे। जब कृषि की शुरुआत हुई और कृषिगत क्रियाओं का विकास आरम्भ हुआ, तब संभवतः अन्य प्राकृतिक उत्पादों, जैसे खनिज अयस्कों के निष्कर्षण की भी शुरुआत हुई। पत्थरों एवं अन्य खनिजों को प्राप्त करने की इस प्रक्रिया को 'उत्खनन' कहा जाता है।



मनुष्य ने औजार, अस्त्र-शस्त्र, बर्तन, मछली का जाल और अनेक चीजें बनाने के लिए अखाद्य उत्पादों, जैसे — पेड़ों से लकड़ी और कच्चे माल के रूप में उत्खनन से प्राप्त खनिजों का उपयोग करना सीखा। ये प्रथम मानव-निर्मित उत्पाद थे जिन्हें 'शिल्पकृतियाँ' कहा जाता है।

अर्थशास्त्री कृषि (उत्खनन सहित), जिसमें फल, चावल, खनिज जैसे शुद्ध प्राकृतिक उत्पादों का संग्रहण, खेती या निष्कर्षण शामिल है, से अन्तर करने के लिए शिल्पकृतियाँ बनाने की प्रक्रिया को विनिर्माण कहते हैं।



श्रम सभी संपत्तियों
का स्रोत है।

उत्थनन सहित कृषि (जिसे प्राथमिक क्षेत्रक भी कहते हैं) और विनिर्माण (जिसे द्वितीयक क्षेत्रक भी कहते हैं), इन दो क्षेत्रकों के बीच उत्पादन-गतिविधियों का विभाजन आर्थिक विकास का संभवतः प्रथम दृष्ट स्वरूप था। यह विभाजन 'श्रम-विभाजन' की प्रक्रिया के माध्यम से हुआ। यह नाम अर्थशास्त्र के जनक एडम स्मिथ द्वारा दिया गया था। इस प्रक्रिया की संक्षिप्त व्याख्या नीचे की गई है।

सर्वप्रथम एक व्यक्ति या कम से कम एक परिवार के सदस्य संभवतः सभी कार्य स्वयं करते थे। उसके बाद कहीं-कहीं श्रम-विभाजन का लाभ महसूस किया गया। मानव ने अनुभव के साथ पाया कि जब कुछ लोगों ने मछली पकड़ने, कुछ अन्य लोगों ने खेतों की जुताई या मिट्टी के बर्तन बनाने या पक्षियों और जानवरों का शिकार करना सीखने पर ध्यान केन्द्रित किया तो दक्षता पूर्ण ढंग से उत्पादन होने लगा। यह भी एक प्रकार का 'विकास' ही था। इसके बाद विशेषज्ञों का उदय हुआ, जो स्वयं वस्तुओं का बिल्कुल उत्पादन नहीं करते थे परन्तु दूसरों को यह बताने में विशेषज्ञ थे कि बेहतर ढंग से उत्पादन कैसे किया जाए। जो डॉक्टर थे, वे घायल या बीमार पड़े लोगों का उपचार करते थे। इस प्रकार, श्रम विभाजन से स्वभावतः सभी लोगों की उत्पादकता में वृद्धि हुई और अर्थव्यवस्था का भी विकास हुआ।

द्वितीय अध्याय में उस तरीके का अध्ययन करेंगे जिसके तहत आधुनिक अर्थव्यवस्था में आर्थिक गतिविधियों के वर्गीकरण तथा प्राथमिक, द्वितीयक एवं तृतीयक क्षेत्रकों के ढाँचे में समझा जा सकता है। यहाँ चर्चा तीनों क्षेत्रकों में हुए परिवर्तन के फलस्वरूप भारतीय अर्थव्यवस्था के बदलते स्वरूप पर केन्द्रित है। इसके अलावा आर्थिक गतिविधियों के वर्गीकरण के दो अन्य रूपों – संगठित एवं असंगठित और सार्वजनिक एवं निजी क्षेत्रकों – की भी चर्चा की गई है। आधुनिक भारतीय अर्थव्यवस्था की चुनौतियों को समझने में वर्गीकरण के अन्य रूपों की प्रासंगिकता की विस्तृत व्याख्या वास्तविक जीवन के उदाहरणों और संदर्भ-अध्ययनों के माध्यम से की गयी है।

तृतीय अध्याय पाठकों को मुद्रा संसार में ले जाता है जहाँ आधुनिक अर्थव्यवस्था में इसकी भूमिका, इसके प्रकार एवं अनेक संस्थाओं, जैसे बैंकों से संबंध की चर्चा है। इस अध्याय में लोगों को साख उपलब्ध कराने वाली अन्य संस्थाओं और बैंकों की भूमिका पर चर्चा की गई है। चर्चा में साख के जिन मुद्दों पर बल दिया गया है, वे हैं – (अ) जनसंख्या के एक बड़े भाग के बीच साख की उपलब्धता, (ब) भारत में अनौपचारिक साख की बहुलता और (स) उत्पादक निवेश, उच्चतर आय प्रवाह, उत्पादक निवेश में सहायक उच्च जीवन स्तर का स्वपोषित 'सुचक' या ऋणग्रस्तता, निर्धनता और निर्धनता की वृद्धि में सहायक कर्ज-जाल 'दुश्चक्र' के निर्माण में साख की भूमिका। ये सभी अवधारणाएँ संदर्भ-अध्ययनों के माध्यम से प्रस्तुत की गई हैं।

वैश्वीकरण एक महत्वपूर्ण परिघटना है जिसने विकास-प्रक्रिया और विश्व के लोगों को कई तरह से प्रभावित किया है। चतुर्थ अध्याय वैश्वीकरण के एक विशेष आर्थिक आयाम, उत्पादन, के जटिल ताने-बाने पर केन्द्रित है। इसमें व्याख्या की गई है कि कैसे बहुराष्ट्रीय कंपनियाँ व्यापार और निवेश के जरिए वैश्वीकरण में मदद करती हैं। इस अध्याय में वैश्वीकरण में सहायक कुछ अन्य महत्वपूर्ण कारकों और संस्थाओं को भी स्थान मिला है। अध्याय के अन्त में भारत की अर्थव्यवस्था पर वैश्वीकरण के प्रभावों (सकारात्मक एवं नकारात्मक) का मूल्यांकन किया गया है।

विकास की प्रक्रिया अर्थव्यवस्था के विभिन्न क्षेत्रकों में केवल उत्पादन स्तर की वृद्धि में ही मदद नहीं करती है, बल्कि इसके कुछ नकारात्मक पक्ष भी हैं। इस अध्याय में दिए गए उदाहरण और संदर्भ अध्ययन यह परीक्षण करने का प्रयत्न करते हैं कि विकास का लाभ सभी लोगों (छोटे एवं बड़े उत्पादकों, संगठित या असंगठित क्षेत्रक के श्रमिकों, सभी आय-वर्ग के उपभोक्ताओं, पुरुष एवं महिलाओं) को मिल रहा है या कुछ सुविधा प्राप्त लोगों तक ही सीमित है।

अंतिम अध्याय एक प्रासंगिक अध्ययन प्रस्तुत करता है कि कैसे और किस सीमा तक हम उपभोक्ता के रूप में नागरिकों के अधिकारों की सुरक्षा कर सकते हैं? तीव्र विकास की प्रक्रिया एवं नये ब्रांडों के उदय और अनैतिक उत्पादकों के विज्ञापन अभियानों के युग में प्रायः उपभोक्ता ही भ्रष्ट व्यवसाय का शिकार होता है। उपभोक्ता आंदोलनों की ऐतिहासिकता की पहचान के साथ वास्तविक जीवन के अनेक दृष्टान्तों के माध्यम से यह अध्याय वर्षों से विकसित विभिन्न किफायती उपभोक्ता संरक्षण क्रिया विधियों की चर्चा करता है। यह अध्याय विस्तृत विवरण देता है कि कष्टप्रद, खर्चीली और अधिक समय लेने वाली वर्तमान न्यायिक प्रक्रिया से अलग हटकर संचालित विशेष उपभोक्ता अदालतों से लोग कैसे अत्यन्त कम खर्च पर अपने अधिकारों का दावा कर सकते हैं।



पाठ्यपुस्तक की विशिष्टताएँ

इस पुस्तक का उद्देश्य अपने आसपास के अर्थिक जीवन को समझना है और इस बारे में भी विचार करना है कि लोगों के आर्थिक विकास से हम क्या समझते हैं। अवधारणात्मक स्पष्टता और इन अवधारणाओं को वास्तविक जीवन से जोड़ने के लिए हमने इसमें अनेक उदाहरणों और संदर्भ-अध्ययनों का उपयोग किया है। सम्पूर्ण उद्देश्य को ध्यान में रखते हुए इन्हें पढ़कर और उपयोग किया जाना चाहिए।



अध्याय **शिक्षक के लिए निर्देश** से प्रारम्भ होते हैं। किसी भी अध्याय को पढ़ाने से पहले शिक्षक को यह पृष्ठ पढ़ना चाहिए। इसमें (क) अध्याय की विषय-वस्तु और व्यापक दृष्टिकोण (ख) अध्याय की विषय-वस्तु को पढ़ाने के लिए कुछ निर्देश तथा (ग) विभिन्न शीर्षकों से संबंधित अतिरिक्त जानकारियों के स्रोतों के विवरण दिए गए हैं।

सभी अध्यायों में प्रत्येक खंड के बाद **आओ-इन** पर विचार करें के अन्तर्गत अनेक अभ्यास दिए गए हैं। इसमें खंड के पुनरीक्षण के लिए कुछ प्रश्न हैं और कुछ खुले परिणाम वाले प्रश्न और कार्यकलाप हैं जिन्हें कक्षाओं में या कक्षाओं से बाहर किया जा सकता है। कुछ अभ्यासों को परिचर्चा के माध्यम से किया जाना चाहिए। छात्र इन पर समूहों में चर्चा कर सकते हैं और उनके निष्कर्षों और उत्तरों को सम्पूर्ण कक्षा में बहस के लिए रखा जा सकता है। इसके लिए अतिरिक्त समय की आवश्यकता होगी, परन्तु यह अनिवार्य है क्योंकि इनसे छात्रों को छान-बीन करने और एक-दूसरे से सीखने में सहायता मिलती है। इसका अभिप्राय पहले की तुलना में छात्रों के बीच अधिक पारस्परिक सहयोग में मदद करना है। लेकिन इसकी कोई तयशुदा विधि नहीं है। प्रत्येक शिक्षक को स्वयं अपने पढाने का ढंग विकसित करना होगा और हमें उनकी क्षमता पर विश्वास है।



जहाँ संभव हुआ है, हमने आधुनिकतम समंको को देने का प्रयास किया है। हाल के वर्षों के लिए प्रमाणिक सभी समंक उपलब्ध नहीं हैं। थोड़े से वर्षों में सभी आर्थिक प्रवृत्तियों में परिवर्तन भी नहीं होते हैं। आधुनिकतम समंकों की चिंता किए बिना आप यह बताएँ कि अवधारणा विशेष को उससे संबंधित आँकड़ों का केंद्रीय-भाव क्या है? समंक पहलुओं पर प्रश्न से बचा जा सकता है।

इस पुस्तक को तैयार करते समय हमने अनेक संदर्भ सामग्रियों का उपयोग किया है। इसके अलावा समाचार पत्रों की अनेक कतरनों, सरकारी एवं गैर सरकारी संगठनों की रिपोर्टों का भी उपयोग किया है। इनमें से कुछ का उल्लेख शिक्षक के लिए निर्देश में किया गया है और कुछ पुस्तक के अन्त में सुझावित पाठ्य-सामग्रियों में दिए गए हैं।

अतिरिक्त जानकारियों और पाठ्य-सामग्रियों की कक्षाओं में चर्चा करना अत्यन्त आवश्यक है। यह संक्षिप्त सर्वेक्षणों, आसपास के लोगों के साक्षात्कारों, संदर्भ-पुस्तकों अथवा समाचार पत्रों की

कतरनों इत्यादि के रूप में हो सकता है। इसलिए इनका उपयोग छात्रों द्वारा स्वतः चार्ट बनाने, वॉल पेपर डिस्प्ले, प्रदर्शन एवं बहस आदि के रूप में प्रत्युत्तर एवं रचनात्मक अभिव्यक्ति के लिए किया जाना चाहिए।

मूल्यांकन

शिक्षा में सुधार की आवश्यकता पर ध्यान देते हुए राष्ट्रीय पाठ्यचर्चा रूपरेखा 2005 और परीक्षा सुधारों पर राष्ट्रीय फोकस समूह के स्थिति पत्र ने परीक्षाओं में पूछे जाने वाले प्रश्नों के तरीकों में बदलाव के लिए अपील की है। इस पुस्तक में पूछे गए प्रश्न रटने को बढ़ावा देने वाली मूल्यांकन प्रणाली से हटकर पाठकों की रचनात्मक सोच, कल्पनाशीलता, प्रत्युत्तर और विश्लेषण क्षमता को धारदार बनाने वाली प्रणाली अपनायी गई है। यहाँ दिए गए उदाहरणों के आधार पर शिक्षक अतिरिक्त प्रश्नों को भी तैयार कर सकते हैं।

केन्द्रीय अवधारणा की समझ का परीक्षण करने वाले प्रश्न

- (अ) सकल घरेलू उत्पादन (जी.डी.पी.) किसी विशेष वर्ष में उत्पादित का कुल मूल्य है।
- (क) सभी वस्तुओं और सेवाओं
- (ख) सभी अंतिम वस्तुओं और सेवाओं
- (ग) सभी मध्यवर्ती वस्तुओं और सेवाओं
- (घ) सभी मध्यवर्ती एवं अंतिम वस्तुओं और सेवाओं
- (ब) विकास के लिए साख की भूमिका का विश्लेषण कीजिए।
- (स) भारत में फोर्ड मोर्टस द्वारा कारों का उत्पादन किस प्रकार उत्पादन को परस्पर संबंधित करने में सहायक होगा?
- (द) श्रम कानूनों में लचीलापन कंपनियों की कैसे मदद करेगा?

विश्लेषणात्मक योग्यता, व्याख्या और सुसंगत प्रस्तुतीकरण के मूल्यांकन हेतु प्रश्न

- (अ) निम्नलिखित सारणी में तीनों क्षेत्रों के द्वारा जी.डी.पी. में योगदान को दिखाया गया है (करोड़ रुपये में)।

वर्ष	प्राथमिक	द्वितीयक	तृतीयक
2000	52,000	4,48,500	1,33,500
2013	8,00,500	10,74,000	38,68,000

- (क) 2000 और 2013 में तीनों क्षेत्रों की जी.डी.पी. में हिस्सेदारी की गणना कीजिए।
- (ख) आँकड़ों को अध्याय 2 के आरेख 2 के समान दण्ड-आरेख में प्रदर्शित कीजिए।
- (ग) दण्ड-आरेख से हम क्या निष्कर्ष निकाल सकते हैं?
- (ब) भारत में 80 प्रतिशत किसान, छोटे किसान हैं जिन्हें खेती के लिए साख की ज़रूरत है।
- (क) बैंक छोटे किसानों को कर्ज देने की अनिच्छा क्यों प्रकट करते हैं?
- (ख) अन्य स्रोत क्या हैं जहाँ से छोटे किसान उधार ले सकते हैं।
- (ग) छोटे किसानों के लिए ऋण की शर्तें कैसे प्रतिकूल हो सकती हैं? उदाहरण सहित व्याख्या कीजिए।
- (घ) कुछ ऐसे तरीकों का सुझाव दीजिए जिससे छोटे किसान सस्ते ऋण प्राप्त कर सकते हैं।

प्रतिबिम्बित सोच के परीक्षण हेतु प्रश्न

- (अ) चित्र को देखिए (झुगियों के बीच ऊँचे भवन)। ऐसे क्षेत्रों के लिए विकास लक्ष्य क्या होना चाहिए?
- (ब) “पृथ्वी पर सभी लोगों की ज़रूरतों को पूरा करने के पर्याप्त संसाधन हैं परन्तु किसी भी व्यक्ति के लालच को पूरा करने के लिए पर्याप्त नहीं है।” विकास के संदर्भ में यह कथन किस प्रकार प्रासारिक है? चर्चा करें।
- (स) “तृतीयक क्षेत्रक भारतीय अर्थव्यवस्था के विकास में कोई महत्वपूर्ण भूमिका नहीं निभा रहा है।” क्या आप सहमत हैं? अपने उत्तर के समर्थन में कारण दीजिए।
- (द) लोग खराब सड़कों या पानी एवं स्वास्थ्य सुविधाएँ जैसी नागरिक सुविधाओं के अभाव की शिकायत करते हैं परन्तु कोई सुनता नहीं है। अब सूचना का अधिकार अधिनियम आपको सवाल करने का अधिकार देता है। क्या आप सहमत हैं? चर्चा कीजिए।



वास्तविक जीवन की समस्याओं पर अवधारणाओं एवं विचारों को लागू करने की योग्यता का परीक्षण करने वाले प्रश्न

- (अ) आपके गाँव, शहर या क्षेत्र के विकास लक्ष्य क्या हो सकते हैं?
- (ब) विद्यालय में छात्रों को प्रायः प्राथमिक और द्वितीयक या कनिष्ठ और वरिष्ठ समूह में वर्गीकृत किया जाता है। यहाँ प्रयुक्त की गई कसौटी क्या है? आपके विचार से क्या यह उपयोगी वर्गीकरण है?
- (स) शहरी क्षेत्रों में रोज़गार में किस प्रकार वृद्धि की जा सकती है?
- (द) प्रच्छन्न बेरोज़गारी से आप क्या समझते हैं? शहरी एवं ग्रामीण क्षेत्रों से उदाहरण लेकर व्याख्या कीजिए।
- (घ) यदि आप अपने क्षेत्र के बाजार परिसर (शॉपिंग कम्प्लेक्स) में जाते हैं तो उपभोक्ता के रूप में अपने कर्तव्यों का वर्णन कीजिए।



इस पुस्तक के विभिन्न अध्यायों के विषय अन्तःसंबंधित है। इनसे ऐसे प्रश्न विकसित करने की आवश्यकता है जो छात्रों का ध्यान पाठ्यक्रम के एक या अधिक विषयों के सार्थक संबंधों की ओर आकर्षित करें। उदाहरण के लिए, अध्याय-4 का एक प्रश्न अध्याय-2 से संबंधित है— अध्याय-4 में, हमने देखा कि एक का विकास दूसरों के लिए विनाश हो सकता है। भारत में विशेष आर्थिक क्षेत्रों की स्थापना का कुछ लोगों द्वारा विरोध किया जा रहा है। पता कीजिए कि ये लोग कौन हैं और वे लोग क्यों विरोध कर रहे हैं?

हम आशा करते हैं कि आप अपने छात्रों सहित इस पुस्तक का समालोचनात्मक अध्ययन करेंगे और अपनी आलोचनाओं, प्रश्नों एवं सहमतियों को निम्न पते पर हमें भेजेंगे और हम इस चर्चा को पुनः जारी रख सकेंगे।

कार्यक्रम समन्वयक

अर्थशास्त्र पाठ्यपुस्तक, कक्षा- 10

सामाजिक विज्ञान शिक्षा विभाग

राष्ट्रीय शैक्षिक अनुसंधान एवं प्रशिक्षण परिषद्

श्री अरविन्दो मार्ग

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भारत का संविधान

उद्देशिका

हम, भारत के लोग, भारत को एक ¹[संपूर्ण प्रभुत्व-संपन्न समाजवादी पंथनिरपेक्ष लोकतंत्रात्मक गणराज्य] बनाने के लिए, तथा उसके समस्त नागरिकों को :

सामाजिक, आर्थिक और राजनैतिक न्याय,

विचार, अभिव्यक्ति, विश्वास, धर्म

और उपासना की स्वतंत्रता,

प्रतिष्ठा और अवसर की समता

प्राप्त कराने के लिए,

तथा उन सब में

व्यक्ति की गरिमा और ²[राष्ट्र की एकता

और अखंडता] सुनिश्चित करने वाली बंधुता

बढ़ाने के लिए

दृढ़संकल्प होकर अपनी इस संविधान सभा में आज तारीख 26 नवंबर, 1949 ई. को एतद्वारा इस संविधान को अंगीकृत, अधिनियमित और आत्मार्पित करते हैं।

1. संविधान (बयालीसवां संशोधन) अधिनियम, 1976 की धारा 2 द्वारा (3.1.1977 से) “प्रभुत्व-संपन्न लोकतंत्रात्मक गणराज्य” के स्थान पर प्रतिस्थापित।
2. संविधान (बयालीसवां संशोधन) अधिनियम, 1976 की धारा 2 द्वारा (3.1.1977 से) “राष्ट्र की एकता” के स्थान पर प्रतिस्थापित।

पाठ्यपुस्तक निर्माण समिति

अध्यक्ष, सामाजिक विज्ञान पाठ्यपुस्तक (माध्यमिक स्तरीय) सलाहकार समिति
हरि वासुदेवन, आचार्य, इतिहास विभाग, कलकत्ता विश्वविद्यालय, कोलकाता

मुख्य सलाहकार

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सदस्य समन्वयक

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आभार

यह पुस्तक विद्वानों, विद्यालय के शिक्षकों, छात्रों शैक्षिक कार्यकर्ताओं और हमारे बच्चों की शिक्षा के लिए प्रयासरत लोगों के विचारों, टिप्पणियों और सुझावों का परिणाम है। राष्ट्रीय शैक्षिक अनुसंधान एवं प्रशिक्षण परिषद् जीन ड्रेज, विजिटिंग प्रोफेसर, गो.ब. पन्त सामाजिक विज्ञान संस्थान, इलाहाबाद; आर. नागराज, प्रोफेसर, इंदिरा गाँधी विकास अनुसंधान संस्थान, मुम्बई; राममनोहर रेडी, एडीटर, इकोनॉमिक एंड पॉलिटिकल वीकली और सुजन कृष्णमूर्ति, स्वतंत्र शोधकर्ता, मुम्बई; एस. कृष्णकुमार, श्री वेंकटेश्वर कॉलेज, दिल्ली विश्वविद्यालय, दिल्ली; तारा नायर, ग्रामीण प्रबंधन संस्थान, आनन्द केशव दास, गुजरात विकास अनुसंधान संस्थान, अहमदाबाद; जॉर्ज चेरियन, कंज्यूमर यूनिटी ट्रस्ट इंटरनेशनल, जयपुर; निर्मल्य बसु, भारतीय विज्ञान संस्थान, बंगलार; मनीष जैन, शोधार्थी, दिल्ली विश्वविद्यालय, दिल्ली का पुस्तक निर्माण में दिए सुझावों के लिए आभार प्रकट करती है। हम अपने सहकर्मियों के चन्द्रशेखर, शैक्षिक मापदण्ड एवं मूल्यांकन विभाग, आर. मेघनाथन, भाषा विभाग, अशिता रवीन्द्रन एवं जया सिंह, सामाजिक विज्ञान एवं मानविकी शिक्षा विभाग, एन.सी.ई.आर.टी. का उनकी सामग्रियों एवं सुझावों के लिए हार्दिक कृतज्ञता व्यक्त करते हैं।

हम (स्व.) दीपक बनर्जी, प्रोफेसर (अवकाश प्राप्त), प्रेसीडेंसी कॉलेज, कोलकाता के अमूल्य परामर्शों के प्रति हार्दिक आभार व्यक्त करते हैं।

कई शिक्षकों ने विभिन्न प्रकार से इस पुस्तक में योगदान दिया है। कांता बंसल, उप प्राचार्या, केन्द्रीय विद्यालय न. 2, मिलिटरी हॉस्पीटल रोड, बेलगाम छावनी, बेलगाम, कर्नाटक; रेनू देशमना, टी.जी.टी. (सामाजिक विज्ञान) केन्द्रीय विद्यालय न.2, दिल्ली छावनी, गुडगाँव रोड, दिल्ली; नलिनी पदमनाभन, पी.जी.टी. (अर्थशास्त्र) डी.टी.ई.ए. सीनियर सेकेंडरी स्कूल, जनकपुरी, नयी दिल्ली के योगदानों के प्रति हम कृतज्ञ हैं। केन्द्रीय विद्यालय, सेक्टर-47, चंडीगढ़ के छात्रों एवं शिक्षकों के फीडबैक एवं प्रतिक्रियाएँ इस पुस्तक के सुधार हेतु अत्यन्त महत्वपूर्ण थीं।

हम समीक्षा समिति के सदस्यगण - एच.के गप्ता, सी-78, सूजमल विहार, दिल्ली; ओ.पी.अग्रवाल डी-12, द्वितीय तल, कालकाजी, नयी दिल्ली; लीना सिंह पी.जी.टी. (अर्थशास्त्र), केन्द्रीय विद्यालय, ए.जी.सी.आर. दिल्ली तथा रमेश चन्द्र, ए-56, डी.डी.ए.प्लैट, कटवारिया सराय, नयी दिल्ली के भी आभारी हैं, जिन्होंने अनुवाद के पुनरीक्षण हेतु आयोजित कार्यशालाओं में भाग लिया तथा अपना बहुमूल्य योगदान दिया।

प्रिष्ठद् निम्न व्यक्तियों एवं संगठनों को अपनी पुस्तकों और अभिलेखागारों से हमें फोटोग्राफ उपलब्ध कराने और उनके उपयोग की अनुमति प्रदान करने हेतु हार्दिक कृतज्ञता व्यक्त करती है: जॉन ब्रेमन एवं पार्थिव शाह की वर्किंग इन द मिल नो मोर, ऑक्सफोर्ड यूनिवर्सिटी प्रेस, दिल्ली सेंटर फॉर एजुकेशन एण्ड कम्युनिकेशन, दिल्ली फोरम; निरन्तर, दिल्ली एवं अनन्ति, गुजरात; शुभ लक्ष्मी, दिल्ली, अंबुज सोनी, देवास, मध्य प्रदेश; करेन हेडॉक, चंडीगढ़; और एम.वी. श्रीनिवासन, डी.ई.एस.एच.; प्रेस सूचना ब्यूरो, सूचना एवं प्रसारण मंत्रालय; विस्तार निर्देशालय, कृषि मंत्रालय; भारी उद्योग एवं सार्वजनिक उद्यम मंत्रालय; मद्रास पोर्ट ट्रस्ट, चेन्नई एवं सीताराम भरतिया विज्ञान एवं अनुसंधान संस्थान, नयी दिल्ली।

हम इस पुस्तक में प्रयुक्त समाचार करनों के लिए 'द हिन्दू' एवं 'टाइम्स ऑफ इंडिया' के ऋणी हैं।

सविता सिंहा, प्रोफेसर एवं अध्यक्ष, सामाजिक विज्ञान एवं मानविकी शिक्षा विभाग को उनके सहयोग के लिए हम धन्यवाद देते हैं।

पांडुलिपियों की जाँच करने और उनमें आवश्यक परिवर्तन के लिए सुझाव देने हेतु वंदना आर. सिंह, सलाहकार संपादक, को विशेष धन्यवाद।

इस पुस्तक को तैयार करने हेतु प्रिष्ठद् डी.टी.पी. ऑपरेटर मुकद्दस आजम, मोहम्मद हारून रशिद, ऋतु शर्मा; दिनेश कुमार सिंह इंचार्ज कम्प्यूटर कक्ष; प्रशासनिक कर्मचारी डी.ई.एस.एच.; कॉफी एडीटर, विनय शंकर पाण्डेय, सतीश झा के संपादकीय योगदान के प्रति आभार व्यक्त करती है। अंततः प्रकाशन विभाग, एन.सी.ई.आर.टी. के प्रयासों के प्रति भी आभारी है।

विषय सामग्री

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शिक्षक के लिए निर्देश

अध्याय 1 – विकास

विकास के कई पहलू हैं। इस अध्याय का उद्देश्य विद्यार्थियों को यही विचार समझाना है। उनके लिये यह समझना आवश्यक है कि लोगों की विकास के बारे में अलग-अलग धारणाएँ हैं और ऐसे उपाय हैं जिनके द्वारा हम विकास के सामूहिक सूचकांकों को जान सकते हैं। इसके लिये हमने ऐसी स्थितियों का प्रयोग किया है, जिन पर वे सहजबुद्धि से प्रतिक्रिया दिखा सकते हैं। हमने ऐसे विश्लेषण भी दिए हैं जिनकी प्रकृति ज्यादा जटिल और बृहत् है।

दूसरा प्रश्न यह है कि देशों और राज्यों की तुलना कुछ चयनित विकास सूचकांकों के आधार पर कैसे की जा सकती है, इस अध्याय में विद्यार्थी इसका अध्ययन करेंगे। आर्थिक विकास को मापा जा सकता है और आय इसे मापने की एक विधि है। यद्यपि आय के द्वारा विकास मापने की विधि उपयोगी है, इसके कुछ दोष भी हैं। इसलिए, हमें जीवन की गुणवत्ता और पर्यावरण की धारणीयता जैसे नए सूचकांकों के प्रयोग करने की आवश्यकता है।

आपके लिये यह अपेक्षा करना आवश्यक है कि विद्यार्थी उपर्युक्त विषय पर कक्षा में सक्रिय प्रतिक्रिया दिखायें। इस विषय पर विद्यार्थियों की राय में काफी अंतर हो सकता है और इस पर विवाद होना भी संभव है। विद्यार्थियों को अपने-अपने दृष्टिकोण रखने दीजिए। हर खंड के अंत में कुछ प्रश्न और क्रियाकलाप दिये गये हैं। इनका दोहरा उद्देश्य है। पहला, वे इस भाग में चर्चित विचारों को संक्षेप में बताते हैं और दूसरा, वे विद्यार्थियों को उनकी वास्तविक जीवन परिस्थितियों के निकट लाकर इन विषयों को बेहतर तरीके से समझने के योग्य बनाते हैं।

इस अध्याय में कुछ शब्दों का प्रयोग किया गया है, जिनका स्पष्टीकरण आवश्यक है— जैसे कि प्रतिव्यक्ति आय, साक्षरता दर, शिशु मृत्यु दर, उपस्थिति दर, जीवन प्रत्याशा, सकल नामांकन अनुपात और मानव विकास सूचकांक। इन शब्दों से संबंधित आँकड़े दिए गये हैं तथा इन्हें पूर्ण रूप से समझने के लिए इनका विस्तार से अध्ययन आवश्यक है। आपको क्रय शक्ति समता की अवधारणा को भी स्पष्ट करना होगा जिसका तालिका 1.6 में प्रति व्यक्ति आय की गणना के लिए प्रयोग किया गया है। यह आवश्यक है कि इन शब्दों का प्रयोग चर्चा में सहायता के लिए किया जाए न कि उनको कठस्थ करने के लिए।

सूचना के स्रोत

इस अध्याय के लिए आँकड़े राष्ट्रीय परिवार स्वास्थ्य सर्वेक्षण और भारतीय अर्थव्यवस्था पर सारिखकीय हैंडबुक, भारत सरकार द्वारा प्रकाशित आर्थिक सर्वेक्षण, संयुक्त राष्ट्र संघ विकास कार्यक्रम के मानव विकास रिपोर्ट और विश्व बैंक (विश्व विकास सूचकांक) द्वारा प्रकाशित रिपोर्टों से लिए गए हैं। इनमें से कई रिपोर्ट हर साल प्रकाशित होती हैं। यदि आपके विद्यालय के पुस्तकालय में ये रिपोर्ट हैं, तो इन्हें देखना अच्छा होगा। अगर नहीं, तो आप इन संस्थानों की वेबसाइट (www.budgetindia.nic.in, www.undp.org, www.worldbank.org)। आँकड़े भारतीय रिज़र्व बैंक की हैंडबुक ऑफ स्टेटिस्टिक्स ऑन इंडियन इकानौमी में भी उपलब्ध हैं। इसके लिए आप www.rbi.org वेबसाइट पर भी जा सकते हैं।



अध्याय 1

विकास



1071CH01

विकास अथवा प्रगति की धारणा हमेशा से हमारे साथ है। हमारी आकांक्षाएँ और इच्छाएँ हैं कि हम क्या करना चाहते हैं और अपना जीवन कैसे जीना चाहते हैं? इसी तरह हम विचार रखते हैं कि कोई देश कैसा होना चाहिए? हमें किन अनिवार्य वस्तुओं की आवश्यकता है? क्या सभी का जीवन बेहतर हो सकता है? लोग मिल-जुलकर कैसे रह सकते हैं? क्या और अधिक समानता हो सकती है? विकास इन सभी प्रश्नों पर विचार करने और इन लक्ष्यों को प्राप्त करने के उपायों से जुड़ा है। यह काम जटिल है और इस अध्याय में हम विकास को समझने की प्रक्रिया शुरू करेंगे। आप उच्च कक्षाओं में इन मुद्दों को अधिक गहराई से सीखेंगे। इसके अतिरिक्त, ऐसे बहुत से प्रश्नों के उत्तर आपको अर्थशास्त्र में ही नहीं बल्कि इतिहास और राजनीति विज्ञान के पाठ्यक्रम में भी मिलेंगे। ऐसा इसलिए है कि हम आज जो जीवन जी रहे हैं, वह अतीत से प्रभावित है। हम इसे जाने बिना बदलाव की इच्छा नहीं रख सकते। इसी तरह, हम केवल एक लोकतात्त्विक राजनीतिक प्रक्रिया के द्वारा ही इन आशाओं और संभावनाओं को वास्तविक जीवन में प्राप्त कर सकते हैं।



मेरे बगैर के विकास नहीं कर सकते...
इस व्यवस्था में मेरा विकास नहीं हो सकता

विकास क्या वादा करता है-विभिन्न व्यक्ति, विभिन्न लक्ष्य

हम यह कल्पना करने का प्रयास करें कि तालिका 1.1 में दी गई सूची के अनुसार लोगों के लिए विकास का क्या अर्थ हो सकता है। उनकी क्या आकांक्षाएँ हैं? आप देखेंगे कि कुछ स्तम्भ अधूरे भरे हुए हैं। इस तालिका को पूरा करने की कोशिश कीजिए। आप चाहें तो किन्हीं और श्रेणी के व्यक्तियों को जोड़ सकते हैं।

तुम एक कर चाहते हो? अभी देश की जो स्थिति है, उसमें तुम यही आशा कर सकते हो कि काशा, तुम्हारे पास एक रिक्षा होता!



तालिका 1.1 विभिन्न श्रेणी के लोगों के विकास के लक्ष्य

व्यक्ति की श्रेणी	विकास के लक्ष्य/आकांक्षाएँ
भूमिहीन ग्रामीण मजदूर	काम करने के अधिक दिन और बेहतर मज़दूरी; स्थानीय स्कूल उनके बच्चों को उत्तम शिक्षा प्रदान करने में सक्षम; कोई सामाजिक भेदभाव नहीं और गाँव में वे भी नेता बन सकते हैं।
पंजाब के समृद्ध किसान	किसानों को उनकी उपज के लिए ज्यादा समर्थन मूल्यों और मेहनती और सस्ते मज़दूरों द्वारा उच्च परिवारिक आय सुनिश्चित करना ताकि वे अपने बच्चों को विदेशों में बसा सकें।
किसान जो खेती के लिए केवल वर्षा पर निर्भर हैं	
भूस्वामी परिवार की एक ग्रामीण महिला	
शहरी बेरोजगार युवक	
शहर के अमीर परिवार का एक लड़का	
शहर के अमीर परिवार की एक लड़की	उसे अपने भाई के जैसी आजादी मिलती है और वह अपने फ़ैसले खुद कर सकती है। वह अपनी पढ़ाई विदेश में कर सकती है।
नर्मदा घाटी का एक आदिवासी	

तालिका 1.1 को भरने के बाद अब इसका निरीक्षण करते हैं। क्या इन सभी लोगों की विकास या प्रगति के बारे में एक जैसा विचार है? संभवतः नहीं। इनमें से हर एक अलग-अलग चीजें पाना चाहता है। वे ऐसी चीजें चाहते हैं जो उनके लिए

सर्वाधिक महत्वपूर्ण हैं, अर्थात् वे चीजें जो उनकी आकांक्षाओं और इच्छाओं को पूरा कर सकें। वास्तव में, कई बार दो व्यक्ति या दो गुट ऐसी चीजें चाह सकते हैं, जिनमें परस्पर विरोध हो सकता है। एक लड़की अपने भाई के समकक्ष

आजादी और अवसर मिलने और भाई भी घर के कामकाज में हाथ बटायेगा, की आशा रखती है। हो सकता है कि भाई को यह पसंद न हो। इसी तरह, अधिक बिजली पाने के लिए, उद्योगपति ज्यादा बाँध चाहते हैं। लेकिन इससे जमीन जलमग्न हो सकती है और उन लोगों का जीवन अस्तव्यस्त हो सकता है जो बेघर हो जायें, जैसे कि आदिवासी। वे इसका विरोध कर सकते हैं और हो सकता है कि वे अपने खेतों की सिंचाई के लिए केवल छोटे चैक बाँध या तालाब पसंद करें।

आय और अन्य लक्ष्य

आप अगर एक बार फिर तालिका 1.1 देखें तो एक बात समान पायेंगे: लोग चाहते हैं कि उन्हें नियमित काम, बेहतर मज़दूरी और अपनी उपज अथवा अन्य उत्पादों के लिए अच्छी कीमतें मिलें। दूसरे शब्दों में वे ज्यादा आय चाहते हैं।

किसी भी तरह से ज्यादा आय चाहने के अतिरिक्त, लोग बराबरी का व्यवहार, स्वतंत्रता, सुरक्षा और दूसरों से आदर मिलने की इच्छा भी रखते हैं। वे भेदभाव से अप्रसन्न होते हैं। ये सभी महत्वपूर्ण लक्ष्य हैं। बल्कि, कुछ मामलों में ये अधिक आय और अधिक उपभोग से अधिक महत्वपूर्ण हो सकते हैं, क्योंकि जीने के लिए केवल भौतिक वस्तुएँ ही पर्याप्त नहीं होती।

इस तरह दो बातें साफ हैं – एक, अलग-अलग लोगों के विकास के लक्ष्य भिन्न हो सकते हैं और दूसरा, एक के लिए जो विकास है वह दूसरे के लिए विकास न हो। यहाँ तक कि वह दूसरे के लिए विनाशकारी भी हो सकता है।



द्रव्य या उससे खरीदी जा सकने वाली भौतिक वस्तुएँ एक कारक है जिस पर हमारा जीवन निर्भर है। लेकिन हमारा बेहतर जीवन ऊपर लिखी अभौतिक वस्तुओं पर भी निर्भर करता है। अगर आप को यह बात स्पष्ट नहीं लगती है, तो अपने जीवन में अपने मित्रों की भूमिका के बारे में ज़रा सोचिए। आप को उनकी मित्रता की इच्छा हो सकती है। इसी तरह और भी बहुत सी चीजें हैं जिन्हें आसानी से मापा नहीं जा सकता, लेकिन उनका हमारे जीवन में बहुत महत्व है। इनकी प्रायः उपेक्षा कर दी जाती है। लेकिन, यह निष्कर्ष निकालना गलत होगा कि जिसे मापा नहीं जा सकता, वह महत्व नहीं रखता।

नर्मदा नदी पर सरदार सरोवर बाँध की ऊँचाई में वृद्धि किये जाने के विरुद्ध प्रदर्शन



एक और उदाहरण देखिए। अगर आप को कहीं दूर-दराज के इलाके में नौकरी मिलती है, उसे स्वीकार करने से पहले आप आय के अतिरिक्त बहुत से कारकों पर विचार करेंगे, जैसे कि आपके परिवार के लिए क्या सुविधाएँ उपलब्ध होंगी, काम करने का वातावरण कैसा होगा या सीखने के क्या अवसर हैं? दूसरी नौकरी में यद्यपि आप को वेतन कम मिलता है लेकिन यह नियमित रोजगार हो सकता है, जो आपकी सुरक्षा की भावना को बढ़ाता है। एक अन्य नौकरी अधिक वेतन दे सकती है, लेकिन कार्य की सुरक्षा नहीं, और हो सकता है आपको परिवार के लिए पर्याप्त समय भी न मिले। इससे आपकी सुरक्षा और स्वतंत्रता की भावना कम हो जाएगी।

इसी तरह, विकास के लिए, लोग मिले-जुले लक्ष्यों को देखते हैं। यह सच है कि यदि महिलाएँ वेतनभोगी कार्य करती हैं, तो घर और समाज में उनका आदर बढ़ता है। तथापि, यह भी सच है कि अगर महिलाओं के लिए आदर है, तो घर में उनके काम-काज में ज्यादा हाथ बँटाया जाएगा और घर से बाहर काम करने वाली महिलाओं को अधिक स्वीकार किया जायेगा। सुरक्षित और संरक्षित वातावरण के कारण ज्यादा महिलाएँ विभिन्न प्रकार की नौकरियाँ या व्यापार कर सकती हैं। इसलिए लोगों के विकास के लक्ष्य केवल बेहतर आय के ही नहीं होते बल्कि जीवन में अन्य महत्वपूर्ण चीजों के बारे में भी होते हैं।

आओ—इन पर विचार करें

1. अलग-अलग लोगों की विकास की धारणाएँ अलग क्यों हैं? नीचे दी गई व्याख्याओं में कौन सी अधिक महत्वपूर्ण है और क्यों?
 - (क) क्योंकि लोग भिन्न होते हैं।
 - (ख) क्योंकि लोगों के जीवन की परिस्थितियाँ भिन्न हैं।
2. क्या निम्न दो कथनों का एक अर्थ है, कारण सहित उत्तर दीजिए।
 - (क) लोगों के विकास के लक्ष्य भिन्न होते हैं।
 - (ख) लोगों के विकास के लक्ष्यों में परस्पर विरोध होता है।
3. कुछ ऐसे उदाहरण दीजिए, जहाँ आय के अतिरिक्त अन्य कारक हमारे जीवन के महत्वपूर्ण पहलू हैं।
4. ऊपर दिये गए खण्ड के कुछ महत्वपूर्ण विचारों को अपनी भाषा में समझाइए।

राष्ट्रीय विकास

जैसा कि हमने ऊपर देखा, यदि लोगों के लक्ष्य भिन्न हैं, तो उनकी राष्ट्रीय विकास के बारे में धारणा भी भिन्न होगी। आपस में इस विषय पर चर्चा कीजिए कि भारत को विकास के लिए क्या करना चाहिए?

संभव है कि कक्षा के विभिन्न विद्यार्थियों ने उपर्युक्त प्रश्नों के अलग-अलग उत्तर दिये होंगे। हो सकता है, आपने स्वयं इन प्रश्नों के बहुत से उत्तर सोचे हों और उनमें से किसी एक के विषय में आप स्वयं भी निश्चित न हो। यह समझना बहुत आवश्यक है कि देश के विकास

के विषय में विभिन्न लोगों की धारणाएँ भिन्न या परस्पर विरोधी हो सकती हैं।

लेकिन क्या सभी विचारों को बराबर का महत्व दिया जा सकता है? या यदि परस्पर विरोधी हैं तो निर्णय कैसे किया जाए? सभी के लिए न्यायपूर्ण और सही राह क्या होगी? हमें यह भी सोचना होगा कि क्या कार्य करने का कोई बेहतर तरीका है? क्या इस विचार से बहुत से लोगों को लाभ होगा या कुछ को ही? राष्ट्रीय विकास का अभिप्राय इन सब प्रश्नों पर विचार करना है।

आओ—इन पर विचार करें

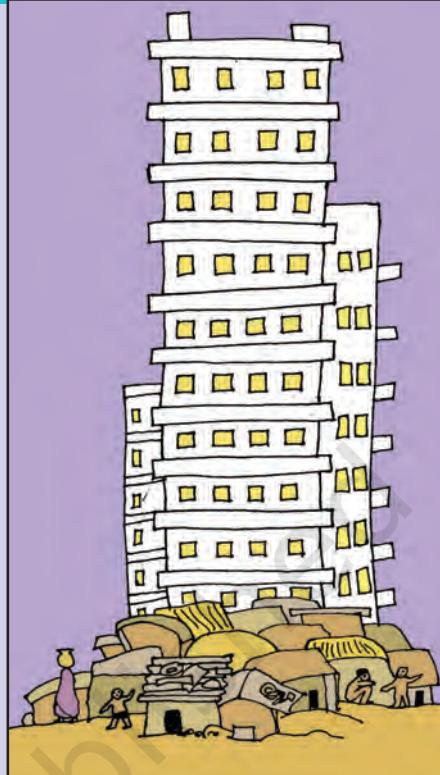
निम्नलिखित स्थितियों पर चर्चा कीजिए –

1. दाहिनी ओर दिए गए चित्र को देखिए। इस प्रकार के क्षेत्र के विकासात्मक लक्ष्य क्या होने चाहिए?
2. इस अखबार की रिपोर्ट देखिए और दिए गए प्रश्नों के उत्तर दीजिए।

एक जहाज ने 500 टन तरल ज़हरीले अवशेष एक शहर के खुले कूड़े घर और आसपास के समुद्र में डाल दिए। यह अफ्रीका देश के आइवरी कोस्ट में अबिदजान शहर में हुआ। इन ख़तरनाक ज़हरीले अवशेषों से निकलने वाले धुएँ से लोगों ने जी मितलाना, चमड़ी पर ददरे पड़ना, बेहोश होना, दस्त लगना इत्यादि की शिकायतें कीं। एक महीने के बाद 7 लोग मारे गए, 20 अस्पताल में भरती हुए और विषाक्तता के कारण 26,000 लोगों का इलाज किया गया।

पेट्रोल और धातुओं से संबंधित एक बहुराष्ट्रीय कंपनी ने आइवरी कोस्ट की एक स्थानीय कंपनी को अपने जहाज से ज़हरीले पदार्थ फेंकने का ठेका दिया था।

- (क) किन लोगों को लाभ हुआ और किन को नहीं?
(ख) इस देश के विकास के लक्ष्य क्या होने चाहिए?
3. आपके गाँव या शहर या स्थानीय इलाके के विकास के लक्ष्य क्या होने चाहिए?



कार्यकलाप 1



यदि विकास की धारणा में ही भिन्नता और परस्पर विरोध हो सकता है, तो निश्चित रूप से विकास के तरीकों में भी भिन्नता हो सकती है। अगर आप ऐसे किसी विवाद से परिचित हैं, तो आप विभिन्न व्यक्तियों के तर्क

जानने का प्रयास कीजिए। यह आप लोगों से बातचीत करके या अखबारों और टेलीविज़न के माध्यम से जान सकते हैं।

विभिन्न देशों या राज्यों की तुलना कैसे की जाए?

आप पूछ सकते हैं कि अगर विकास का अर्थ अलग-अलग हो सकता है, तो फिर कुछ देशों को विकसित और कुछ को अविकसित कैसे कहा जा सकता है? इससे पहले कि हम इस विषय पर आएँ, एक अन्य प्रश्न के बारे में सोचते हैं।

जब हम भिन्न-भिन्न चीजों की तुलना करते हैं तो उसमें समानताएँ और अंतर दोनों हो सकते हैं। हम इनकी तुलना करने के लिए किन पहलुओं का प्रयोग करते हैं? कक्षा में विद्यार्थियों को ही देखते हैं। हम विभिन्न विद्यार्थियों की तुलना कैसे करते हैं? उनमें ऊँचाई, स्वास्थ्य, प्रतिभा और रुचि के अनुसार अंतर हैं। हो सकता है, सबसे स्वस्थ विद्यार्थी सबसे पढ़ाकू विद्यार्थी न हो। सबसे बुद्धिमान विद्यार्थी हो सकता है मित्रता व्यवहार न रखता हो। तो, हम विद्यार्थियों की तुलना कैसे करते हैं? हम जो मापदण्ड प्रयोग करेंगे वह तुलना के उद्देश्य पर निर्भर करेगा। खेलकूद टीम, वाद विवाद टीम, संगीत टीम या पिकनिक के लिए टीम, सबके चयन के लिए अलग मापदण्ड होंगे। फिर भी, अगर हमें किसी उद्देश्य से कक्षा के विद्यार्थियों की सर्वांगीण प्रगति के बारे में मानक चाहिए तो हम उसे कैसे चुनेंगे?

सामान्यतया हम व्यक्तियों की एक या दो महत्वपूर्ण विशिष्टताएँ लेकर उनके आधार पर तुलना करते हैं। तुलना के लिए क्या महत्वपूर्ण विशिष्टताएँ चुनी जाएँ इस पर मतभेद हो सकते हैं— विद्यार्थियों का मित्रतापूर्ण व्यवहार और सहयोग भावना, उनकी रचनात्मकता या उनके द्वारा प्राप्त अंक?

यही बात विकास पर भी लागू होती है। देशों की तुलना करने के लिए उनकी आय सबसे महत्वपूर्ण विशिष्टता समझी जाती है। जिन देशों की आय अधिक है उन्हें कम आय वाले देशों से अधिक विकसित समझा जाता है। यह इस

समझ पर आधारित है कि अधिक आय का अर्थ है मानवीय आवश्यकताओं की सभी वस्तुओं का अधिक होना। जो भी लोगों को पसंद है और जो उनके पास होना चाहिए, वे उन सभी वस्तुओं को अधिक आय के द्वारा प्राप्त कर पायेंगे। इसलिये, ज्यादा आय अपने आप में एक महत्वपूर्ण लक्ष्य समझा जाता है।

अब, एक देश की आय क्या है? अन्तर्रूप्ति से, किसी देश की आय उस देश के सभी निवासियों की आय है। इससे हमें देश की कुल आय ज्ञात होती है।

लेकिन, देशों के बीच तुलना करने के लिए कुल आय इन्हाँ उपयुक्त माप नहीं है। क्योंकि देशों की जनसंख्या अलग-अलग होती है, कुल आय की तुलना करने से हमें यह ज्ञात नहीं होगा कि औसत व्यक्ति क्या कमा सकता है? क्या एक देश के लोग दूसरे देश के लोगों से बेहतर हैं? इसलिए, हम औसत आय की तुलना करते हैं जो कि देश की कुल आय को कुल जनसंख्या से भाग देकर निकाली जाती है। औसत आय को प्रतिव्यक्ति आय भी कहा जाता है।

विश्व बैंक की विश्व विकास रिपोर्ट के अनुसार, देशों का वर्गीकरण करने में इस मापदण्ड का प्रयोग किया गया है। वे देश जिनकी 2019 में प्रतिव्यक्ति आय US \$ 49,300 प्रति वर्ष या उससे अधिक है, उसे समृद्ध अथवा उच्च आय देश और वे देश जिनकी प्रतिव्यक्ति आय US \$ 2500 प्रति वर्ष या उससे कम है, उन्हें निम्न आय वाला देश कहा गया है। भारत मध्य आय वर्ग के देशों में आता है क्योंकि उसकी प्रतिव्यक्ति आय 2019 में केवल US \$ 6700 प्रति वर्ष थी। समृद्ध देशों, जिनमें मध्य पूर्व के देश और कुछ अन्य छोटे देश शामिल नहीं हैं, को आमतौर पर विकसित देश कहा जाता है।

औसत आय

यद्यपि 'औसत आय' तुलना के लिए उपयोगी हैं, परंतु इनके द्वारा असमानताओं की जानकारी नहीं मिलती

उदाहरण के लिए, दो देश के और ख पर विचार करते हैं। सरलता के लिए, हम मानते हैं कि प्रत्येक देश में 5 निवासी हैं। तालिका 1.2 में दिए आंकड़ों के अनुसार, दोनों देशों की औसत आय निकालिए।

तालिका 1.2 दो देशों की तुलना

देश	नागरिकों की मासिक आय (रुपये में)					औसत
	1	2	3	4	5	
देश क	9,500	10,500	9,800	10,000	10,200	
देश ख	500	500	500	500	48,000	

क्या आप इन दोनों देशों में रहकर समान रूप से सुखी होंगे? क्या दोनों देश बराबर विकसित हैं? शायद हममें से कुछ लोग देश

'ख' में रहना पसंद करेंगे अगर हमें यह आश्वासन हो कि हम उस देश के पाँचवें नागरिक होंगे। लेकिन अगर हमारी नागरिकता संख्या लॉटरी के द्वारा निश्चित होगी तो शायद हममें से ज्यादातर लोग देश 'क' में रहना पसंद करेंगे। ऐसा इसलिए है क्योंकि यद्यपि दोनों देशों की औसत आय एक समान है, देश 'क' के लोग न तो बहुत अमीर हैं न बहुत गरीब, जबकि देश 'ख' के ज्यादातर नागरिक गरीब हैं और एक व्यक्ति बहुत अमीर है। इसलिए यद्यपि औसत आय तुलना के लिए उपयोगी है, लेकिन इससे यह पता नहीं चलता कि यह आय लोगों में किस प्रकार वितरित है।

गरीब विहीन तथा अमीर विहीन व्यक्तियों का देश



हमने कुर्सियों
को बनाया तथा
उनका उपयोग
करते हैं

गरीब तथा अमीर व्यक्तियों का देश



हमने कुर्सियों
को बनाया तथा
उसने ले लिया

आओ—इन पर विचार करें

- तीन उदाहरण दीजिए, जहाँ स्थितियों की तुलना के लिए औसत का प्रयोग किया जाता है।
- आप क्यों सोचते हैं कि औसत आय विकास को समझने का एक महत्वपूर्ण मापदण्ड है? व्याख्या कीजिए।
- प्रतिव्यक्ति आय के माप के अतिरिक्त, आय के कौन से अन्य लक्षण हैं जो दो या दो से अधिक देशों की तुलना के लिए महत्व रखते हैं?
- मान लीजिए कि रिकॉर्ड ये दिखाते हैं कि किसी देश की आय समय के साथ बढ़ती जा रही है। क्या इससे हम इस निष्कर्ष पर पहुँच सकते हैं कि अर्थव्यवस्था के सभी भाग बेहतर हो गए हैं? अपना उत्तर उदाहरण सहित दीजिए।
- विश्व विकास रिपोर्ट 2012 के अनुसार निम्न-आय वाले लगभग 10-15 देशों की प्रतिव्यक्ति आय ज्ञात कीजिए।
- एक अनुच्छेद लिखिए कि भारत को एक विकसित देश बनने के लिए क्या करना या प्राप्त करना चाहिए?

आय और अन्य मापदण्ड

जब हमने व्यक्तिगत आकांक्षाओं और लक्ष्यों को देखा, तो पाया कि लोग केवल बेहतर आय के बारे में ही नहीं सोचते बल्कि वे अपनी सुरक्षा, दूसरों से आदर और समानता का व्यवहार पाना, आज्ञादी इत्यादि जैसे लक्ष्यों के बारे में भी सोचते हैं। इसी प्रकार जब हम किसी देश या क्षेत्र के बारे में सोचते हैं तो हम औसत आय के अतिरिक्त अन्य महत्वपूर्ण लक्षणों के विषय में भी सोचते हैं।

ये विशेषताएँ क्या हो सकती हैं? इसका निरीक्षण हम एक उदाहरण के द्वारा करते हैं। तालिका 1.3 हरियाणा, केरल और बिहार की प्रति-व्यक्ति आय दर्शाती है। वास्तव में, ये आँकड़े वर्ष 2018-19 की वर्तमान कीमतों पर प्रति-व्यक्ति निवल राज्य घरेलू उत्पाद के हैं। अभी हम इस जटिल शब्द का क्या वास्तविक अर्थ है, उसे छोड़ देते हैं। मोटे तौर पर, हम इसे राज्य की प्रति-व्यक्ति आय मान सकते हैं। हम देखते हैं कि इन तीनों राज्यों में हरियाणा की प्रति-व्यक्ति आय सबसे अधिक है

तालिका 1.3 चयनित राज्यों की प्रति-व्यक्ति आय

राज्य	2018-19 के लिए प्रति व्यक्ति आय (रुपयों में)
हरियाणा	2,36,147
केरल	2,04,105
बिहार	40,982

स्रोत: आर्थिक सर्वेक्षण 2020-21 P.A. 29

और बिहार सबसे पीछे है। इसका अर्थ है कि औसतन, हरियाणा में एक व्यक्ति एक वर्ष में 2,36,147 रुपए कमाता है, जबकि बिहार में औसतन वह केवल 40,982 रुपए कमा पाता है। इसलिए अगर विकास को मापने के लिए प्रति-व्यक्ति आय का प्रयोग किया जाए तो तीनों राज्यों में हरियाणा सबसे अधिक और बिहार सबसे कम विकसित राज्य माना जाएगा। अब हम इन तीनों राज्यों के कुछ और आँकड़ों पर नजर डालते हैं, जो कि तालिका 1.4 में दिये गए हैं।

तालिका 1.4 हरियाणा, केरल और बिहार के कुछ तुलनात्मक आँकड़े

राज्य	शिशु मृत्यु दर प्रति 1,000 व्यक्ति (2018)	साक्षरता दर % (2017-18)	निवल उपस्थिति अनुपात (प्रति 100 व्यक्ति) उच्चतर (आयु 14 तथा 15 वर्ष) 2017-18
हरियाणा	30	80	67
केरल	7	96	77
बिहार	32	71	55

स्रोत: आर्थिक सर्वेक्षण, 2020-21 P.A. 157 वॉल्यूम 2, राष्ट्रीय सर्वेक्षण की कार्यालय, भारत सरकार, राष्ट्रीय नमूना सर्वेक्षण (रिपोर्ट संख्या 585)

(अ) अनन्तिम

इस तालिका में प्रयोग किये गए कुछ शब्दों की व्याख्या –

शिशु मृत्यु दर – किसी वर्ष में पैदा हुए 1,000 जीवित बच्चों में से एक वर्ष की आयु से पहले मर जाने वाले बच्चों का अनुपात दिखाती है।

साक्षरता दर – 7 वर्ष और उससे अधिक आयु के लोगों में साक्षर जनसंख्या का अनुपात।

निवल उपस्थिति अनुपात – 14 तथा 15 वर्ष की आयु के स्कूल जाने वाले कुल बच्चों का उस आयु-वर्ग के कुल बच्चों के साथ प्रतिशत।

10 आर्थिक विकास की समझ

यह तालिका क्या दर्शाती है? तालिका का पहला स्तंभ दिखाता है कि केरल में 1000 जीवित पैदा हुए बच्चों में से 7 बच्चे 1 वर्ष की आयु तक पहुँचने से पहले मर जाते हैं, लेकिन हरियाणा में यह अनुपात 30 था जो केरल की तुलना में लगभग 3 गुना से ज्यादा है। दूसरी ओर हरियाणा की प्रति-व्यक्ति आय केरल से ज्यादा है जैसा तालिका 1.3 में दिखाया गया है। जब सोचिए कि अपने माता-पिता के लिए आप कितने प्यारे हैं, यह सोचिए कि सब लोग कितना प्रसन्न होते हैं, जब कोई बच्चा जन्म लेता है। अब ऐसे माता-पिताओं के बारे में सोचिए जिनके बच्चे अपने पहले जन्म दिन से पहले ही मर जाते हैं। ऐसे माता-पिताओं को कितना दुख महसूस होता होगा। दूसरा, यह देखिए कि ये आँकड़े किस वर्ष के हैं। वर्ष 2018-19 के हैं तो हम बहुत पुराने समय की बात नहीं कर रहे हैं; यह हमारी स्वतंत्रता के 70 वर्ष बाद की बात है जब हमारे देश के बड़े शहर



अधिकांश शिशुओं को बुनियादी स्वास्थ्य सुविधाएँ भी नहीं मिल पाते

ऊँची-ऊँची इमारतों और खरीददारी के लिए शॉपिंग मॉल से भरे हुए हैं।

समस्या शिशु मृत्यु दर पर समाप्त नहीं हो जाती। तालिका 1.4 का अंतिम स्तंभ दिखाता है कि बिहार के लगभग आधे बच्चे कक्षा आठवीं के बाद स्कूल नहीं जा रहे हैं अर्थात् यदि आप बिहार के किसी स्कूल में पढ़ते होते, तो आपकी प्रारंभिक कक्षा के लगभग आधे से अधिक बच्चे गायब होते। जिन बच्चों को स्कूल में होना चाहिए था, वे वहाँ नहीं होते। अगर ये आपके साथ होता, तो आप अभी यह सब न पढ़ पाते जो पढ़ रहे हैं।

सार्वजनिक सुविधाएँ

ऐसा क्यों है कि हरियाणा में औसत व्यक्ति की आय केरल के औसत व्यक्ति की आय से अधिक है, लेकिन इन महत्वपूर्ण क्षेत्रों में वह केरल से पीछे है? इसका कारण यह है कि यह आवश्यक नहीं कि जेब में रखा रुपया वे सब वस्तुएँ और सेवाएँ खरीद सके, जिनकी आपको एक बेहतर जीवन के लिए आवश्यकता हो सकती है। नागरिक कितनी भौतिक वस्तुएँ और सेवाएँ प्रयोग कर सकते हैं, इसके लिए आय अपने आप में संपूर्ण रूप से पर्याप्त सूचक नहीं है। उदाहरण के लिए, सामान्यता आपका द्रव्य आपके लिए प्रदूषण मुक्त वातावरण नहीं खरीद सकता या बिना मिलावट की दवाएँ आपको नहीं दिला सकता, जब तक आप ऐसे समुदाय में ही जाकर नहीं रहने लग जाते जहाँ ये सुविधाएँ पहले से उपलब्ध हैं। द्रव्य आपको संक्रामक बीमारियों से भी नहीं बचा सकता, जब तक आपका पूरा समुदाय इनसे बचाव के लिए कदम नहीं उठाता।

वास्तव में जीवन में बहुत सी महत्वपूर्ण चीज़ों के लिए सबसे अच्छा और सस्ता तरीका इन वस्तुओं और सेवाओं को सामूहिक रूप से उपलब्ध कराना है। जब सोचिए, किसी स्थानीय इलाके के लिए सामूहिक सुरक्षा प्रदान करना अधिक सस्ता है अथवा हर घर के लिए अलग-अलग सुरक्षा गार्ड रखना? आप क्या करते, अगर आपके गाँव या इलाके में आपके अतिरिक्त कोई और पढ़ने में रुचि नहीं रखता? क्या तुम पढ़ पाओगे? शायद तब तक नहीं जब तक तुम्हारे माता-पिता तुम्हें कहीं और निजी स्कूल में पढ़ने भेजने की क्षमता न रखते हों। आप इसलिए पढ़ पा रहे हो क्योंकि बहुत से अन्य बच्चे पढ़ना चाहते हैं और बहुत से लोग ये मानते हैं कि सरकार को स्कूल खोलने चाहिए और अन्य प्रकार की सुविधाएँ उपलब्ध करानी चाहिए जिससे सभी बच्चों को पढ़ने का अवसर मिले। अभी भी बहुत से क्षेत्रों में बच्चे मुख्य रूप से लड़कियाँ, उच्च विद्यालयी शिक्षा भी नहीं ले पाती हैं। क्योंकि सरकार/समाज ने इसके लिए पर्याप्त सुविधाएँ उपलब्ध नहीं कराई हैं।





केरल में शिशु मृत्यु दर कम है क्योंकि यहाँ स्वास्थ्य और शिक्षा की मौलिक सुविधाएँ पर्याप्त मात्रा में उपलब्ध हैं। इसी प्रकार, कुछ राज्यों में सार्वजनिक

वितरण प्रणाली (सा.वि.प्र.) ठीक प्रकार कार्य करती है। ऐसे राज्यों में लोगों के स्वास्थ्य और पोषण स्तर निश्चित रूप से बेहतर होने की संभावना है।

आओ—इन पर विचार करें

- तालिका 1.3 और 1.4 के आँकड़ों को देखिए। क्या हरियाणा केरल से साक्षरता दर आदि में उतना ही आगे है जितना कि प्रतिव्यक्ति आय के विषय में?
- ऐसे दूसरे उदाहरण सोचिए, जहाँ वस्तुएँ और सेवाएँ व्यक्तिगत स्तर की अपेक्षा सामूहिक स्तर पर उपलब्ध कराना अधिक सस्ता है।
- अच्छे स्वास्थ्य और शिक्षा सुविधाओं की उपलब्धता क्या केवल सरकार द्वारा इन सुविधाओं के लिए किए गए व्यय पर ही निर्भर करती है? अन्य कौन से कारक प्रासांगिक हो सकते हैं?
- तमिलनाडु में ग्रामीण क्षेत्रों के 90 प्रतिशत लोग राशन की दुकानों का प्रयोग करते हैं, जबकि पश्चिम बंगाल में केवल 35 प्रतिशत ग्रामीण निवासी इसका प्रयोग करते हैं। कहाँ के लोगों का जीवन बेहतर होगा और क्यों?



कार्यकलाप 2

तालिका 1.5 को ध्यान से अध्ययन कीजिए और निम्न अनुच्छेदों में रिक्त स्थानों को भरिए। हो सकता है इसके लिए आपको तालिका के आधार पर कुछ गणना करनी पड़े।

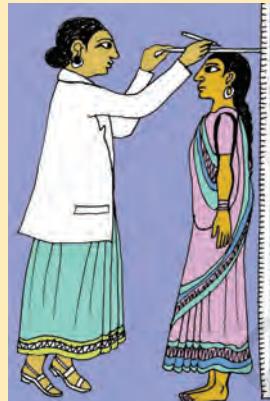
तालिका 1.5 उत्तर प्रदेश की ग्रामीण जनसंख्या की शैक्षिक उपलब्धि श्रेणी

श्रेणी	पुरुष	महिला
ग्रामीण जनसंख्या की साक्षरता दर	76%	54%
10-14 वर्ष के ग्रामीण बच्चों में साक्षरता दर	90%	87%
10-14 वर्ष की आयु के स्कूल जाने वाले		
ग्रामीण बच्चों की प्रतिशत	85%	82%

- (क) सभी आयु वर्गों की साक्षरता दर, जिसमें युवक और वृद्ध दोनों सम्मिलित हैं, ग्रामीण पुरुषों के लिए थी और ग्रामीण महिलाओं के लिए थी। यही नहीं कि बहुत से वयस्क स्कूल ही नहीं जा पाए बल्कि इस समय स्कूल में नहीं है।
- (ख) इस तालिका से स्पष्ट है कि प्रतिशत ग्रामीण लड़कियाँ और प्रतिशत ग्रामीण लड़के स्कूल नहीं जा रहे हैं। इसलिए, 10 से 14 वर्ष की आयु के बच्चों में से प्रतिशत ग्रामीण लड़कियाँ और प्रतिशत ग्रामीण लड़के निरक्षर हैं।
- (ग) हमारी स्वतंत्रता के 70 वर्षों के बाद भी, आयु के वर्ग में इस उच्च स्तर की निरक्षरता चिंताजनक है। बहुत से अन्य राज्यों में भी 14 वर्ष की आयु तक के सभी बच्चों को निशुल्क तथा अनिवार्य शिक्षा प्रदान करने के संवैधानिक लक्ष्य के निकट भी नहीं पहुँच पाए हैं, जबकि इस लक्ष्य को 1960 तक पूरा करना था।

कार्यकलाप 3

यह ज्ञात करने के लिए कि क्या हम उचित प्रकार से पोषित हैं। एक तरीका है, जिसे वैज्ञानिक शरीर द्रव्यमान सूचकांक (बी.एम.आई.) कहते हैं। इसकी गणना करना सरल है, कक्षा में प्रत्येक विद्यार्थी अपना भार और ऊँचाई ज्ञात करें। प्रत्येक बच्चे का भार किलोग्राम में लें। फिर दीवार पर एक पैमाना बनाकर, सिर को सीधा रखते हुए, ऊँचाई का सही माप करें। सेंटीमीटर में नापी गई ऊँचाई का सही माप करें। किलोग्राम में व्यक्त भार को, ऊँचाई के वर्ग से भाग दें। आपको जो अंक प्राप्त होगा, वही बी.एम.आई. (BMI) कहलाता है। फिर इस पुस्तक के पृष्ठ 90 और 91 पर दी गई, 'आयु-अनुसार बी.एम.आई.' तालिका को देखें। विद्यार्थी का बी.एम.आई. सामान्य, सामान्य से कम या सामान्य से अधिक हो सकता है। यदि एक विद्यार्थी की बी.एम.आई. -2 एस.डी. से 2 एस.डी. के बीच में है तो उसे सामान्य कहा जाएगा। यदि यह -2 एस.डी. से अधिक है तो वह 'न्यूनभारित' है और उसे अतिरिक्त पोषण की आवश्यकता है। उदाहरण के लिए, यदि एक विद्यार्थी की आयु 14 वर्ष 8 माह है और उसकी बी.एम.आई. 15.2 है तो वह अल्प-पोषित है। इसी भांति यदि एक विद्यार्थी जिसकी बी.एम.आई. 28 है और आयु 15 वर्ष 6 माह है, को न्यूनभारित कहेंगे। विद्यार्थियों की जीवन-परिस्थिति, भोजन एवं व्यायाम संबंधी आदतों को बिना किसी को लज्जित किये सामान्य रूप से चर्चा करें।



मानव विकास रिपोर्ट

एक बार यह बात समझ में आ जाए कि यद्यपि आय का स्तर महत्वपूर्ण है, पर यह विकास के स्तर को मापने का अपर्याप्त मापदंड है, तो हम अन्य मापदंडों के बारे में सोचने लगेंगे। ऐसे मापदंडों की सूची लम्बी हो सकती है, लेकिन वह इतनी उपयोगी नहीं रहेगी। हमें अधिक महत्वपूर्ण चीज़ों की कम संख्या में आवश्यकता है। स्वास्थ्य और शिक्षा के सूचक-जैसे हमने केरल और हरियाणा की तुलना करने के लिए प्रयोग किये, ऐसे ही सूचकों में हैं। पिछले लगभग एक दशक में, स्वास्थ्य और शिक्षा सूचकों का आय के साथ व्यापक स्तर पर विकास के माप के लिए प्रयोग किया जाने लगा है। उदाहरण के लिए, यूएनडीपी द्वारा प्रकाशित मानव विकास रिपोर्ट देशों की तुलना लोगों के शैक्षिक स्तर, उनकी स्वास्थ्य स्थिति और प्रति व्यक्ति आय के आधार पर करती है। भारत और उसके पड़ोसी देशों की 2020 की मानव विकास रिपोर्ट के कुछ संबद्ध आँकड़ों पर दृष्टि डालना रुचिकर होगा।

तालिका 1.6 वर्ष 2019 के लिए भारत और उसके पड़ोसी देशों के कुछ आँकड़े

देश	सकल राष्ट्रीय आय (स.रा.आ.) प्रति व्यक्ति अमेरिकी डॉलर में (2017 क्रय शक्ति क्षमता)	जन्म के समय संभावित आयु	विद्यालयी औसत आयु 25 वर्ष या उसके अधिक	विश्व में मानव विकास सूचकांक (HDI) का क्रमांक (2018)
श्रीलंका	12,707	75.5	10.6	73
भारत	6,681	68.8	6.5	130
प्यांगार	4,961	66.7	5.0	148
पाकिस्तान	5,005	66.6	5.2	154
नेपाल	3,457	70.6	5.0	143
बंगलादेश	4,976	72.8	6.2	134

स्रोत: मानव विकास रिपोर्ट, 2020, संयुक्त राष्ट्र विकास कार्यक्रम न्यूयार्क।

टिप्पणी

- HDI का अर्थ है मानव विकास सूचकांक। ऊपर दी गई तालिका में HDI सूचकांक का क्रमांक कुल 189 देशों में से है।
- जन्म के समय संभावित आयु, जैसा कि नाम से स्पष्ट है, व्यक्ति की जन्म के समय औसत आयु की संभावना दर्शाती है।
- प्रतिव्यक्ति आय की गणना सभी देशों के लिए डॉलर में की जाती है, ताकि उसकी तुलना की जा सके। यह इस तरीके से भी की जाती है कि एक डॉलर किसी भी देश में समान मात्रा में वस्तुएँ और सेवाएँ खरीद सके।

क्या यह आश्चर्यजनक नहीं है कि हमारे पड़ोस का एक छोटा-सा देश श्रीलंका हर विषय में भारत से आगे है और हमारे जैसे बड़े देश का विश्व में इतना नीचा क्रमांक है? तालिका 1.6 यह भी दिखाती है कि यद्यपि नेपाल और बांग्लादेश की प्रतिव्यक्ति आय भारत की तुलना में कम है, फिर भी वे भारत से आयु संभाविता में पीछे नहीं हैं।

एच.डी.आई. के परिकलन के लिए बहुत से सुधारों का सुझाव दिया गया है। मानव विकास

रिपोर्ट में बहुत से नए घटक जोड़े गए हैं, लेकिन मानव के विकास से पहले, यह बात स्पष्ट कर दी गई है कि विकास महत्वपूर्ण है – एक देश के नागरिकों के साथ क्या हो रहा है। लोगों का स्वास्थ्य, उनका कल्याण सबसे अधिक ज़रूरी है।

क्या आप सोचते हैं कि मानव विकास को मापने के कुछ और पहलुओं पर विचार किया जाना चाहिए?

विकास की धारणीयता

हम विकास को जिस तरह भी परिभाषित करें, अभी के लिए मान लें कि एक विशेष देश काफ़ी विकसित है। हम निश्चित रूप से यह चाहेंगे कि विकास का यह स्तर और ऊँचा हो या कम से कम भावी पीढ़ी के लिए यह स्तर बना रहे। यह स्पष्ट रूप से बांछनीय है। लेकिन बीसवीं सदी के उत्तरार्द्ध से बहुत से वैज्ञानिक यह चेतावनी देते आ रहे हैं कि विकास का वर्तमान प्रकार और स्तर धारणीय नहीं है।

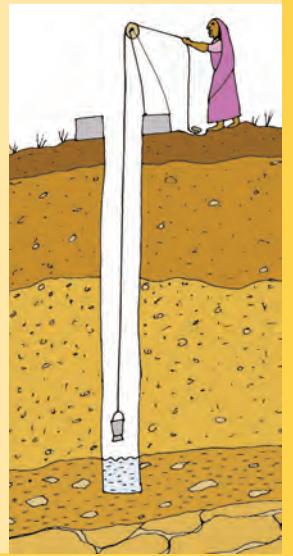
अब हम इसे निम्न उदाहरण द्वारा समझने का प्रयत्न करते हैं।

“हमने विश्व को अपने पूर्वजों से उत्तराधिकार में प्राप्त नहीं किया है— हमने इसे अपने बच्चों से उधार लिया है।”

उदाहरण 1— भारत में भूमिगत जल

“हाल के प्रमाणों से पता चलता है कि देश के कई भागों में भूमिगत जल के अति-उपयोग होने का गंभीर संकट है। 300 ज़िलों से सूचना मिली है कि वहाँ पिछले 20 सालों में पानी के स्तर में 4 मीटर से अधिक की गिरावट आयी है। देश का लगभग एक तिहाई भाग, भूमिगत जल भण्डारों का अति-उपयोग कर रहा है। यदि इस साधन के प्रयोग करने का वर्तमान तरीका जारी रहा तो अगले 25 वर्षों में देश का 60 प्रतिशत भाग इस साधन का अति-उपयोग कर रहा होगा। भूमिगत जल का अति-उपयोग विशेष रूप से पंजाब और पश्चिमी उत्तर प्रदेश के कृषि की दृष्टि से समृद्ध क्षेत्रों, मध्य और दक्षिण भारत के चट्टानी पठारी क्षेत्रों, कुछ तटवर्ती क्षेत्रों और तेज़ी से विकसित होती शहरी बस्तियों में पाया जाता है।”

- आप ऐसा क्यों सोचते हैं कि भूमिगत जल का अति-उपयोग हो रहा है?
- क्या बिना अति-उपयोग के विकास हो सकता है?



भूमिगत जल नवीकरणीय साधन का उदाहरण हैं। फसल और पौधों की तरह इन साधनों की पुनः पूर्ति प्रकृति करती है, लेकिन यहाँ भी हम इन साधनों का अति-उपयोग कर सकते हैं। उदाहरण के लिए, भूमिगत जल का यदि बरसात द्वारा हो रही पुनः पूर्ति से अधिक प्रयोग करते हैं, तो हम इस साधन का अति-उपयोग कर रहे होंगे।

गैर नवीकरणीय साधन वो हैं, जो कुछ ही वर्षों के प्रयोग के पश्चात् समाप्त हो जाते हैं। इन संसाधनों का धरती पर एक निश्चित भण्डार है और इनकी पुनः पूर्ति नहीं हो सकती। कभी-कभी हमें ऐसे नए साधन मिल जाते हैं, जिनके बारे में हमें पहले कोई जानकारी नहीं थी। नये स्रोत भण्डार में वृद्धि करते हैं, लेकिन समय के साथ यह भी समाप्त हो जाएँगे।

उदाहरण के लिए, हम जमीन से जो कच्चा तेल निकालते हैं वह एक गैर नवीकरणीय संसाधन है लेकिन हमें तेल का ऐसा स्रोत मिल सकता है जिसके बारे में हमें पहले जानकारी न हो। इसके लिए हर समय खोज चलती रहती है। नीचे दी गई तालिका को देखिए।

उदाहरण 2 – प्राकृतिक संसाधनों का दोहन

कच्चे तेल के लिए निम्न आंकड़ों को देखिए।

तालिका 1.7 कच्चे तेल के अतिरिक्त भण्डार

क्षेत्र/देश	भण्डार (2017) (हजार मिलियन बैटल)	भण्डारों के चलने की अवधि (वर्षों में)
मध्य-पूर्व	807.7	70
संयुक्त राज्य अमरीका	50	10.5
विश्व	1696.6	50.2

स्रोत: बी.पी. स्टैटिस्टिकल रिव्यू ऑफ वर्ल्ड एनर्जी, जून 2018, पृष्ठ-12

यह तालिका कच्चे तेल के भण्डारों के अनुमान (कॉलम 1) को दर्शाती है। अधिक महत्वपूर्ण यह है कि यह बताती है कि यदि कच्चे तेल का प्रयोग वर्तमान दर पर चालू रहे तो ये भण्डार कितने वर्ष चलेंगे। यह संपूर्ण विश्व के लिए है। किंतु अलग-अलग देशों की अलग-अलग स्थितियाँ हैं। यह भण्डार केवल 50 वर्षों में समाप्त हो जाएँगे। भारत जैसे देश इसके आयात पर निर्भर हैं, जिसके पास तेल के पर्याप्त भण्डार नहीं है। तेल की कीमतें बढ़ती हैं, तो प्रत्येक पर भार पड़ता है। संयुक्त राज्य अमेरिका जैसे कुछ देश हैं जिनके पास भण्डार तो कम है लेकिन वे इसे सैन्य और आर्थिक शक्ति के द्वारा पाना चाहते हैं। विकास की धारणीयता का प्रश्न, इसकी प्रकृति और प्रक्रिया के बारे में कई अन्य मूल नए विषय खड़े कर देता है।

1. क्या किसी देश की विकास प्रक्रिया के लिए कच्चा तेल अनिवार्य है? चर्चा कीजिए।
2. भारत को कच्चे तेल का आयात करना पड़ता है। उपरोक्त स्थिति को देखते हुए आप भारत के लिए आने वाले समय में किन समस्याओं का पूर्वानुमान करते हैं?



पर्यावरण में गिरावट के परिणाम राष्ट्रीय और राज्य सीमाओं का ख्याल नहीं करते; यह एक क्षेत्र या देशगत विषय नहीं रह गया है। हम सब का भविष्य परस्पर जुड़ा हुआ है। विकास की धारणीयता तुलनात्मक स्तर पर ज्ञान का नया क्षेत्र है, जिसमें वैज्ञानिक, अर्थशास्त्री, दार्शनिक और अन्य सामाजिक वैज्ञानिक मिल-जुल कर काम कर रहे हैं।

विकास या प्रगति का प्रश्न हमेशा चलने वाला प्रश्न है। हर वक्त में, हमें व्यक्तिगत स्तर पर और समाज का सदस्य होने के नाते यह प्रश्न पूछने की आवश्यकता है कि हम कहाँ जाना चाहते हैं, हम क्या बनना चाहते हैं और हमारे लक्ष्य क्या हैं? इसलिए विकास पर बहस जारी है।

अभ्यास

- सामान्यतः किसी देश का विकास किस आधार पर निर्धारित किया जा सकता है –
 - प्रतिव्यक्ति आय
 - औसत साक्षरता स्तर
 - लोगों की स्वास्थ्य स्थिति
 - उपरोक्त सभी
- निम्नलिखित पड़ोसी देशों में से मानव विकास के लिहाज़ से किस देश की स्थिति भारत से बेहतर है?
 - बांग्लादेश
 - श्रीलंका
 - नेपाल
 - पाकिस्तान
- मान लीजिए कि एक देश में चार परिवार हैं। इन परिवारों की प्रतिव्यक्ति आय 5,000 रुपये हैं। अगर तीन परिवारों की आय क्रमशः 4,000, 7,000 और 3,000 रुपये हैं, तो चौथे परिवार की आय क्या है?
 - 7,500 रुपये
 - 3,000 रुपये
 - 2,000 रुपये
 - 6,000 रुपये
- विश्व बैंक विभिन्न वर्गों का वर्गीकरण करने के लिये किस प्रमुख मापदण्ड का प्रयोग करता है? इस मापदण्ड की, अगर कोई हैं, तो सीमाएँ क्या हैं?
- विकास मापने का यू.एन.डी.पी. का मापदण्ड किन पहलुओं में विश्व बैंक के मापदण्ड से अलग है?
- हम औसत का प्रयोग क्यों करते हैं? इनके प्रयोग करने की क्या कोई सीमाएँ हैं? विकास से जुड़े अपने उदाहरण देकर स्पष्ट कीजिए।
- प्रतिव्यक्ति आय कम होने पर भी केरल का मानव विकास क्रमांक हरियाणा से ऊँचा है। इसलिए प्रतिव्यक्ति आय एक उपयोगी मापदण्ड बिलकुल नहीं है और राज्यों की तुलना के लिए इसका उपयोग नहीं करना चाहिए। क्या आप सहमत हैं? चर्चा कीजिए।

8. भारत के लोगों द्वारा ऊर्जा के किन स्रोतों का प्रयोग किया जाता है? ज्ञात कीजिए। अब से 50 वर्ष पश्चात् क्या संभावनाएँ हो सकती हैं?
9. धारणीयता का विषय विकास के लिए क्यों महत्वपूर्ण है?
10. धरती के पास सब लोगों की आवश्यकताओं को पूरा करने के लिये पर्याप्त संसाधन हैं, लेकिन एक भी व्यक्ति के लालच को पूरा करने के लिए पर्याप्त संसाधन नहीं हैं। यह कथन विकास की चर्चा में कैसे प्रासंगिक है? चर्चा कीजिए।
11. पर्यावरण में गिरावट के कुछ ऐसे उदाहरणों की सूची बनाइए जो आपने अपने आसपास देखे हों।
12. तालिका 1.6 में दी गई प्रत्येक मद के लिए ज्ञात कीजिए कि कौन-सा देश सबसे ऊपर है और कौन-सा सबसे नीचे।
13. नीचे दी गई तालिका में भारत में व्यस्कों (15-49 वर्ष आयु वाले) जिनका बी.एम.आई. सामान्य से कम है (बी.एम.आई. $<18.5\text{kg}/\text{m}^2$) का अनुपात दिखाया गया है। यह वर्ष 2015-16 में देश के विभिन्न राज्यों के एक सर्वेक्षण पर आधारित है। तालिका का अध्ययन करके निम्नलिखित प्रश्नों का उत्तर दीजिए।

राज्य	पुरुष (%)	महिला (%)
केरल	8.5	10
कर्नाटक	17	21
मध्य प्रदेश	28	28
सभी राज्य	20	23

स्रोत : राष्ट्रीय परिवार स्वास्थ्य सर्वेक्षण-4, 2015-16, <http://rchiiips.org>.

- (क) केरल और मध्य प्रदेश के लोगों के पोषण स्तरों की तुलना कीजिए।
- (ख) क्या आप अन्दराज लगा सकते हैं कि देश में लगभग हर पाँच में से एक व्यक्ति अल्पोषित क्यों है, यद्यपि यह तर्क दिया जाता है कि देश में पर्याप्त खाद्य है? अपने शब्दों में विवरण दीजिए।

अतिरिक्त परियोजना/कार्यकलाप

अपने क्षेत्र के विकास के विषय में चर्चा के लिए तीन भिन्न वक्ताओं को आमंत्रित कीजिए। अपने मस्तिष्क में आने वाले सभी प्रश्नों को उनसे पूछिए। इन विचारों की समूहों में चर्चा कीजिए। प्रत्येक समूह एक दीवार-चार्ट बनाए जिसमें कारण सहित उन विचारों का उल्लेख करे, जिनसे आप सहमत अथवा असहमत हैं।

शिक्षक के लिए निर्देश

अध्याय 2 – भारतीय अर्थव्यवस्था के क्षेत्रक

किसी अर्थव्यवस्था को हम उत्तम ढंग से तभी समझ सकते हैं, जब इसके घटकों या क्षेत्रों का अध्ययन करते हैं। क्षेत्रक वर्गीकरण अनेक मानदंडों के आधार पर किया जा सकता है। इस अध्याय में तीन प्रकार के वर्गीकरणों की चर्चा की गई है— प्राथमिक/द्वितीयक/ तृतीयक; संगठित/असंगठित और सार्वजनिक/निजी। आप दैनिक जीवन में छात्रों से परिचित उदाहरणों के द्वारा इन वर्गीकृत क्षेत्रों के बारे में चर्चा कर सकते हैं। क्षेत्रकों की बदलती भूमिका पर विशेष बल देना आवश्यक है। सेवा क्षेत्रक की तीव्र संवृद्धि की ओर छात्रों का ध्यान आकर्षित करते हुए पुनः इन पर प्रकाश डाला जा सकता है। इस अध्याय में प्रस्तुत धारणाओं की विस्तार से व्याख्या करते समय छात्रों को कुछ मौलिक अवधारणाओं जैसे – राष्ट्रीय आय, रोजगार इत्यादि से अवगत कराने की ज़रूरत पड़ सकती है। चूँकि छात्रों को इसे समझने में कठिनाई हो सकती है, इसलिए उदाहरण के द्वारा इन्हें स्पष्ट करना आवश्यक है। छात्रों को समझने में सहायक अनेक क्रियाकलाप और अभ्यास इस अध्याय में दिए गए हैं – किसी व्यक्ति के कार्य को कैसे प्राथमिक, द्वितीयक या तृतीयक, संगठित या असंगठित और सार्वजनिक या निजी क्षेत्रक में रखा जा सकता है। आप छात्रों को उनके आसपास के कामकाजी लोगों (दुकान के मालिक, अनियत श्रमिक, सब्जी विक्रेता, कार्यशाला मैकेनिक, घरेलू नौकर इत्यादि) से बात करने के लिए, कि वे कैसे रहते और काम करते हैं तथा और अधिक जानकारी प्राप्त करने के लिए, प्रोत्साहित कर सकते हैं। इन जानकारियों के आधार पर आर्थिक गतिविधियों का स्वयं वर्गीकरण करने के लिए छात्रों को प्रोत्साहित किया जाना चाहिए।

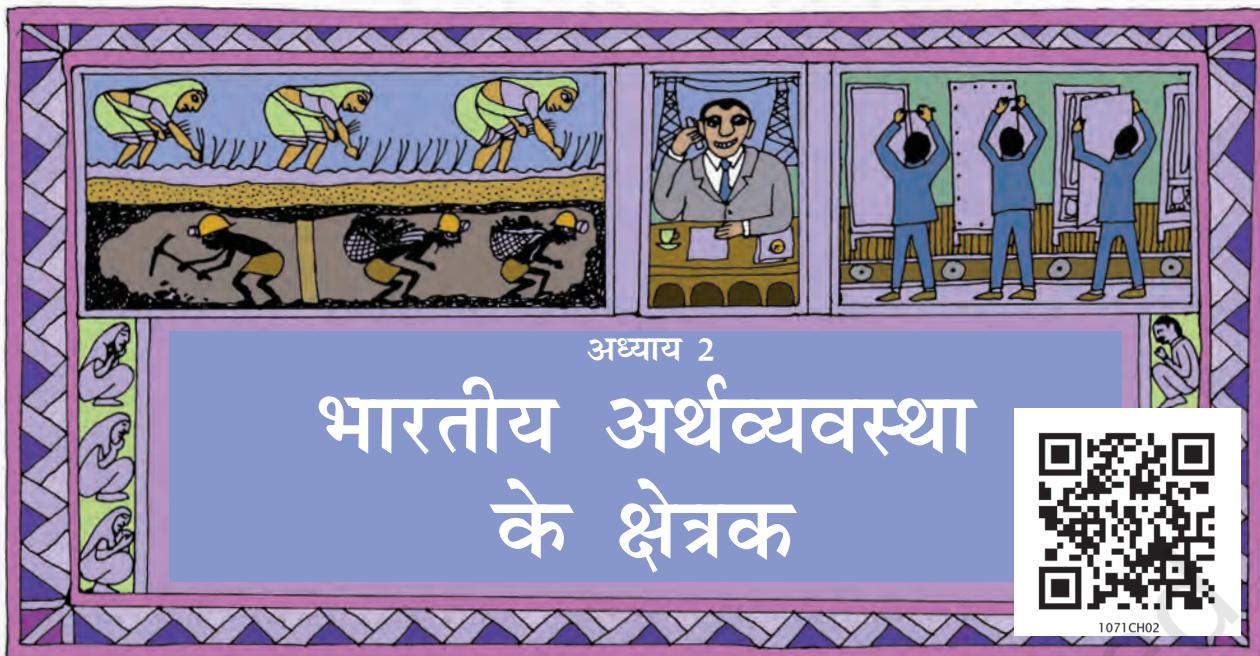
क्षेत्रकों की भूमिका में परिवर्तन से होने वाली समस्याएँ एक अन्य महत्वपूर्ण मुद्दा है, जिस पर प्रकाश डालने की ज़रूरत है। इस अध्याय में बेरोजगारी और उसके निराकरण के लिए सरकार क्या कर सकती है, इसके उदाहरण दिए गए हैं। कृषि के घटते महत्व और उद्योगों एवं सेवाओं के बढ़ते महत्व को, छात्रों के

दैनिक जीवन के अनुभवों से लिए गए अधिकाधिक उदाहरणों से जोड़ा जाना चाहिए। इसके लिए संचार माध्यमों द्वारा प्राप्त सूचनाओं का इस्तेमाल किया जा सकता है। आप छात्रों को अखबारों की महत्वपूर्ण कतरनों और विवरणों को लाने के लिए प्रोत्साहित कर सकते हैं, जिन्हें कथापटलों पर प्रदर्शित किया जा सके और इन पर चर्चा की जा सके। असंगठित क्षेत्रक पर चर्चा करते समय कार्यरत श्रमिकों के संरक्षण जैसे महत्वपूर्ण मुद्दे पर विशेष बल दिया जाना चाहिए। आप छात्रों को असंगठित क्षेत्रक के लोगों तथा उद्यमों के पास जाकर उनकी वास्तविक जीवन-परिस्थितियों का साक्षात् अनुभव प्राप्त करने के लिए प्रोत्साहित कर सकते हैं।

सूचना के स्रोत

इस अध्याय में सकल घरेलू उत्पाद (स.घ.उ.) के आँकड़े औद्योगिक उत्पादन लागत पर सकल घरेलू उत्पाद से संबंधित वर्ष 2011-12 के मूल्य के आधार पर भारतीय अर्थव्यवस्था पर सांख्यिकी की वास्तविक समय पुस्तिका से लिए गए हैं। यह स.घ.उ. एवं भारतीय अर्थव्यवस्था से संबंधित अन्य जानकारियों के लिए महत्वपूर्ण स्रोत है। मूल्यांकन के लिए, विशेषकर पाठकों की विश्लेषण क्षमता का विकास करने के उद्देश्य से शिक्षक इस रिपोर्ट का इंटरनेट के माध्यम से भिन्न वर्षों के आँकड़े प्राप्त करने के लिए उल्लेख कर सकते हैं। क्रियाविधि में परिवर्तन हेतु नवीनतम आँकड़े इस अध्याय में उपयोग नहीं किये गए हैं।

रोजगार आँकड़े राष्ट्रीय सांख्यिकीय कार्यालय द्वारा रोजगार और बेरोजगारी पर किए गए पाँचवर्षीय सर्वेक्षणों के आँकड़ों पर आधारित है। रा.प्र.सं., भारत सरकार के सांख्यिकी, योजना एवं कार्यक्रम कार्यान्वयन मंत्रालय के अन्तर्गत एक संगठन है। इसकी वेबसाइट: <http://mospi.gov.in> को आप देख सकते हैं। रोजगार-आँकड़े अन्य स्रोतों जैसे भारत की जनगणना में भी उपलब्ध हैं।



आर्थिक कार्यों के क्षेत्रक

निम्न चित्रों को देखें। आप लोगों को विभिन्न आर्थिक गतिविधियों में कार्यरत पाएँगे। इनमें से कुछ गतिविधियाँ वस्तुओं का उत्पादन करती हैं। कुछ अन्य सेवाओं का सृजन करती हैं। ये गतिविधियाँ हमारे चारों ओर हर समय सम्पादित होती हैं, यहाँ तक कि हमारे बोलने में भी। हम इन गतिविधियों को कैसे समझ सकते हैं? इन्हें समझने का एक तरीका यह है कि कुछ महत्वपूर्ण मानदंडों के आधार पर इन्हें विभिन्न समूहों में वर्गीकृत कर दिया जाए। इन समूहों को क्षेत्रक भी कहते हैं। उद्देश्य और किसी महत्वपूर्ण मानदंड के आधार पर इन्हें अनेक तरीकों से वर्गीकृत किया जा सकता है।



हम विभिन्न प्रकार की आर्थिक गतिविधियों से प्रारम्भ करते हैं।

प्राथमिक क्षेत्रक (कृषि)



प्राकृतिक वस्तुएँ
उत्पादित करता है

तृतीयक क्षेत्रक



अन्य क्षेत्रों के विकास में मदद पहुँचाता है

दूध भी एक प्राकृतिक उत्पाद है। इसी प्रकार, खनिज और अयस्क भी प्राकृतिक उत्पाद हैं। जब हम प्राकृतिक संसाधनों का उपयोग करके किसी वस्तु का उत्पादन करते हैं, तो इसे प्राथमिक क्षेत्रक की गतिविधि कहा जाता है। प्राथमिक क्यों? क्योंकि यह उन सभी उत्पादों का आधार है, जिन्हें हम क्रमशः निर्मित करते हैं। चूँकि हम अधिकांश प्राकृतिक उत्पाद कृषि, डेयरी, मत्स्यन और वनों से प्राप्त करते हैं, इसलिए इस क्षेत्रक को कृषि एवं सहायक क्षेत्रक भी कहा जाता है।

द्वितीयक क्षेत्रक की गतिविधियों

के अन्तर्गत प्राकृतिक उत्पादों को विनिर्माण प्रणाली के जरिए अन्य रूपों में परिवर्तित किया जाता है। यह प्राथमिक क्षेत्रक के बाद अगला कदम है। यहाँ वस्तुएँ सीधे प्रकृति से उत्पादित नहीं होती हैं, बल्कि निर्मित की जाती हैं। इसलिए विनिर्माण की प्रक्रिया अपरिहार्य है। यह प्रक्रिया किसी कारखाना, किसी कार्यशाला या घर में हो सकती है। जैसे, कपास के पौधे से प्राप्त रेशे का उपयोग कर हम सत कातते और कपड़ा बनते हैं। गन्ने को कच्चे

माल के रूप में उपयोग कर हम चीनी और गुड़ तैयार करते हैं। हम मिट्टी से ईंट बनाते हैं और ईंटों से घर और भवनों का निर्माण करते हैं। चूँकि यह क्षेत्रक क्रमशः संवर्धित विभिन्न प्रकार के उद्योगों से जुड़ा हुआ है, इसलिए इसे औद्योगिक क्षेत्रक भी कहा जाता है।

प्राथमिक और द्वितीयक क्षेत्रक के अतिरिक्त आर्थिक गतिविधियों की एक तीसरी कोटि भी है जो तृतीयक क्षेत्रक के अन्तर्गत आती हैं और उपर्युक्त दो क्षेत्रकों से भिन्न है। ये गतिविधियाँ प्राथमिक और द्वितीयक क्षेत्रक के विकास में मदद करती हैं। ये गतिविधियाँ स्वतः वस्तुओं का उत्पादन नहीं करती हैं, बल्कि उत्पादन-प्रक्रिया में सहयोग या मदद करती हैं। जैसे – प्राथमिक और द्वितीयक क्षेत्रक द्वारा उत्पादित वस्तुओं को थोक एवं खुदरा विक्रेताओं को बेचने के लिए ट्रकों और ट्रेनों द्वारा परिवहन करने की ज़रूरत पड़ती है। कभी-कभी वस्तुओं को गोदामों में भण्डारित करने की आवश्यकता होती है। हमें उत्पादन और व्यापार में सहूलियत के लिए टेलीफोन पर दूसरों से वार्तालाप करने या पत्राचार (संवाद) या बैंकों से कर्ज लेने की भी आवश्यकता होती है। परिवहन, भण्डारण, संचार, बैंक सेवाएँ और व्यापार तृतीयक गतिविधियों के कुछ उदाहरण हैं। चूँकि ये गतिविधियाँ वस्तुओं के बजाय सेवाओं का सृजन करती हैं, इसलिए तृतीयक क्षेत्रक को सेवा क्षेत्रक भी कहा जाता है।

सेवा क्षेत्रक में कुछ ऐसी अपरिहार्य सेवाएँ भी हैं, जो प्रत्यक्ष रूप से वस्तुओं के उत्पादन में सहायता नहीं करती हैं। जैसे, हमें शिक्षकों, डॉक्टरों, धोबी, नाई, मोची एवं वकील जैसे व्यक्तिगत सेवाएँ उपलब्ध कराने वाले और प्रशासनिक एवं लेखाकरण कार्य करने वाले लोगों की आवश्यकता होती है। वर्तमान समय में सूचना प्रौद्योगिकी पर आधारित कुछ नवीन सेवाएँ जैसे, इंटरनेट कैफे, ए.टी.एम. बूथ, कॉल सेंटर, सॉफ्टवेयर कम्पनी इत्यादि भी महत्वपूर्ण हो गई हैं।

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आर्थिक विकास की समझ

यद्यपि आर्थिक गतिविधियाँ तीन विभिन्न वर्गों में विभाजित हैं, फिर भी ये बहुत अधिक परस्पर-निर्भर हैं। हम कुछ उदाहरण दे रहे हैं।

तालिका 2.1 आर्थिक गतिविधियों के उदाहरण

उदाहरण	यह क्या प्रदर्शित करता है?
कल्पना करें कि यदि किसान किसी चीज़ी मिल को गन्ना बेचने से इंकार कर दें, तो क्या होगा। मिल बंद हो जाएगी।	यह द्वितीयक या औद्योगिक क्षेत्रक का उदाहरण है, जो प्राथमिक क्षेत्रक पर निर्भर है।
कल्पना करें कि यदि कम्पनियाँ भारतीय बाज़ार से कपास नहीं खरीदती और अन्य देशों से कपास आयात करने का निर्णय करती हैं, तो कपास की खेती का क्या होगा? भारत में कपास की खेती कम लाभकारी रह जाएगी और यदि किसान शीघ्रता से अन्य फसलों की ओर उन्मुख नहीं होते हैं, तो वे दिवालिया भी हो सकते हैं तथा कपास की कीमत गिर जाएगी।	
किसान, ट्रैक्टर, पम्पसेट, बिजली, कीटनाशक और उर्वरक जैसी अनेक वस्तुएँ खरीदते हैं। कल्पना करें कि यदि उर्वरकों और पम्पसेटों की कीमत बढ़ जाती है, तो क्या होगा? खेती पर लागत बढ़ जाएगी और किसानों का लाभ कम हो जाएगा।	
औद्योगिक और सेवा क्षेत्रकों में काम करने वाले लोगों को भोजन की आवश्यकता होती है। कल्पना करें कि यदि ट्रांसपोर्टरों ने हड्डताल कर दी है और ग्रामीण क्षेत्रों से सब्जियाँ, दूध इत्यादि ले जाने से इंकार कर दिया, तो क्या होगा? शहरी क्षेत्रों में भोजन की कमी हो जाएगी और किसान अपने उत्पाद बेचने में असमर्थ हो जायेंगे।	

आओ—इन पर विचार करें

- विभिन्न क्षेत्रकों की परस्पर-निर्भरता दिखाते हुए उपर्युक्त सारणी को भरें।
- पुस्तक में वर्णित उदाहरणों से भिन्न उदाहरणों के आधार पर प्राथमिक, द्वितीयक और तृतीयक क्षेत्रकों के अंतर की व्याख्या करें।
- निम्नलिखित व्यवसायों को प्राथमिक, द्वितीयक और तृतीयक क्षेत्रकों में विभाजित करें:
 - दर्जी
 - पुजारी
 - टोकरी बुनकर
 - कूरियर पहुँचाने वाला
 - फूल की खेती करने वाला
 - दियासलाई कारखाना में श्रमिक
 - महाजन
 - माली
 - कुम्हार
 - मधुमक्खी पालक
 - अंतरिक्ष - यात्री
 - कॉल सेंटर का कर्मचारी
- विद्यालय में छात्रों को प्रायः प्राथमिक और द्वितीयक अथवा वरिष्ठ और कनिष्ठ वर्गों में विभाजित किया जाता है। इस विभाजन की कसौटी क्या है? क्या आप मानते हैं कि यह विभाजन उपर्युक्त है? चर्चा करें।

तीन क्षेत्रकों की तुलना

प्राथमिक, द्वितीयक एवं तृतीयक क्षेत्रक के विविध उत्पादन कार्यों से काफी अधिक मात्रा में वस्तुओं और सेवाओं का उत्पादन होता है। साथ ही, इन क्षेत्रकों में काफी अधिक संख्या में लोग वस्तुओं और सेवाओं के उत्पादन के लिए काम करते हैं। इसलिए, आगे चरण में यह देखना है कि प्रत्येक क्षेत्रक में कितनी वस्तुएँ और सेवाएँ उत्पादित होती हैं और कितने लोग उस क्षेत्रक में काम करते हैं। किसी अर्थव्यवस्था में कुल उत्पादन और रोजगार की दृष्टि से एक या अधिक क्षेत्रक प्रधान होते हैं, जबकि अन्य क्षेत्रक अपेक्षाकृत छोटे आकार के होते हैं।

प्रत्येक क्षेत्रक की विविध वस्तुओं और सेवाओं की हम गणना कैसे करते हैं और कुल उत्पादन को कैसे जानते हैं?

आप सोचते होंगे कि हजारों की संख्या में उत्पादित वस्तुओं और सेवाओं की गणना करना असंभव कार्य है। यह न केवल वृहद् कार्य है, बल्कि आप आश्चर्यचकित भी होंगे कि हम कारों और कम्प्यूटरों, कीलों और फर्नीचरों की



संख्या का योगफल कैसे कर सकते हैं। यह अत्यंत बेतुकी बात है।

आप बिल्कुल सही सोचते हैं। इस समस्या के समाधान के लिए अर्थशास्त्रियों का सुझाव है कि वस्तुओं और सेवाओं की वास्तविक संख्याओं का योग करने के स्थान पर उनके मूल्य का उपयोग किया जाना चाहिए। जैसे, यदि 10,000 कि.ग्रा. गेहूँ ₹ 20 प्रति कि.ग्रा. की दर से बेचा जाता है तो, गेहूँ का मूल्य ₹ 2,00,000 होगा। ₹ 15 प्रति नारियल की दर से 5000 नारियल का मूल्य ₹ 75,000 होगा। इसी प्रकार, तीनों क्षेत्रकों के वस्तुओं और सेवाओं के मूल्य की गणना की जाती है और उसके बाद योगफल प्राप्त करते हैं।

ध्यान रखें कि यहाँ एक सावधानी बरतने की ज़रूरत है। उत्पादित और बेची गई प्रत्येक वस्तु (या सेवा) की गणना करने की ज़रूरत नहीं है। केवल अंतिम वस्तुओं और सेवाओं की गणना का ही औचित्य है। जैसे, एक किसान किसी आटा-मिल को ₹ 20 प्रति कि.ग्रा. की दर से गेहूँ बेचता है। मिल में गेहूँ की पिसाई होती है और बिस्कुट कंपनी को आटा ₹ 25 प्रति कि.ग्रा. की दर से बेचा जाता है। बिस्कुट कंपनी आटा के साथ चीनी एवं तेल जैसी चीज़ों का उपयोग करती है और बिस्कुट के चार पैकेट बनाती है। वह बाजार में उपभोक्ताओं को ₹ 80 में (₹ 20 प्रति पैकेट) बिस्कुट बेचती है। अतः बिस्कुट ही अंतिम उत्पाद है, अर्थात् वह वस्तु जो उपभोक्ताओं तक पहुँचती है।

केवल 'अंतिम वस्तुओं और सेवाओं' की ही गणना क्यों की जाती है? दिए गए उदाहरण में अंतिम वस्तु के विपरीत गेहूँ और आटा जैसी वस्तुएँ मध्यवर्ती वस्तुएँ हैं। मध्यवर्ती वस्तुएँ, अंतिम वस्तुओं और सेवाओं के निर्माण में इस्तेमाल की जाती हैं। अंतिम वस्तुओं के मूल्य में मध्यवर्ती वस्तुओं का मूल्य पहले से ही शामिल होता है। बिस्कुट (अंतिम वस्तु) के मूल्य ₹ 80 में पहले

से ही आटा का मूल्य (₹ 25) शामिल है। इसी प्रकार अन्य सभी मध्यवर्ती वस्तुओं का मूल्य भी शामिल होगा। अतः गेहूँ और आटा के मूल्य की अलग-अलग गणना उचित नहीं है, क्योंकि तब हम एक ही वस्तु के मूल्य की गणना कई बार करते हैं। पहले गेहूँ के रूप में, फिर आटा के रूप में और अंततः अंतिम वस्तु बिस्कुट के रूप में मूल्य की कई बार गणना करते हैं।

किसी विशेष वर्ष में प्रत्येक क्षेत्रक द्वारा उत्पादित अंतिम वस्तुओं और सेवाओं का मूल्य, उस वर्ष में क्षेत्रक के कुल उत्पादन की जानकारी प्रदान करता है। तीनों क्षेत्रकों के उत्पादनों के योगफल को देश का सकल घरेलू उत्पाद (स. घ. उ.) कहते हैं। यह किसी देश के भीतर किसी विशेष वर्ष में उत्पादित सभी अंतिम वस्तुओं और सेवाओं का मूल्य है। स. घ. उ. अर्थव्यवस्था की विशालता प्रदर्शित करता है।

भारत में स. घ. उ. मापन जैसा कठिन कार्य केन्द्र सरकार के मंत्रालय द्वारा किया जाता है। यह मंत्रालय राज्यों एवं केन्द्र शासित क्षेत्रों के विभिन्न सरकारी विभागों की सहायता से वस्तुओं और सेवाओं की कुल संख्या और उनके मूल्य से संबंधित सूचनाएँ एकत्र करता है और तब जी. डी. पी. का अनुमान करता है।

क्षेत्रकों में ऐतिहासिक परिवर्तन

सामान्यतया, अधिकांश विकसित देशों के इतिहास में यह देखा गया है कि विकास की प्रारम्भिक अवस्थाओं में प्राथमिक क्षेत्रक ही आर्थिक सक्रियता का सबसे महत्वपूर्ण क्षेत्रक रहा है।

जैसे-जैसे कृषि-प्रणाली परिवर्तित होती गई और कृषि क्षेत्रक समृद्ध होता गया, वैसे-वैसे पहले की तुलना में अपेक्षाकृत अधिक उत्पादन होने लगा। अब अनेक लोग दूसरे कार्य करने लगे। शिल्पियों और व्यापारियों की संख्या में वृद्धि होने लगी। क्रय-विक्रय की गतिविधियाँ कई गुना बढ़ गईं। इसके अतिरिक्त अनेक लोग परिवहन, प्रशासक और सैनिक कार्य इत्यादि से जुड़े थे। फिर भी, इस

अवस्था में अधिकांश उत्पादित वस्तुएँ प्राकृतिक उत्पाद थी, जो प्राथमिक क्षेत्रक में आती थीं और अधिकांश लोग इसी क्षेत्रक में रोजगार करते थे।

लम्बे समय (सौ वर्षों से अधिक) के बाद और विशेषकर विनिर्माण की नवीन प्रणाली के प्रचलन से कारखाने अस्तित्व में आए और उनका प्रसार होने लगा। जो लोग पहले खेतों में काम करते थे, उनमें से बहुत अधिक लोग अब कारखानों में काम करने लगे। उन्हें कारखानों में काम करने के लिए मजबूर किया गया, जैसा कि आपने इतिहास में पढ़ा है। कारखानों में सस्ती दरों पर उत्पादित वस्तुओं का लोग इस्तेमाल करने लगे। कुल उत्पादन एवं रोजगार की दृष्टि से द्वितीयक क्षेत्रक सबसे महत्वपूर्ण हो गया। इस कारण अतिरिक्त समय में भी काम होने लगा। इसका अर्थ है कि क्षेत्रकों का महत्व परिवर्तित हो गया।

विगत 100 वर्षों में, विकसित देशों में द्वितीयक क्षेत्रक से तृतीयक क्षेत्रक की ओर पुनः बदलाव हुआ है। कुल उत्पादन की दृष्टि से सेवा क्षेत्रक का महत्व बढ़ गया। अधिकांश श्रमजीवी लोग सेवा क्षेत्रक में ही नियोजित हैं। विकसित देशों में यही सामान्य लक्षण देखा गया है।

भारत में तीनों क्षेत्रकों का कुल उत्पादन और रोजगार कितना है? विगत वर्षों में विकसित देशों में देखे गए पैटर्न के समरूप क्या भारत में भी परिवर्तन हुआ है। हम इसे अगले खंड में देखेंगे।

आओ—इन पर विचार करें

1. विकसित देशों का इतिहास क्षेत्रकों में हुए परिवर्तन के संबंध में क्या संकेत करता है?
2. अव्यवस्थित वाक्यांश से स. घ. उ. गणना हेतु महत्वपूर्ण पहलुओं को व्यवस्थित एवं सही करें।
- उत्पादित वस्तुओं और सेवाओं की गणना करने के लिए हम उनकी संख्याओं को जोड़ देते हैं। हम विगत पाँच वर्षों में उत्पादित सभी वस्तुओं की गणना करते हैं। चूँकि हमें किसी चीज़ को छोड़ना नहीं चाहिए इसलिए हम इन वस्तुओं और सेवाओं के मूल्य का योगफल प्राप्त करते हैं।
3. अपने शिक्षक के साथ चर्चा करें कि आप मूल्य की विधि का उपयोग करके प्रत्येक चरण में जोड़े गए वस्तुया सेव के मूल्य की गणना कैसे करें।

भारत में प्राथमिक, द्वितीयक और तृतीयक क्षेत्रक

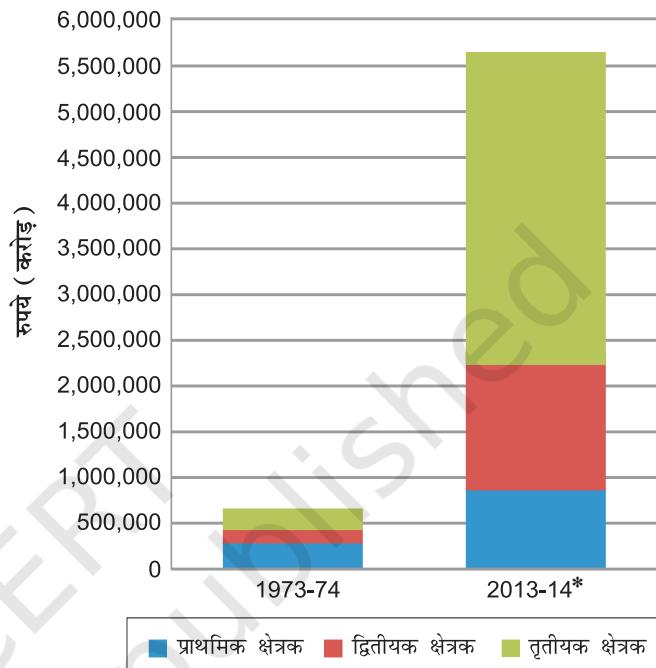
आलेख 1 - तीनों क्षेत्रकों द्वारा उत्पादित वस्तुओं और सेवाओं को दिखाता है। यह दो वर्षों 1973-74 और 2013-14 के उत्पादन को दिखाता है। हमने इन दो वर्षों के लिए आंकड़ों का उपयोग किया है। क्योंकि यह आंकड़े तुलनीय और प्रामाणिक हैं। आप देख सकते हैं कि चालीस वर्षों में कुल उत्पादन में कितनी संवृद्धि हुई है।

आओ—इन पर विचार करें

आरेख का अवलोकन करते हुए निम्नलिखित का उत्तर दें—

1. 1973-74 में सबसे बड़ा उत्पादक क्षेत्रक कौन था?
2. 2013-14 में सबसे बड़ा उत्पादक क्षेत्रक कौन था?
3. क्या आप बता सकते हैं कि तीस वर्षों में किस क्षेत्रक में सबसे अधिक संवृद्धि हुई?
4. 2013-14 में भारत का जी. डी. पी. क्या है?

आलेख 1 – प्राथमिक, द्वितीयक और तृतीयक क्षेत्रक द्वारा स. घ. उ.



स्रोत- *2013-14 नवीनतम वर्ष है, जिसके लिए तुलनीय आंकड़ा उपलब्ध है।

सन् 1973-74 और 2013-14 के बीच तुलना क्या प्रदर्शित करती है? इससे आप क्या निष्कर्ष निकाल सकते हैं? विचार करें।

उत्पादन में तृतीयक क्षेत्रक का बढ़ता महत्व

वर्ष 1973-74 और 2013-14 के बीच चालीस वर्षों में यद्यपि सभी क्षेत्रकों में उत्पादन में वृद्धि हुई, परन्तु सबसे अधिक वृद्धि तृतीयक क्षेत्रक के उत्पादन में हुई। परिणामतः वर्ष 2013-14 में भारत में प्राथमिक क्षेत्रक को प्रतिस्थापित करते हुए तृतीयक क्षेत्रक सबसे बड़े उत्पादक क्षेत्रक के रूप में उभरा।

भारत में तृतीयक क्षेत्रक इतना महत्वपूर्ण क्यों हो गया? इसके कई कारण हो सकते हैं।

प्रथम, किसी भी देश में अनेक सेवाओं, जैसे- अस्पताल, शैक्षिक संस्थाएँ, डाक एवं तार सेवा, थाना, कचहरी, ग्रामीण प्रशासनिक कार्यालय, नगर निगम, रक्षा, परिवहन, बैंक, बीमा कंपनी इत्यादि की आवश्यकता होती है। इन्हें बुनियादी सेवाएँ माना जाता है। किसी विकासशील देश में इन सेवाओं के प्रबंधन की जिम्मेदारी सरकार उठाती है।

द्वितीय, कृषि एवं उद्योग के विकास से परिवहन, व्यापार, भण्डारण जैसी सेवाओं का विकास होता है। प्राथमिक और द्वितीयक क्षेत्रक का विकास जितना अधिक होगा, ऐसी सेवाओं की माँग उतनी ही अधिक होगी।

तृतीय, जैसे-जैसे आय बढ़ती है, कुछ लोग अन्य कई सेवाओं जैसे – रेस्टरां, पर्यटन, शॉपिंग, निजी अस्पताल, निजी विद्यालय, व्यावसायिक प्रशिक्षण इत्यादि की माँग शुरू कर देते हैं। आप नगरों में, विशेषकर बड़े नगरों में इस द्रुत परिवर्तन को देख सकते हैं।

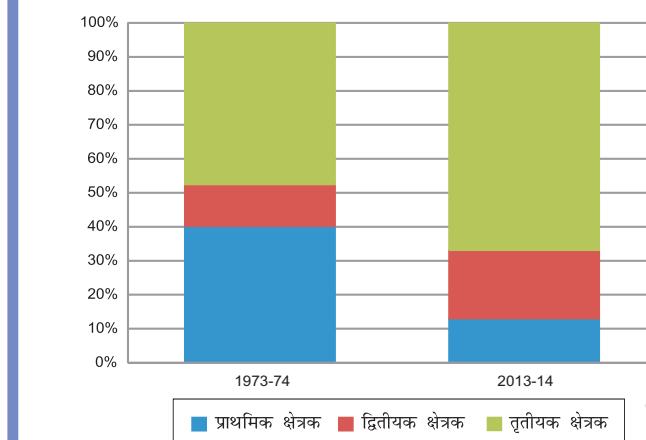
चतुर्थ, विगत दशकों में सूचना और संचार प्रौद्योगिकी पर आधारित कुछ नवीन सेवाएँ महत्वपूर्ण एवं अपरिहार्य हो गई हैं। इन सेवाओं के उत्पादन में तीव्र वृद्धि हो रही है। अध्याय-4 में हम इन नवीन सेवाओं और इनके प्रसार के कारणों की चर्चा करेंगे।

अंततः, आपको याद रखना चाहिए कि सेवा क्षेत्रक की सभी सेवाओं में समान रूप से संवृद्धि नहीं हो रही है। भारत में सेवा क्षेत्रक कई तरह के लोगों को नियोजित करते हैं। एक ओर, उन सेवाओं की संख्या सीमित है, जिसमें अत्यन्त कुशल और शिक्षित श्रमिकों को रोजगार मिलता है। दूसरी ओर, बहुत अधिक संख्या में लोग छोटी दुकानों, मरम्मत कार्यों, परिवहन जैसी सेवाओं में लगे हुए हैं। वे लोग बड़ी मुश्किल से जीविका निर्वाह कर पाते हैं और वे इन सेवाओं में इसलिए लगे हुए हैं क्योंकि उनके पास कोई अन्य वैकल्पिक अवसर नहीं है। इस कारण सेवा क्षेत्रक के केवल कुछ भागों का ही महत्व बढ़ रहा है। आप इनके बारे में अगले खंड में विस्तार से पढ़ेंगे।

अधिकांश लोग कहाँ नियोजित हैं?

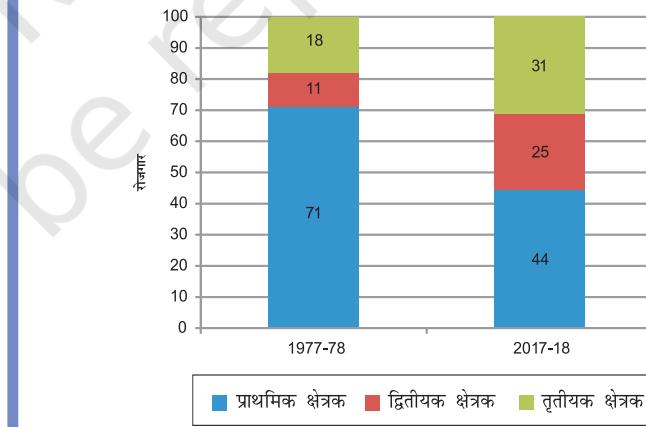
आलेख 2 – स. घ. उ. में तीनों क्षेत्रकों की प्रतिशत हिस्सेदारी प्रस्तुत करता है। अब आप चालीस वर्षों में क्षेत्रकों के बदलते महत्व को प्रत्यक्षतः देख सकते हैं।

आलेख 2 – स. घ. उ. में क्षेत्रकों की हिस्सेदारी (%)



भारत के संदर्भ में एक उल्लेखनीय तथ्य है कि यद्यपि स. घ. उ. में तीनों क्षेत्रकों की हिस्सेदारी में परिवर्तन हुआ है, फिर भी रोजगार में ऐसा ही परिवर्तन नहीं हुआ है। आरेख 3 – वर्ष 1977-78 एवं 2017-18 और वर्ष 2003 में तीनों क्षेत्रकों में रोजगार की हिस्सेदारी को दिखाता है। आज भी प्राथमिक क्षेत्र में सबसे बड़ा नियोक्ता है।

आलेख 3 – रोजगार में क्षेत्रकों की हिस्सेदारी (%)



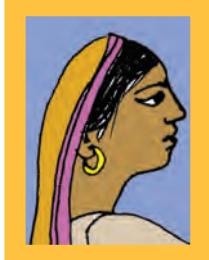
प्राथमिक क्षेत्रक से रोजगार का ऐसा ही क्षेत्रक स्थानान्तरण क्यों नहीं हुआ? इसका कारण यह है कि द्वितीयक और तृतीयक क्षेत्रक में रोजगार के पर्याप्त अवसरों का सृजन नहीं हुआ। यद्यपि इस

अवधि में वस्तुओं के औद्योगिक उत्पादन में 3 गुना से ज्यादा वृद्धि हुई परन्तु औद्योगिक रोजगार में लगभग 3 गुना ही वृद्धि हुई। तृतीयक क्षेत्रक पर भी यही बात लागू होती है। सेवा क्षेत्रक में उत्पादन में 14 गुना वृद्धि हुई, परन्तु रोजगार में 5 गुना से भी कम वृद्धि हुई।

परिणामतः, देश में आधे से अधिक श्रमिक प्राथमिक क्षेत्रक, मुख्यतः कृषि क्षेत्र, में काम कर रहे हैं जिसका स. घ. उ. में योगदान लगभग एक-छठा भाग है। इसकी तुलना में द्वितीयक और तृतीयक क्षेत्रक का स. घ. उ. में बाकी हिस्सा है। परन्तु, ये क्षेत्र कम लोगों को रोजगार प्रदान करते हैं। क्या इसका अर्थ यह है कि कृषि क्षेत्र में लगभग श्रमिक अपनी क्षमता से कम उत्पादन कर रहे हैं?

क्या इसका अर्थ यह है कि कृषि में आवश्यकता से अधिक लोग लगे हुए हैं? अतएव, यदि आप कुछ लोगों को कृषि क्षेत्र से हटा देते हो, तो भी उत्पादन प्रभावित नहीं होगा। दूसरे शब्दों में, कृषि क्षेत्रक के श्रमिकों में अल्प बेरोजगारी है।

एक छोटा किसान लक्ष्मी का उदाहरण लेते हैं, जिसके पास दो हेक्टेयर असिंचित भूमि है, जो सिंचाई के लिए केवल वर्षा पर निर्भर है और ज्वार एवं अरहर जैसी फसलें उपजाती है। उसके परिवार के सभी पाँच सदस्य उस भूमि पर वर्ष भर काम करते हैं। क्यों? क्योंकि उन्हें कहीं और रोजगार उपलब्ध नहीं है। आप देखेंगे कि प्रत्येक व्यक्ति काम कर रहा है, कोई बेकार नहीं है। परन्तु, वास्तव में उनका श्रम-प्रयास विभाजित है। प्रत्येक व्यक्ति कुछ काम कर रहा है परन्तु किसी को भी पूर्ण रोजगार प्राप्त नहीं है। यह अल्प बेरोजगारी की स्थिति है, जहाँ लोग प्रत्यक्ष रूप से काम कर रहे हैं, लेकिन सभी अपनी क्षमता से कम काम करते हैं। इस प्रकार की अल्प बेरोजगारी को छिपी हुई कहते हैं क्योंकि यह उन लोगों की बेरोजगारी, जिनके पास कोई रोजगार



नहीं है और बेकार बैठे हुए हैं, से अलग है (खुली बेरोजगारी)। इसलिए इसे प्रच्छन्न बेरोजगारी भी कहा जाता है।

अब मान लेते हैं कि एक भूस्वामी सुखराम आता है और अपनी जमीन पर काम करने के लिए लक्ष्मी के परिवार के एक या दो सदस्यों को भाड़े पर ले जाता है। अब लक्ष्मी के परिवार को मज़दूरी के द्वारा कुछ अतिरिक्त आय होती है। चूँकि आपको छोटे से भूखंड पर काम करने के लिए पाँच लोगों की ज़रूरत नहीं है, अतः दो लोगों के चले जाने से कृषि-उत्पादन प्रभावित नहीं होता है। दिए गए उदाहरण में, दो सदस्य किसी कारखाना में भी काम करने के लिए जा सकते हैं। एक बार फिर परिवार की कमाई में वृद्धि होगी और वे लोग अपनी भूमि से पहले जैसा उत्पादन करते रहेंगे।

भारत में लक्ष्मी की तरह लाखों किसान हैं। इसका अर्थ है कि यदि हम कुछ लोगों को कृषि क्षेत्रक से हटाकर उन्हें कहीं और समुचित रोजगार उपलब्ध करा दें, तो भी कृषि उत्पादन पर बुरा प्रभाव नहीं पड़ेगा। कोई अन्य रोजगार करने से लोगों की आय से परिवार के कुल आय में वृद्धि होगी।

अल्प बेरोजगारी दूसरे क्षेत्रकों में भी हो सकती है। उदाहरण के लिए, शहरों में सेवा क्षेत्रक में हजारों अनियत श्रमिक हैं जो दैनिक रोजगार की तलाश करते हैं। वे प्लम्बर, पेन्टर, मरम्मत कार्य जैसे रोजगार करते हैं और अन्य लोग असुविधाजनक विषम काम करते हैं। उनमें से कई रोजाना काम नहीं पाते हैं। इसी प्रकार हम सेवा क्षेत्रक के कुछ लोगों को सड़कों पर ठेला खींचते अथवा कुछ चीजें बेचते हुए देखते हैं, जहाँ वे पूरा दिन बिता देते हैं, परन्तु बहुत कम कमा पाते हैं। वे यह काम इसलिए कर रहे हैं, क्योंकि उनके पास कोई बेहतर अवसर नहीं है।

26 आर्थिक विकास की समझ

आओ—इन पर विचार करें

1. आलेख 2 और 3 में दिए गए आँकड़े का प्रयोग कर सारणी की पूर्ति करें और नीचे दिए गए प्रश्नों का उत्तर दें। यदि आँकड़े कुछ वर्षों के नहीं हैं, तो उन्हें नज़रअंदाज़ किया जा सकता है।

तालिका 2.2 स. घ. उ. और रोजगार में प्राथमिक क्षेत्रक की हिस्सेदारी

	1973-74	1977-78	2013-14	2017-18
स. घ. उ. में हिस्सेदारी				
रोजगार में हिस्सेदारी				

40 वर्षों में प्राथमिक क्षेत्रक में आप क्या परिवर्तन देखते हैं?

2. सही उत्तर का चयन करें –

अल्प बेरोजगारी तब होती है जब लोग –

- (अ) काम करना नहीं चाहते हैं।
- (ब) सुस्त ढंग से काम कर रहे हैं।
- (स) अपनी क्षमता से कम काम कर रहे हैं।
- (द) उनके काम के लिए भुगतान नहीं किया जाता है।

3. विकसित देशों में देखे गए लक्षण की भारत में हुए परिवर्तनों से तुलना करें और वैषम्य बतायें। भारत में क्षेत्रकों के बीच किस प्रकार के परिवर्तन वर्णित थे, जो नहीं हुए?

4. हमें अल्प बेरोजगारी के संबंध में क्यों विचार करना चाहिए?

अतिरिक्त रोजगार का सृजन कैसे हो?

उपर्युक्त चर्चा से हम देख सकते हैं कि कृषि क्षेत्र में अल्प बेरोजगारी की गंभीर स्थिति बनी हुई है। कुछ लोग ऐसे हैं जिन्हें बिल्कुल रोजगार नहीं मिला है। लोगों के लिए रोजगार की वृद्धि कैसे की जा सकती है? हम कुछ तरीकों को देखते हैं।

हम लक्ष्मी और उसके दो हेक्टेयर असिंचित भूखंड का उदाहरण लेते हैं। उसके परिवार की भूमि की सिंचाई हेतु एक कुएँ का निर्माण करने के लिए सरकार कुछ मुद्रा व्यय कर सकती है या बैंक ऋण प्रदान कर सकता है। तब लक्ष्मी अपनी भूमि की सिंचाई करने में सक्षम होगी और रबी मौसम में एक दूसरी फसल गेहूँ उपजाती है। हम मान लेते हैं कि एक हेक्टेयर गेहूँ की फसल दो लोगों को 50 दिनों (बीज डालने, पानी देने, खाद डालने और कटाई में) तक रोजगार प्रदान कर सकती है। अतः परिवार के दो अन्य सदस्यों को अपनी जमीन में रोजगार मिल सकता है। अब मान लेते हैं कि ऐसे कई खेतों की सिंचाई के लिए एक नये बाँध का निर्माण किया जाता है अथवा एक नहर खोदी जाती है। इससे कृषि क्षेत्र में रोजगार के अनेक अवसर सृजित हो सकेंगे और अल्प बेरोजगारी की समस्या अपने-आप कम हो जाएगी।



अब मान लेते हैं कि लक्ष्मी और दूसरे किसान पहले की तुलना में अधिक उत्पादन करते हैं। उन्हें कुछ उत्पाद बेचने की भी आवश्यकता होगी? इसके लिए उन्हें अपना उत्पाद नजदीक के शहर में ले जाने की आवश्यकता हो सकती है। यदि सरकार परिवहन और फसलों के भण्डारण पर अथवा बेहतर ग्रामीण सड़कों के निर्माण पर कुछ पैसा निवेश करती है तो छोटे ट्रक सब जगह पहुँच जाते हैं। इस तरीके से लक्ष्मी जैसे अनेक किसान, जिन्हें अब पानी की सुविधा उपलब्ध है, फसलों की उपज और विक्रय कर सकते हैं। इस कार्य से केवल किसानों को ही उत्पादक रोजगार उपलब्ध नहीं हो सकता है, बल्कि परिवहन और व्यापार जैसी सेवाओं में लगे लोगों को भी रोजगार प्राप्त हो सकता है।

लक्ष्मी की ज़रूरत केवल पानी तक ही सीमित नहीं है। खेती करने के लिए उसे बीजों, उर्वरकों, कृषिगत उपकरणों और पानी निकालने के लिए पम्पसेटों की भी ज़रूरत है। एक निर्धन किसान होने के कारण वह सभी चीजों पर खर्च नहीं कर सकती। इसलिए उसे साहूकारों से पैसा उधार लेना होगा और उच्च व्याज दर पर वापस करना पड़ेगा। यदि स्थानीय बैंक उचित व्याज दर पर उसे साख प्रदान करता है, तो वह इन सभी चीजों को उचित समय पर खरीदने और अपनी भूमि पर खेती करने में सक्षम होगी। तात्पर्य यह है कि पानी के

हरियाणा में गुड़ निर्माण



साथ-साथ कृषि में सुधार के लिए किसानों को सस्ते कृषि साख भी प्रदान करने की ज़रूरत है। हम अध्याय-4 मुद्रा एवं साख में कुछ आवश्यकताओं का अध्ययन करेंगे।

हम एक अन्य तरीके से इस समस्या का समाधान कर सकते हैं। वह तरीका है अर्द्ध-ग्रामीण क्षेत्रों में उन उद्योगों और सेवाओं की पहचान करना और उन्हें बढ़ावा देना, जहाँ बहुत अधिक लोग नियोजित किए जा सकें। उदाहरण के लिए, मान लेते हैं कि अनेक किसान अरहर और मटर (दलहन फसलें) उपजाने का निर्णय करते हैं। इनकी वसूली और प्रसंस्करण के लिए तथा शहरों में विक्रय करने के लिए दाल मिल की स्थापना एक ऐसा ही उदाहरण है। शीत भण्डारण गृहों के खुलने से किसानों को एक अवसर मिलेगा कि वे अपने आलू और प्याज जैसे उत्पादों का भण्डारण कर सके और अच्छी कीमत मिलने पर बेच सकें। वन क्षेत्रों के निकटवर्ती गाँवों में हम शहद संग्रह केन्द्रों की शुरुआत कर सकते हैं, जहाँ किसान वनों से प्राप्त शहद बेच सकें। सज्जियों और कृषिगत उत्पादों, जैसे आलू, शकरकंद, चावल, गेहूँ, टमाटर और फल इत्यादि, जिसे बाहरी बाजारों में बेचा जा सके, के लिए प्रसंस्करण उद्योगों की स्थापना की जा सकती है। यह अर्द्ध-ग्रामीण क्षेत्रों में स्थित उद्योगों में रोजगार प्रदान करेगा।

आपके विचार से आपके क्षेत्र में किस समूह के लोग बेरोजगार अथवा अल्प बेरोजगार हैं? क्या आप कुछ उपाय सुझा सकते हैं, जिन पर अमल किया जा सके?

क्या आप जानते हैं कि भारत में 60 प्रतिशत जनसंख्या 5-29 वर्ष आयु की है। इनमें से 51 प्रतिशत के लगभग ही विद्यालय जाते हैं। शोष, खास करके 18 वर्ष या उससे कम आयु के बच्चे विद्यालय नहीं जाते हैं। वे या तो घर पर रहते होंगे या उनमें से अधिकतर बाल श्रमिक के रूप में काम कर रहे होंगे। यदि ये बच्चे भी विद्यालय जाने लगें तो हमें और अधिक भवनों,

अध्यापकों और अन्य कर्मचारियों की आवश्यकता होगी। योजना आयोग (पूर्व) वर्तमान में नीति आयोग द्वारा किए गए एक अध्ययन के अनुसार, अकेले शिक्षा क्षेत्र में लगभग 20 लाख रोजगारों का सृजन किया जा सकता है। इसी प्रकार, यदि हमें स्वास्थ्य की स्थिति में सुधार करना है तो हमें ग्रामीण क्षेत्रों में काम करने वाले और अधिक डॉक्टरों, नर्सों और स्वास्थ्य कर्मचारियों की आवश्यकता पड़ेगी। ये कुछ ऐसे तरीके हैं जिनसे रोजगार का सृजन होगा और हम विकास के महत्वपूर्ण पहलुओं पर विचार कर पाने में भी सक्षम होंगे, जिन पर हम अध्याय-1 में चर्चा कर चुके हैं।

प्रत्येक राज्य या प्रदेश में वर्हाँ के निवासियों की आय और उनके रोजगार में वृद्धि करने की संभावना होती है। यह पर्यटन अथवा क्षेत्रीय शिल्प उद्योग अथवा सूचना प्रौद्योगिकी जैसी नवीन सेवाओं के माध्यम से हो सकता है। इनमें से कुछ के लिए समुचित योजना एवं सरकारी सहायता की आवश्यकता होगी। उदाहरण के लिए, योजना आयोग के अध्ययन के अनुसार यदि पर्यटन क्षेत्र में सुधार होता है तो हम प्रतिवर्ष 35 लाख से अधिक लोगों को अतिरिक्त रोजगार प्रदान कर सकते हैं।

हम जानते हैं कि चर्चा किए गए कुछ सुझावों के अमल में लंबा समय लगेगा। अतः छोटी अवधि के लिए हमें कुछ द्रुत उपायों की ज़रूरत है। इसे ध्यान में रखते हुए केन्द्र सरकार ने अभी भारत के लगभग 625 जिलों में काम का अधिकार लागू करने के लिए एक कानून बनाया है। इसे महात्मा गांधी



राष्ट्रीय ग्रामीण रोजगार गारंटी अधिनियम-2005

(म.गाँ.रा.ग्रा.रो.गा.अ.-2005) कहते हैं। म.गाँ.रा.ग्रा.रो.गा.अ.-2005 के अन्तर्गत उन सभी लोगों, जो काम करने में सक्षम हैं और जिन्हें काम की ज़रूरत है, को सरकार द्वारा ग्रामीण क्षेत्रों में वर्ष में 100 दिन के रोजगार की गारंटी दी गई है। यदि सरकार रोजगार उपलब्ध कराने में असफल रहती है तो वह लोगों को बेरोजगारी भत्ता देगी। अधिनियम के अन्तर्गत उस तरह के कामों को वरीयता दी जाएगी, जिनसे भविष्य में भूमि से उत्पादन बढ़ाने में मदद मिलेगी।

आओ—इन पर विचार करें

1. आपके विचार से म.गाँ.रा.ग्रा.रो.गा.अ. को 'काम का अधिकार' क्यों कहा गया है?
2. कल्पना कीजिए, कि आप ग्राम के प्रधान हैं और उस हैसियत से कुछ ऐसे क्रियाकलापों का सुझाव दीजिए जिसे आप मानते हैं कि उससे लोगों की आय में वृद्धि होगी और उसे इस अधिनियम के अन्तर्गत शामिल किया जाना चाहिए। चर्चा करें।
3. यदि किसानों को सिंचाई और विपणन सुविधाएँ उपलब्ध कराई जाती हैं तो रोजगार और आय में वृद्धि कैसे होगी?
4. शहरी क्षेत्रों में रोजगार में वृद्धि कैसे की जा सकती है?

सुंगठित और असुंगठित के रूप में क्षेत्रकों का विभाजन

अब हम आर्थिक कार्यों को विभाजित करने के एक अन्य तरीके का परीक्षण करते हैं। इसे लोगों के नियोजित होने के आधार पर देखते हैं। उनके काम करने की शर्तें क्या हैं? क्या कोई नियम और विनियम है, जिनका उनके रोज़गार के संदर्भ में अनुपालन किया जाता है?

कान्ता

कान्ता एक कार्यालय में काम करती है। वह सुबह 9.30 से शाम 5.30 तक कार्यालय में रहती है। वह नियमित रूप से प्रत्येक माह नियमों के तहत भविष्य निधि भी प्राप्त करती है। उसे चिकित्सीय और अन्य भत्ते भी मिलते हैं। कान्ता रविवार को कार्यालय नहीं जाती है। इस दिन सबेतन अवकाश होता है। उसने जब नौकरी आरम्भ की थी, तब उसे एक नियुक्ति-पत्र दिया गया था जिसमें नौकरी संबंधी निवंधन और शर्तों का उल्लेख किया गया था।



कमल

कमल, कान्ता का पड़ोसी है। वह नज़दीक के किराना दुकान में दैनिक मज़दूरी करने वाला श्रमिक है। वह सुबह 7.30 बजे दुकान पर जाता है और शाम 8 बजे तक काम करता है। उसे अपनी मज़दूरी के अतिरिक्त अन्य कोई भत्ता नहीं मिलता है। जिस दिन वह काम नहीं करता है, उस दिन की मज़दूरी उसे नहीं मिलती है। उसे कोई छुट्टी या सवेतन अवकाश नहीं मिलता है। उसे कोई औपचारिक-पत्र नहीं मिला है, जिसमें दुकान में नियुक्ति के बारे में कहा गया हो। उसका नियोक्ता उसे किसी भी समय काम से हटने के लिए कह सकता है।

क्या आप कान्ता और कमल के रोज़गार की परिस्थितियों में अन्तर देखते हैं?

कान्ता संगठित क्षेत्रक में काम करती है। संगठित क्षेत्रक में वे उद्यम अथवा कार्य-स्थान आते हैं जहाँ रोजगार की अवधि नियमित होती है और इसलिए लोगों के पास सुनिश्चित काम होता है। वे क्षेत्रक सरकार द्वारा पंजीकृत होते हैं और उन्हें सरकारी नियमों एवं विनियमों का अनुपालन करना होता है। इन नियमों एवं विनियमों का अनेक विधियों, जैसे, कारखाना अधिनियम, न्यूनतम मजदूरी अधिनियम, सेवानुदान अधिनियम, दुकान एवं प्रतिष्ठान अधिनियम, इत्यादि में उल्लेख किया

गया है। इसे संगठित क्षेत्रक कहते हैं क्योंकि इसकी कुछ औपचारिक प्रक्रिया एवं कार्यविधि है। कुछ लोग किसी के द्वारा नियोजित नहीं होते बल्कि वे स्वतः काम कर सकते हैं। परन्तु वे भी अपने को सरकार के समक्ष पंजीकृत कराते हैं और नियमों एवं विनियमों का अनुपालन करते हैं।

संगठित क्षेत्रक के कर्मचारियों को रोज़गार-सुरक्षा के लाभ मिलते हैं। उनसे एक निश्चित समय तक ही काम करने की आशा की जाती है। यदि वे अधिक काम करते हैं तो नियोक्ता द्वारा उन्हें अतिरिक्त वेतन दिया जाता है। वे नियोक्ता से कई

दूसरे लाभ भी प्राप्त करते हैं। ये लाभ क्या हैं? सबेतन छुट्टी, अवकाश काल में भुगतान, भविष्य निधि, सेवानुदान इत्यादि पाते हैं। वे चिकित्सीय लाभ पाने के हकदार होते हैं और नियमों के अनुसार कारखाना मालिक को पेयजल और सुरक्षित कार्य-पर्यावरण जैसी सुविधाओं को सुनिश्चित करना होता है। जब वे सेवानिवृत होते हैं, तो पेंशन भी प्राप्त करते हैं।

इसके विपरीत, कमल असंगठित क्षेत्रक में काम करता है। असंगठित क्षेत्रक छोटी-छोटी और बिखरी इकाइयों, जो अधिकांशतः सरकारी नियंत्रण से बाहर होती हैं, से निर्मित होता है। इस क्षेत्रक के नियम और विनियम तो होते हैं परंतु उनका अनुपालन नहीं होता है। वे कम बेतन वाले

रोजगार हैं और प्रायः नियमित नहीं हैं। यहाँ अतिरिक्त समय में काम करने, सबेतन छुट्टी, अवकाश, बीमारी के कारण छुट्टी इत्यादि का कोई प्रावधान नहीं है। रोजगार सुरक्षित नहीं है। श्रमिकों को बिना किसी कारण काम से हटाया जा सकता है। कुछ मौसमों में जब काम कम होता है, तो कुछ लोगों को काम से छुट्टी दे दी जाती है। बहुत से लोग नियोक्ता की पसन्द पर निर्भर होते हैं।

इस क्षेत्रक में काफी संख्या में लोग अपने-अपने छोटे कार्यों, जैसे- सड़कों पर विक्रय अथवा मरम्मत कार्य में स्वतः नियोजित हैं। इसी प्रकार किसान अपने खेतों में काम करते हैं और ज़रूरत पड़ने पर मजदूरी पर श्रमिकों को लगाते हैं।

आओ—इन पर विचार करें

- निम्नलिखित उदाहरणों को देखें। इनमें से कौन असंगठित क्षेत्रक की गतिविधियाँ हैं?
 - विद्यालय में पढ़ाता एक शिक्षक
 - बाजार में अपनी पीठ पर सीमेन्ट की बोरी ढोता हुआ एक श्रमिक
 - अपने खेत की सिंचाई करता एक किसान
 - अस्पताल में मरीज का इलाज करता एक डॉक्टर
 - एक ठेकेदार के अधीन काम करता एक दैनिक मजदूरी वाला श्रमिक
 - एक बड़े कारखाने में काम करने जाता एक कारखाना श्रमिक
 - अपने घर में काम करता एक करघा बुनकरा।
- संगठित क्षेत्रक में नियमित काम करने वाले एक व्यक्ति और असंगठित क्षेत्रक में काम करने वाले किसी दूसरे व्यक्ति से बात करें। सभी पहलुओं पर उनकी कार्य-स्थितियों की तुलना करें।
- असंगठित और संगठित क्षेत्रक के बीच आप विभेद कैसे करेंगे? अपने शब्दों में व्याख्या करें।
- संगठित एवं असंगठित क्षेत्रक में भारत के सभी श्रमिकों की अनुमानित संख्या नीचे दी गई सारणी में दी गई है। सारणी को सावधानी से पढ़ें। विलुप्त आँकड़ों की पूर्ति करें और प्रश्नों का उत्तर दें।

तालिका 2.2 – विभिन्न क्षेत्रकों में श्रमिकों की संख्या (दस लाख में)

क्षेत्रक	संगठित	असंगठित	कुल
प्राथमिक	1		232
द्वितीयक	41	74	115
तृतीयक	40	88	128
कुल	82		
कुल प्रतिशत में			100%

- असंगठित क्षेत्रक में कृषि में लगे लोगों का प्रतिशत क्या है?
- क्या आप सहमत हैं कि कृषि असंगठित क्षेत्रक की गतिविधि है? क्यों?
- यदि हम सम्पूर्ण देश पर नजर डालते हैं तो पाते हैं कि भारत में _____ % श्रमिक असंगठित क्षेत्रक में हैं। भारत में लगभग _____ % श्रमिकों को ही संगठित क्षेत्रक में रोजगार उपलब्ध है।

असंगठित क्षेत्रक के श्रमिकों का संरक्षण कैसे हो?

संगठित क्षेत्रक अत्यधिक माँग पर ही रोजगार प्रस्तावित करता है। लेकिन संगठित क्षेत्रक में रोजगार के अवसरों में अत्यंत धीमी गति से बृद्धि हो रही है। यह भी आम तौर पर पाया जाता है कि संगठित क्षेत्रक, असंगठित क्षेत्रक के रूप में काम करते हैं। वे ऐसी रणनीति, कर वंचन एवं श्रमिकों को संरक्षण प्रदान करने वाली विधियों के अनुपालन से बचने के लिए अपनाते हैं। परिणामतः बहुत से श्रमिक असंगठित क्षेत्रक में काम करने के लिए विवश हुए हैं, जहाँ बहुत कम वेतन मिलता है। उनका प्रायः शोषण किया जाता है और उन्हें उचित मजदूरी नहीं दी जाती है। उनकी आय कम है और नियमित नहीं है। इस रोजगार में संरक्षण नहीं है और न ही इसमें कोई लाभ है।

सन् 1990 से यह भी देखा गया है कि संगठित क्षेत्रक के बहुत अधिक श्रमिक अपना रोजगार खोते जा रहे हैं। ये लोग असंगठित क्षेत्रक में कम वेतन पर काम करने के लिए विवश हैं। अतः असंगठित क्षेत्रक में और अधिक रोजगार की ज़रूरत के अलावा श्रमिकों को संरक्षण और सहायता की भी आवश्यकता है।



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ये लाचार लोग कौन हैं जिन्हें संरक्षण की आवश्यकता है? ग्रामीण क्षेत्रों में, असंगठित क्षेत्रक मुख्यतः भूमिहीन कृषि श्रमिकों, छोटे और सीमांत किसानों, फसल बँटाईदारों और कारीगरों (जैसे बुनकरों, लुहारों, बढ़ी और सुनार) से रचित होता है। भारत में लगभग 80 प्रतिशत ग्रामीण परिवार छोटे और सीमांत किसानों की श्रेणी में आते हैं। इन किसानों को समय से बीज, कृषि-उपकरणों, साख, भण्डारण सुविधा और विपणन केन्द्र की पर्याप्त सुविधा उपलब्ध कराने की ज़रूरत है।

शहरी क्षेत्रों में असंगठित क्षेत्रक मुख्यतः लघु उद्योगों के श्रमिकों, निर्माण, व्यापार एवं परिवहन में कार्यरत आकस्मिक श्रमिकों और सड़कों पर विक्रेता का काम करने वालों, सिर पर बोझा ढोने वाले श्रमिकों, वस्त्र-निर्माण करने वालों और कबाड़ उठाने वालों से रचित है। लघु उद्योगों को भी कच्चे माल की प्राप्ति और उत्पाद के विपणन के लिए सरकारी मदद की आवश्यकता होती है। आकस्मिक श्रमिकों को शहरी और ग्रामीण दोनों क्षेत्रों में संरक्षण दिए जाने की ज़रूरत है।

हम यह भी पाते हैं कि बहुसंख्यक श्रमिक अनुसूचित जाति, जनजाति और पिछड़ी जातियों से हैं, जो असंगठित क्षेत्रक में रोजगार करते हैं। ये श्रमिक अनियमित और कम मजदूरी पर काम करने के अलावा सामाजिक भेदभाव के भी शिकार हैं। अतः आर्थिक एवं सामाजिक विकास के लिए असंगठित क्षेत्रक के श्रमिकों को संरक्षण और सहायता अनिवार्य है।

जब कारखाने बंद हो जाते हैं तब अनेक नियमित श्रमिक सञ्जावाँ बेचते या ठेला खींचते या कुछ अन्य काम करते देखे जाते हैं।

स्मरण कीजिए

हमारे चारों ओर अनेक आर्थिक गतिविधियाँ संचालित होती हैं। उन पर तर्कसंगत ढंग से विचार करने के लिए वर्गीकरण की प्रक्रिया अपरिहार्य है। हम क्या निष्कर्ष चाहते हैं, इस आधार पर वर्गीकरण की अनेक कसौटियाँ हो सकती हैं। वर्गीकरण की प्रक्रिया वस्तुस्थिति का मूल्यांकन करने में सहायता करती है।

आर्थिक गतिविधियों को तीन क्षेत्रकों- प्राथमिक, द्वितीयक और तृतीयक में विभाजित करने के लिए 'कार्य के स्वभाव' को कसौटी की रूप में उपयोग किया गया। इस वर्गीकरण के आधार पर हम भारत में कुल उत्पादन और रोजगार की पद्धति का विश्लेषण करने में समर्थ हुए। इसी प्रकार, हमने आर्थिक गतिविधियों को संगठित और असंगठित क्षेत्रक में विभाजित किया और इस विभाजन का प्रयोग इन दो क्षेत्रकों में रोजगार की स्थिति देखने के लिए किया।

वर्गीकरण अभ्यासों से व्युत्पन्न सबसे महत्वपूर्ण निष्कर्ष क्या थे? वे समस्याएँ और समाधान क्या थे, जिनकी ओर संकेत किया गया? क्या आप जानकारियों को निम्नलिखित सारणी में संक्षिप्त रूप में व्यक्त कर सकते हैं?

तालिका 2.4 आर्थिक क्रियाकलापों का वर्गीकरण

क्षेत्रक	इस्तेमाल की गई कसौटी	सबसे महत्वपूर्ण निष्कर्ष	इंगित समस्याएँ और उनका समाधान कैसे किया जा सकता है?
प्राथमिक द्वितीयक तृतीयक	कार्य का स्वभाव		
संगठित असंगठित			

स्वामित्व आधारित क्षेत्रक- सार्वजनिक और निजी क्षेत्रक

आर्थिक गतिविधियों को क्षेत्रकों में वर्गीकृत करने का एक अन्य तरीका हो सकता है— परिसंपत्तियों का स्वामी और सेवाओं की उपलब्धता के लिए जिम्मेदार व्यक्ति कौन है? सार्वजनिक क्षेत्रक में, अधिकांश परिसंपत्तियों पर सरकार का स्वामित्व होता है और सरकार ही सभी सेवाएँ उपलब्ध कराती है। निजी क्षेत्रक में परिसंपत्तियों पर स्वामित्व और सेवाओं के वितरण की जिम्मेदारी एकल व्यक्ति या कंपनी के हाथों में होता है। रेलवे अथवा डाकघर सार्वजनिक क्षेत्रक के उदाहरण हैं, जबकि टाटा आयरन एंड स्टील कंपनी लिमिटेड (टिस्को) अथवा रिलायंस इंडस्ट्रीज लिमिटेड जैसी कम्पनियाँ निजी स्वामित्व में हैं।

निजी क्षेत्रक की गतिविधियों का ध्येय लाभ अर्जित करना होता है। इनकी सेवाओं को प्राप्त

करने के लिए हमें इन एकल स्वामियों और कंपनियों को भुगतान करना पड़ता है। सार्वजनिक क्षेत्रक का ध्येय केवल लाभ कमाना नहीं होता है। सरकार सेवाओं पर किए गए व्यय की भरपाई करों या अन्य तरीकों से करती है। आधुनिक दिनों में सरकार सभी तरह की गतिविधियों पर व्यय करती है। ये गतिविधियाँ क्या हैं? सरकार ऐसी गतिविधियों पर व्यय क्यों करती है? ज्ञात करें।

कई ऐसी चीजें हैं जिनकी आवश्यकता समाज के सभी सदस्यों को होती है, परन्तु जिन्हें निजी क्षेत्रक उचित कीमत पर उपलब्ध नहीं कराते हैं। क्यों? क्योंकि इनमें से कुछ चीज़ों पर बहुत अधिक पैसे खर्च करने पड़ते हैं, जो निजी क्षेत्रकों की क्षमता से बाहर होती हैं। इन चीज़ों का इस्तेमाल करने वाले हजारों लोगों से पैसा एकत्र

करना भी आसान नहीं है। फिर, यदि वे चीजों को उपलब्ध कराते हैं तो वे इसकी ऊँची कीमत वसूलते हैं। जैसे, सड़कों, पूलों, रेलवे, पत्तनों, बिजली आदि का निर्माण और बाँध आदि से सिंचाई की सुविधा उपलब्ध कराना। इसीलिए सरकार ऐसे भारी व्यय स्वयं उठाती है और सभी लोगों के लिए इन सुविधाओं को सुनिश्चित करती है।

कुछ गतिविधियाँ ऐसी हैं, जिन्हें सरकारी समर्थन की ज़रूरत पड़ती है। निजी क्षेत्रक उन उत्पादनों अथवा व्यवसायों को तब तक जारी नहीं रख सकते, जब तक सरकार उन्हें प्रोत्साहित नहीं करती है। जैसे, उत्पादन-मूल्य पर बिजली की बिक्री से बहुत से उद्योगों में वस्तुओं की उत्पादन-लागत में वृद्धि हो सकती है। अनेक इकाइयाँ, विशेषकर लघु इकाइयाँ बन्द हो सकती हैं। यहाँ सरकार उस दर पर बिजली उत्पादन और वितरण के लिए कदम उठाती है जिस पर ये उद्योग बिजली खरीद सकते हैं। सरकार लागत का कुछ अंश वहन करती है।

इसी प्रकार, भारत सरकार किसानों से उचित मूल्य पर गेहूँ और चावल खरीदती है। इसे अपने गोदामों में भण्डारित करती है और राशन-दुकानों के माध्यम से उपभोक्ताओं को कम मूल्य पर बेचती है। आपने कक्षा-9 में खाद्य-सुरक्षा अध्याय में इसके बारे में पढ़ा है। सरकार लागत का कुछ

भाग वहन करती है। इस प्रकार, सरकार किसानों और उपभोक्ताओं दोनों को सहायता पहुँचाती है।

अधिकतर आर्थिक गतिविधियाँ ऐसी हैं, जिनकी प्राथमिक जिम्मेदारी सरकार पर है। इन पर व्यय करना सरकार की अनिवार्यता है। जैसे-सभी के लिए स्वास्थ्य और शिक्षा सुविधाएँ उपलब्ध कराना। हमने पहले अध्याय में कुछ गतिविधियों पर विचार किया है। समुचित ढंग से विद्यालय चलाना और गुणात्मक शिक्षा, विशेषकर प्राथमिक शिक्षा उपलब्ध कराना सरकार का कर्तव्य है। भारत में निरक्षरों की संख्या विश्व में सबसे अधिक है।

इसी प्रकार, हम जानते हैं कि भारत के लगभग आधे बच्चे कुपोषण के शिकार हैं और उनमें से एक-चौथाई गंभीर रूप से बीमार हैं। हमने शिशु मृत्यु दर के बारे में पढ़ा है। ओडिशा (40) अथवा मध्य प्रदेश (48) का शिशु मृत्यु दर विश्व के कुछ निर्धनतम भागों से अधिक है। सरकार को भी मानव विकास के पक्षों, जैसे सुरक्षित पेयजल की उपलब्धता, निर्धनों के लिए आवासीय सुविधाएँ और भोजन एवं पोषण पर ध्यान देने की ज़रूरत है। सरकार का यह भी कर्तव्य है कि वह बजट बढ़ाकर अत्यन्त निर्धनों की और देश के पूर्णतया उपेक्षित भागों की देखभाल करे।

सारांश

इस अध्याय में हमने आर्थिक गतिविधियों को कुछ सार्थक समूहों में विभाजित करने के तरीकों का अध्ययन किया। इसका एक तरीका यह परीक्षण करना है कि गतिविधि प्राथमिक, द्वितीयक और तृतीयक क्षेत्रक में से किससे संबंधित है। भारत के विगत तीस वर्षों के आँकड़े प्रदर्शित करते हैं कि यद्यपि जी. डी. पी. में सबसे अधिक योगदान तृतीयक क्षेत्रक में उत्पादित वस्तुओं और सेवाओं का है, लेकिन रोज़गार अधिकांशतः प्राथमिक क्षेत्रक में ही मिलता है। हमने यह भी देखा है कि

देश में रोज़गार के अवसरों की वृद्धि के लिए क्या किया जा सकता है। दूसरे वर्गीकरण में हम संगठित या असंगठित क्षेत्रक में काम करने वाले लोगों पर विचार करते हैं। अधिकांशतः लोग असंगठित क्षेत्रक में काम कर रहे हैं और उनके लिए संरक्षण अनिवार्य है। हमने सार्वजनिक और निजी क्षेत्रकों की गतिविधियों के बीच अंतर का अध्ययन किया और देखा कि सार्वजनिक गतिविधि यों को कुछ निश्चित क्षेत्रों पर केन्द्रित करना अनिवार्य क्यों है।

34 आर्थिक विकास की समझ

अभ्यास

1. कोष्ठक में दिए गए सही विकल्प का प्रयोग कर रिक्त स्थानों की पूर्ति कीजिए –
 - (क) सेवा क्षेत्रक में रोजगार में उत्पादन के समान अनुपात में वृद्धि। (हुई है/नहीं हुई है)
 - (ख) क्षेत्रक के श्रमिक वस्तुओं का उत्पादन नहीं करते हैं। (तृतीयक/कृषि)
 - (ग) क्षेत्रक के अधिकांश श्रमिकों को रोजगार-सुरक्षा प्राप्त होती है। (संगठित/असंगठित)
 - (घ) भारत में अनुपात में श्रमिक असंगठित क्षेत्रक में काम कर रहे हैं। (बड़े/छोटे)
 - (ङ) कपास एक उत्पाद है और कपड़ा एक उत्पाद है। (प्राकृतिक/विनिर्मित)
 - (च) प्राथमिक, द्वितीयक और तृतीयक क्षेत्रकों की गतिविधियाँ हैं। (स्वतंत्र/परस्पर निर्भर)
2. सही उत्तर का चयन करें –
 - (अ) सार्वजनिक और निजी क्षेत्रक आधार पर विभाजित हैं:
 - (क) रोजगार की शर्तों
 - (ख) आर्थिक गतिविधि के स्वभाव
 - (ग) उद्यमों के स्वामित्व
 - (घ) उद्यम में नियोजित श्रमिकों की संख्या
 - (ब) एक वस्तु का अधिकांशतः प्राकृतिक प्रक्रिया से उत्पादन क्षेत्रक की गतिविधि है।
 - (क) प्राथमिक
 - (ख) द्वितीयक
 - (ग) तृतीयक
 - (घ) सूचना प्रौद्योगिकी
 - (स) किसी वर्ष में उत्पादित कुल मूल्य को स. घ. उ. कहते हैं।
 - (क) सभी वस्तुओं और सेवाओं
 - (ख) सभी अंतिम वस्तुओं और सेवाओं
 - (ग) सभी मध्यवर्ती वस्तुओं और सेवाओं
 - (घ) सभी मध्यवर्ती एवं अंतिम वस्तुओं और सेवाओं
 - (द) स.घ.उ. के पदों में वर्ष 2013-14 के बीच तृतीयक क्षेत्रक की हिस्सेदारी प्रतिशत है।
 - (क) 20 से 30
 - (ख) 30 से 40
 - (ग) 50 से 60
 - (घ) 60 से 70

3. निम्नलिखित का मेल कीजिए –

कृषि क्षेत्रक की समस्याएँ

1. असिंचित भूमि
2. फसलों का कम मूल्य
3. कर्ज भार
4. मंदी काल में रोजगार का अभाव
5. कटाई के तुरन्त बाद स्थानीय व्यापारियों को अपना अनाज बेचने की विवशता

कुछ संभावित उपाय

- (अ) कृषि-आधारित मिलों की स्थापना
- (ब) सहकारी विपणन समितियाँ
- (स) सरकार द्वारा खाद्यान्नों की वसूली
- (द) सरकार द्वारा नहरों का निर्माण
- (य) कम ब्याज पर बैंकों द्वारा साख उपलब्ध कराना

4. विषम की पहचान करें और बताइए क्यों?

- (क) पर्यटन-निर्देशक, धोबी, दर्जी, कुम्हार
- (ख) शिक्षक, डॉक्टर, सब्जी विक्रेता, वकील
- (ग) डाकिया, मोची, सैनिक, पुलिस कांस्टेबल
- (घ) एम.टी.एन.एल., भारतीय रेल, एयर इण्डिया, जेट एयरवेज, ऑल इण्डिया रेडियो।

5. एक शोध छात्र ने सूरत शहर में काम करने वाले लोगों का अध्ययन करके निम्न आँकड़े जुटाए –

कार्य स्थान	रोजगार की प्रकृति	श्रमिकों का प्रतिशत
सरकार द्वारा पंजीकृत कार्यालयों और कारखानों में	संगठित	15
औपचारिक अधिकार-पत्र सहित बाजारों में अपनी दुकान, कार्यालय और क्लिनिक		15
सड़कों पर काम करते लोग निर्माण श्रमिक, घरेलू श्रमिक		20
छोटी कार्यशालाओं में काम करते लोग, जो प्रायः सरकार द्वारा पंजीकृत नहीं हैं		

तालिका को पूरा कीजिए। इस शहर में असंगठित क्षेत्रक में श्रमिकों की प्रतिशतता क्या है?

6. क्या आप मानते हैं कि आर्थिक गतिविधियों का प्राथमिक, द्वितीयक एवं तृतीयक क्षेत्र में विभाजन की उपयोगिता है? व्याख्या कीजिए कि कैसे?
7. इस अध्याय में आए प्रत्येक क्षेत्रक को रोजगार और सकल घरेलू उत्पाद (स.घ.उ.) पर ही क्यों केन्द्रित करना चाहिए? क्या अन्य वाद-पदों का परीक्षण किया जा सकता है? चर्चा करें।
8. जीविका के लिए काम करने वाले अपने आसपास के वयस्कों के सभी कार्यों की लंबी सूची बनाइए। उन्हें आप किस तरीके से वर्गीकृत कर सकते हैं? अपने चयन की व्याख्या कीजिए।
9. तृतीयक क्षेत्रक अन्य क्षेत्रकों से कैसे भिन्न है? सोदाहरण व्याख्या कीजिए।
10. प्रच्छन्न बेरोजगारी से आप क्या समझते हैं? शहरी एवं ग्रामीण क्षेत्रों से उदाहरण देकर व्याख्या कीजिए।
11. खुली बेरोजगारी और प्रच्छन्न बेरोजगारी के बीच विभेद कीजिए।

12. “भारतीय अर्थव्यवस्था के विकास में तृतीयक क्षेत्रक कोई महत्वपूर्ण भूमिका नहीं निभा रहा है।” क्या आप इससे सहमत है? अपने उत्तर के समर्थन में कारण दीजिए।
13. भारत में सेवा क्षेत्रक दो विभिन्न प्रकार के लोग नियोजित करता हैं। ये लोग कौन हैं?
14. “असंगठित क्षेत्रक में श्रमिकों का शोषण किया जाता है।” क्या आप इस विचार से सहमत है? अपने उत्तर के समर्थन में कारण दीजिए।
15. अर्थव्यवस्था में गतिविधियाँ रोजगार की परिस्थितियों के आधार पर कैसे वर्गीकृत की जाती हैं?
16. संगठित और असंगठित क्षेत्रकों में विद्यमान रोजगार-परिस्थितियों की तुलना करें।
17. मनरेगा 2005 (MGNREGA 2005) के उद्देश्यों की व्याख्या कीजिए।
18. अपने क्षेत्र से उदाहरण लेकर सार्वजनिक और निजी क्षेत्रक की गतिविधियों एवं कार्यों की तुलना तथा वैषम्य कीजिए।
19. अपने क्षेत्र से एक-एक उदाहरण देकर निम्न तालिका को पूरा कीजिए और चर्चा कीजिए:

	सुव्यवस्थित प्रबंध वाले संगठन	कुव्यवस्थित प्रबंध वाले संगठन
सार्वजनिक क्षेत्रक		
निजी क्षेत्रक		

20. सार्वजनिक क्षेत्रक की गतिविधियों के कुछ उदाहरण दीजिए और व्याख्या कीजिए कि सरकार द्वारा इन गतिविधियों का कार्यान्वयन क्यों किया जाता है?
21. व्याख्या कीजिए कि एक देश के आर्थिक विकास में सार्वजनिक क्षेत्रक कैसे योगदान करता है?
22. असंगठित क्षेत्रक के श्रमिकों को निम्नलिखित मुद्दों पर संरक्षण की आवश्यकता है— मजदूरी, सुरक्षा और स्वास्थ्य। उदाहरण सहित व्याख्या कीजिए।
23. अहमदाबाद में किए गए एक अध्ययन में पाया गया कि नगर के 15,00,000 श्रमिकों में से 11,00,000 श्रमिक असंगठित क्षेत्रक में काम करते थे। वर्ष 1997–98 में नगर की कुल आय 600 करोड़ रुपए थी इसमें से 320 करोड़ रुपए संगठित क्षेत्रक से प्राप्त होती थी। इस आँकड़े को तालिका में प्रदर्शित कीजिए। नगर में और अधिक रोजगार-सृजन के लिए किन तरीकों पर विचार किया जाना चाहिए?
24. निम्नलिखित तालिका में तीनों क्षेत्रकों का सकल घरेलू उत्पाद (स.घ.उ.) रूपए (करोड़) में दिया गया है:

वर्ष	प्राथमिक	द्वितीयक	तृतीयक
2000	52,000	48,500	1,33,500
2013	8,00,500	10,74,000	38,68,000

- (क) वर्ष 2000 एवं 2013 के लिए स.घ.उ. में तीनों क्षेत्रकों की हिस्सेदारी की गणना कीजिए।
 (ख) इन आँकड़ों को अध्याय में दिए आलेख-2 के समान एक दण्ड-आलेख के रूप में प्रदर्शित कीजिए।
 (ग) दण्ड-आलेख से हम क्या निष्कर्ष प्राप्त करते हैं?

शिक्षक के लिए निर्देश

अध्याय 3 – मुद्रा और साख

मुद्रा एक मनमोहक और कौतूहल से भरा विषय है। विद्यार्थियों के लिए इस तत्व को उभारना महत्वपूर्ण है। मुद्रा का इतिहास और विभिन्न समयों में मुद्रा के अलग-अलग रूप अपने आप में एक रोचक कहानी पेश करते हैं। इस स्तर पर उद्देश्य यह है कि विद्यार्थी समझें और परखें कि किन सामाजिक परिस्थितियों में मुद्रा के कौन से रूप प्रयुक्त होते थे। मुद्रा के आधुनिक रूप बैंक प्रणाली से जुड़े हुए हैं। इस अध्याय के पहले भाग में मुख्य विचार यही है।

भारत की मौजूदा स्थिति में बैंकिंग प्रणाली के कम्प्यूटरीकरण से मुद्रा के नये रूपों का धीरे-धीरे विस्तार हो रहा है, इसके चलते विद्यार्थियों के पास इस विषय को अपने आप समझने के कई अवसर हैं। हमें ‘मुद्रा के कार्यों’ पर औपचारिक रूप से विचार करने की ज़रूरत नहीं है लेकिन इसे सवालों के रूप में उभरने दीजिए। ‘मुद्रा की उत्पत्ति’ (मुद्रा गुणक) या आधुनिक प्रणाली का पृष्ठाघान जैसे विषयों को अध्याय में नहीं रखा गया है, लेकिन अगर आप चाहें तो इन पर चर्चा कर सकते हैं।

इस अध्याय में आप देखेंगे कि मुद्रा स्टॉक, जनता के पास करेंसी तथा बैंकों में इनकी माँग-जमाओं से मिलकर बनता है। यह वह मुद्रा है। जिसका लोग अपनी इच्छानुसार उपयोग कर सकते हैं और सरकार को यह सुनिश्चित करना होता है कि मुद्रा प्रणाली सरलतापूर्वक काम करे। क्या होगा यदि सरकार यह घोषणा कर दे कि लोगों द्वारा उपयोग में लाये जा रहे कुछ करेंसी नोट, नई करेंसी से बदले जाने के लिये अमान्य हो जायेंगे? भारत में नवंबर 2016 में 500 और 1000 रुपये के करेंसी नोटों को अमान्य घोषित कर दिया गया। लोगों से कहा गया कि वे इन नोटों को एक निश्चित अवधि तक बैंकों में जमा कर दें और बदले में 500 तथा 2000 रुपये के नये नोट प्राप्त कर लें। इसे विमुद्रीकरण कहते हैं। तभी से लोगों को लेनदेन के लिए नकदी के स्थान पर बैंक जमाओं को प्रयोग करने के लिये भी प्रोत्साहित किया गया। अतः बैंक से बैंक हस्तांतरण, इंटरनेट मोबाइल फोन, चैक, ए.टी.एम. कार्ड, दुकानों पर पी.ओ.एस (Point of Sale) मशीन द्वारा नकदीरहित लेनदेन विधियाँ उपयोग में आईं। इनको लेनदेन के लिये नकदी की आवश्यकता को कम करने तथा भ्रष्टाचार को नियंत्रित करने के लिये प्रोत्साहित किया गया। विद्यार्थियों से विमुद्रीकरण की प्रक्रिया और प्रभाव पर बहस करने के लिये कहा जा सकता है। विद्यार्थियों को उन वृहत् क्षेत्रों का

कोलॉज बनाने के लिये कहा जा सकता है जिनमें नगद एवं नगदीरहित लेनदेन का प्रयोग किया जाता है और कौन-सा क्षेत्र तर्कसंगत एवं वैद्यार्थिक है? सभी विद्यार्थियों को यह बताना भी महत्वपूर्ण है कि, मौद्रिक लेनदेन के लिये प्लास्टिक कार्डों का उपयोग किया जा रहा है, लेकिन वे अपने आप में मुद्रा नहीं हैं।

साख आर्थिक जीवन का एक महत्वपूर्ण तत्व है और इसलिए इसे अवधारणात्मक स्तर पर समझना ज़रूरी है। अध्याय के दूसरे भाग में, इस पर नजर डाली गई है कि किसी भी साख व्यवस्था में किन पहलुओं को देखा जाता है तथा इसका लोगों पर क्या असर होता है। हम अपने आसपास की दुनिया में हजारों तरह की साख व्यवस्थाएँ देखते हैं। इसलिए, अच्छा होगा अगर विद्यार्थियों के परिवेश से जुड़ी साख-व्यवस्थाओं के ज़रिए उन्हें इसके विभिन्न पहलुओं से अवगत कराया जाए। साख से जुड़ा एक अन्य महत्वपूर्ण मुद्रा है कि यह सभी के लिए उपलब्ध हो, खासतौर से गरीबों के लिए और यथोचित शर्तों पर। हमें इस बात पर ज़ोर देना होगा कि यह लोगों का अधिकार है और इसके बिना इस वर्ग का बड़ा हिस्सा विकास प्रक्रिया से बाहर रह जाएगा। बहुत से नवीन प्रयास, जैसे कि ग्रामीण बैंकों के हस्तक्षेप से विद्यार्थियों को अवगत कराया जा सकता है लेकिन यह समझना ज़रूरी है कि हमारे पास सभी सवालों के जवाब नहीं हैं। हमें नये तरीके ढूँढ़ने की आवश्यकता है और यह विकासशील देशों के सामने सामाजिक चुनौतियों में से एक है।

जानकारी के स्रोत

इस अध्याय में औपचारिक और अनौपचारिक क्षेत्रके साख संबंधी आँकड़े राष्ट्रीय सांख्यिकी कार्यालय द्वारा ग्रामीण कर्जों पर किए गए सर्वेक्षण से लिये गए हैं (अखिल भारतीय ऋण तथा निवेश सर्वेक्षण, 70वाँ, 2013, एन. एस. ओ. द्वारा संचालित)। ग्रामीण बैंक पर जानकारी और आँकड़े अखबारों और वेबसाइट से ली गई हैं। बैंक संबंधित आँकड़ों की विस्तृत जानकारी या किसी विशिष्ट बैंक के बारे में जानने के लिए आप भारतीय रिजर्व बैंक (www.rbi.org) और संबंधित बैंकों की वेबसाइट पर जा सकते हैं। स्वयं सहायता समूहों पर आँकड़े राष्ट्रीय कृषि एवं ग्रामीण विकास बैंक की वेबसाइट पर उपलब्ध हैं (www.nabard.org)।



मुद्रा विनिमय का एक माध्यम

मुद्रा का इस्तेमाल हमारे रोज़ाना के जीवन का एक बहुत बड़ा हिस्सा है। अपने चारों तरफ देखिए, आप किसी एक दिन में मुद्रा से जुड़े कई सौदों की पहचान कर सकते हैं। क्या आप इनकी एक सूची बना सकते हैं? बहुत से लेन-देन में आप देखेंगे कि मुद्रा के जरिए वस्तुएँ खरीदी और बेची जा रही हैं। ऐसे कुछ लेन-देन में मुद्रा के बदले सेवाएँ प्रदान की जा रही हैं। लेकिन कुछ मामलों में हो सकता है कि लेन-देन होते वक्त मुद्रा का कोई आदान-प्रदान न हो, केवल बाद में भुगतान करने का वादा हो।

क्या आपने कभी सोचा है कि खरीददारी मुद्रा के जरिए क्यों होती है? कारण बहुत सरल है। जिस व्यक्ति के पास मुद्रा है, वह इसका विनिमय किसी भी वस्तु या सेवा खरीदने के लिए आसानी से कर सकता है। इसलिए हर कोई मुद्रा के रूप में भुगतान लेना पसंद करता है, फिर उस मुद्रा का इस्तेमाल अपनी ज़रूरत की चीजें खरीदने के लिए करता है। एक जूता निर्माता का उदाहरण देखते हैं। वह बाजार में जूता बेचकर गेहूँ खरीदना चाहता है। जूता बनाने वाला पहले जूतों के बदले मुद्रा प्राप्त करेगा और फिर इस मुद्रा का इस्तेमाल गेहूँ खरीदने के लिए करेगा।

जरा सोचिए कि जूता निर्माता यदि बिना मुद्रा का इस्तेमाल किए जूते का सीधे गेहूँ से विनिमय करता तो उसे कितनी कठिनाई होती। उसे गेहूँ उगाने वाले ऐसे किसान को खोजना पड़ता जो न

आपके गेहूँ के
लिए मैं आपको
जूते दूँगा।

केवल गेहूँ बेचना चाहता हो, बल्कि साथ में जूते भी खरीदना चाहता हो। अर्थात् दोनों पक्ष एक दूसरे से चीज़े खरीदने और बेचने

पर सहमति रखते हों। इसे

आश्यकताओं का दोहरा संयोग कहा जाता है। एक व्यक्ति जो वस्तु बेचने की इच्छा रखता है, वही वस्तु दूसरा व्यक्ति ख़रीदने की भी इच्छा रखता हो। वस्तु विनिमय प्रणाली में, जहाँ मुद्रा का उपयोग किये बिना वस्तुओं का विनिमय होता है, वहाँ आवश्यकताओं का दोहरा संयोग होना अनिवार्य विशिष्टता है।



मुझे जूते नहीं
चाहिए। मुझे कपड़े
चाहिए।

मुझे जूते चाहिए।
लेकिन मेरे पास गेहूँ
नहीं है।



इसकी तुलना में ऐसी अर्थव्यवस्था जहाँ मुद्रा का प्रयोग होता है, मुद्रा महत्वपूर्ण मध्यवर्ती भूमिका प्रदान करके आवश्यकताओं के दोहरे संयोग की ज़रूरत को खत्म कर देती है। फिर जूता निर्माता के लिए ज़रूरी नहीं रह जाता कि वो ऐसे किसान को ढूँढ़ें, जो न केवल उसके जूते

खरीदे बल्कि साथ-साथ उसको गेहूँ भी बेचे। उसे केवल अपने जूते के लिए खरीदार ढूँढ़ा है। एक बार उसने जूते, मुद्रा में बदल लिए तो वह बाजार में गेहूँ या अन्य कोई वस्तु खरीद सकता है। चूँकि मुद्रा विनिमय प्रक्रिया में मध्यस्थता का काम करती है, इसे विनिमय का माध्यम कहा जाता है।



आओ—इन पर विचार करें

- मुद्रा के प्रयोग से वस्तुओं के विनिमय में सहूलियत कैसे आती है?
- क्या आप कुछ ऐसे उदाहरण सोच सकते हैं, जहाँ वस्तुओं तथा सेवाओं का विनिमय या मजदूरी की अदायगी वस्तु विनिमय के जरिए हो रही है?

मुद्रा के आधुनिक रूप



प्रारंभिक आहत
सिक्के (लगभग 2500
वर्ष पुराने)



गुप्तकालीन
सिक्के



तुगलक
के सिक्के



अकबर
कालीन सोने
की मोहर



आधुनिक सिक्का

हमने देखा है कि मुद्रा ऐसी चीज़ है जो लेन-देन में विनिमय का माध्यम बन सकती है। सिक्कों के चलन से पहले तरह-तरह की चीज़ें मुद्रा के रूप में इस्तेमाल की जाती थीं। उदाहरण के लिए, बहुत प्रारंभिक काल से ही भारतीय अनाज और पशु का मुद्रा के रूप में इस्तेमाल करते थे। इसके बाद सोना, चाँदी और ताँबे जैसी धातुओं के सिक्कों का चलन हुआ, जिसका चलन पिछली सदी तक रहा।

करेंसी

मुद्रा के आधुनिक रूपों में करेंसी-कागज के नोट और सिक्के शामिल हैं। वे चीजें जो पहले मुद्रा के रूप में प्रयोग की जाती थीं, उसके विपरीत आधुनिक मुद्रा बहुमूल्य धातुओं जैसे सोना-चाँदी और ताँबे के बने सिक्कों से नहीं बनी है। अनाज और पशुओं की तरह वे रोजमर्रा की चीज़ें भी नहीं हैं। आधुनिक मुद्रा का इस प्रकार का अपना कोई इस्तेमाल नहीं है।

फिर, इसे विनिमय का माध्यम क्यों स्वीकार किया जाता है? इसे विनिमय का माध्यम इसलिए स्वीकार किया जाता है, क्योंकि किसी देश की सरकार इसे प्राधिकृत करती है।

भारत में भारतीय रिजर्व बैंक केंद्रीय सरकार की तरफ से करेंसी नोट जारी करता है। भारतीय

कानून के अनुसार, किसी व्यक्ति या संस्था को मुद्रा जारी करने की इजाजत नहीं है। इसके अलावा कानून विनिमय के माध्यम के रूप में रूपये का इस्तेमाल करने की वैधता प्रदान करता है, जिसे भारत में, सौदों में अदायगी के लिए मना नहीं किया जा सकता। भारत में कोई व्यक्ति कानूनी तौर पर रूपयों में अदायगी को अस्वीकार नहीं कर सकता। इसलिए, रूपया व्यापक स्तर पर विनिमय का माध्यम स्वीकार किया गया है।

बैंकों में निक्षेप

लोग मुद्रा बैंकों में निक्षेप के रूप में भी रखते हैं। किसी समय पर, लोगों को रोजमर्रा की आवश्यकताओं के लिए कुछ ही करेंसी की ज़रूरत होती है। उदाहरण के लिए, हर महीने के आखिर में वेतन बाले मजदूरों के अतिरिक्त नकद होता है। लोग इस अतिरिक्त नकद का क्या करते हैं? वे इसे बैंकों में अपने नाम से खाता खोलकर जमा कर देते हैं। बैंक ये जमा स्वीकार करते हैं और इस पर सूद भी देते हैं। इस तरह लोगों का धन बैंकों के पास सुरक्षित रहता है और इस पर सूद भी मिलता है। लोगों को अपनी आवश्यकता के अनुसार इसमें से धन निकालने की सुविधा भी उपलब्ध होती है। चूँकि बैंक खातों में जमा धन को माँग के जरिए निकाला जा सकता है, इसलिए इस जमा को माँग जमा कहा जाता है।

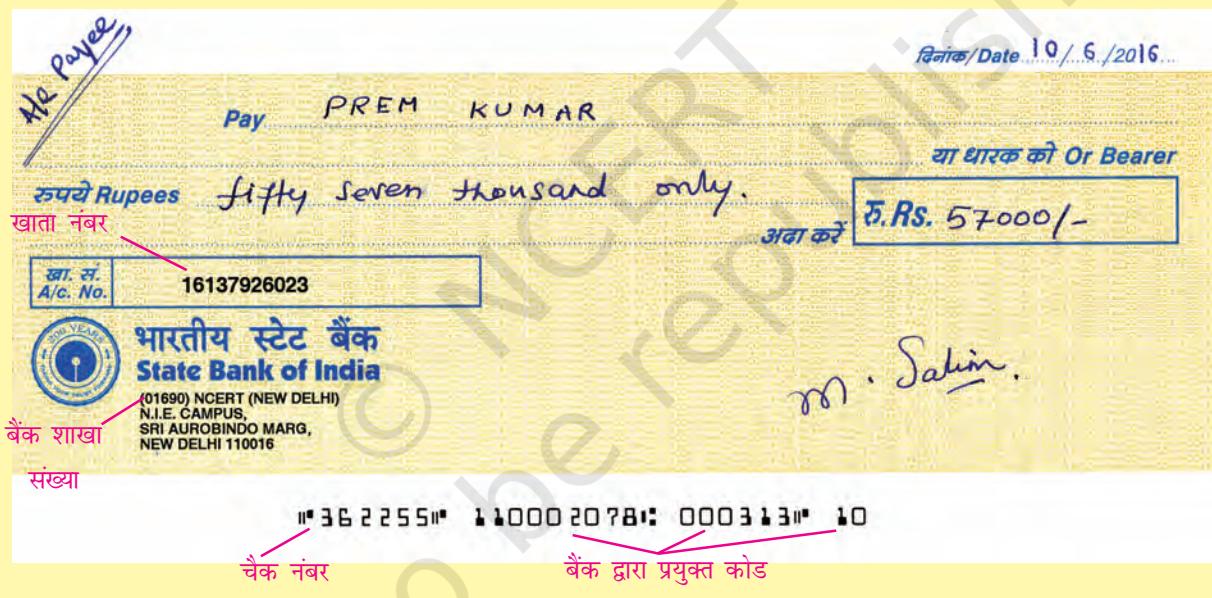
माँग जमा एक अन्य दिलचस्प सुविधा देता है। यह सुविधा इसे मुद्रा का (विनिमय का माध्यम) महत्वपूर्ण लक्षण प्रदान करती है। आपने नकद की बजाय चैक से भुगतान के बारे में सुना होगा। चैक से भुगतान के लिए भुगतानकर्ता, जिसका

किसी बैंक में खाता है, एक निश्चित रकम के लिए चैक काटता है। चैक एक ऐसा कागज़ है, जो बैंक को किसी व्यक्ति के खाते से चैक पर लिखे नाम के किसी दूसरे व्यक्ति को एक खास रकम का भुगतान करने का आदेश देता है।

आइए, यह जानने की कोशिश करते हैं कि चैक द्वारा भुगतान कैसे होता है तथा इसे एक उदाहरण के द्वारा करते हैं।

चैक द्वारा भुगतान

जूता निर्माता एम. सलीम को चमड़ा आपूर्तिकर्ता को भुगतान करना है और इसके लिए वह एक विशेष रकम का चैक लिखता है। अर्थात्, जूता निर्माता अपने बैंक को चमड़ा आपूर्तिकर्ता को यह रकम देने का आदेश देता है। चमड़ा आपूर्तिकर्ता यह चैक ले जाकर अपने बैंक खाते में जमा कर देता है। धन एक बैंक खाते से दूसरे बैंक खाते में कुछ दिनों में अंतरित हो जाता है। यह लेन-देन बिना नकद की अदायगी के पूरा हो जाता है।



इस तरह हम देखते हैं कि माँग जमा में मुद्रा के अनिवार्य लक्षण मिलते हैं। माँग जमा के बदले चैक लिखने की सुविधा से बिना नकद का इस्तेमाल किये सीधा भुगतान करना संभव हो जाता है। चूँकि माँग जमाओं को करेंसी के साथ-साथ व्यापक स्तर पर भुगतान का माध्यम स्वीकार किया जाता है, इसलिए

आधुनिक अर्थव्यवस्था में इसे भी मुद्रा समझा जाता है।

यहाँ आपको बैंक की भूमिका को याद रखना होगा। बैंकों के लिए इन जमा के बदले कोई भी माँग जमा एवं भुगतान नहीं होगा। मुद्रा के आधुनिक रूप-करेंसी और जमा-आधुनिक बैंक प्रणाली की कार्यप्रणाली से बहुत करीब से जुड़े हुए हैं।

मुद्रा और साख

41



आओ—इन पर विचार करें

1. एम. सलीम भुगतान के लिए 20,000 रु. नकद निकालना चाहते हैं। इसके लिए वह बैंक कैसे लिखेंगे?
2. सही उत्तर पर निशान लगाएँ—
 - (अ) सलीम और प्रेम के बीच लेन-देन के बाद
 - (क) सलीम के बैंक खाते में शेष बढ़ जाता है और प्रेम के बैंक खाते में शेष बढ़ जाता है।
 - (ख) सलीम के बैंक खाते में शेष घट जाता है और प्रेम के बैंक खाते में शेष बढ़ जाता है।
 - (ग) सलीम के बैंक खाते में शेष बढ़ जाता है और प्रेम के बैंक खाते में शेष घट जाता है।
3. माँग जमा को मुद्रा क्यों समझा जाता है?

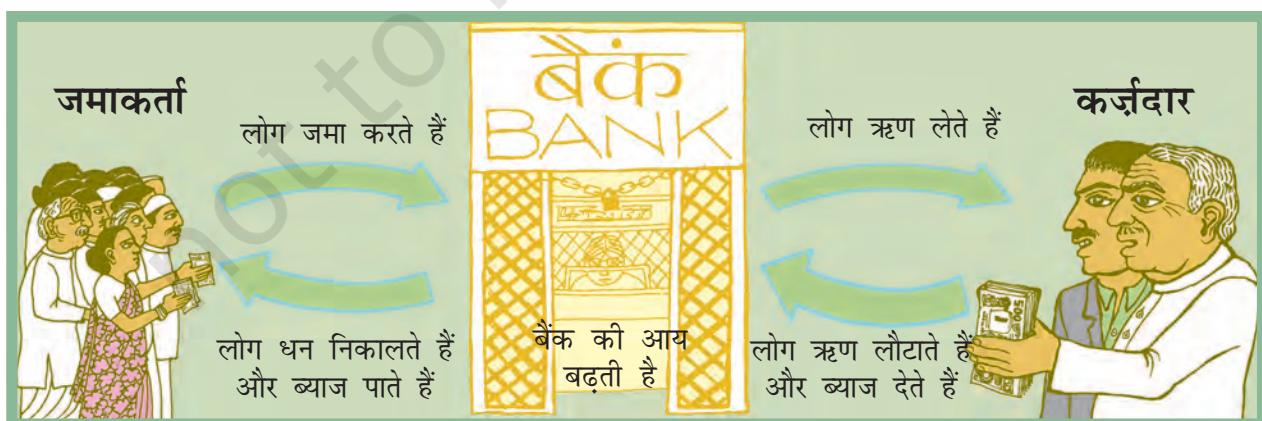
बैंकों की ऋण संबंधी गतिविधियाँ

बैंकों की कहानी को आगे बढ़ाते हैं। बैंक जनता से जो धन जमा खातों में स्वीकार करते हैं, उसका क्या करते हैं? यहाँ एक दिलचस्प क्रियाविधि काम कर रही है। बैंक जमा रकम का एक छोटा हिस्सा अपने पास नकद के रूप में रखते हैं। उदाहरण के लिए, आजकल भारत में बैंक जमा का केवल 15 प्रतिशत हिस्सा नकद के रूप में अपने पास रखते हैं। इसे किसी एक दिन में जमाकर्ताओं द्वारा धन निकालने की संभावना को देखते हुए यह प्रावधान किया जाता है। चूँकि किसी एक विशेष दिन में, केवल कुछ जमाकर्ता ही नकद निकालने के लिए आते हैं, इसलिए बैंक का काम इतने नकद से आराम से चल जाता है।

बैंक जमा राशि के एक बड़े भाग को ऋण देने के लिए इस्तेमाल करते हैं। विभिन्न आर्थिक

गतिविधियों के लिए ऋण की बहुत माँग रहती है। हम इसके बारे में आगे आने वाले खण्डों में और पढ़ेंगे। बैंक जमा राशि का लोगों की ऋण-आवश्यकताओं को पूरा करने के लिए इस्तेमाल करते हैं। इस तरह, बैंक जिनके पास अतिरिक्त राशि है (जमाकर्ता) एवं जिन्हें राशि की ज़रूरत है (कर्जदार) के बीच मध्यस्थिता का काम करते हैं। बैंक जमा पर जो ब्याज देते हैं उससे ज्यादा ब्याज ऋण पर लेते हैं। कर्जदारों से लिए गए ब्याज और जमाकर्ताओं को दिये गये ब्याज के बीच का अंतर बैंकों की आय का प्रमुख स्रोत है।

अगर सभी जमाकर्ता एक ही समय में अपनी धन राशि की माँग करने वैंक पहुँच जाएँ तो क्या होगा?



साख की दो विभिन्न स्थितियाँ

हमारी रोज़मरा की गतिविधियों में ऐसे बहुत से लेन-देन होते हैं, जहाँ किसी न किसी रूप में ऋण का प्रयोग होता है। ऋण (उधार) से हमारा तात्पर्य एक सहमति से है जहाँ साहूकार कर्जदार को धन, वस्तुएँ या सेवाएँ मुहैया करता है और बदले में भविष्य में कर्जदार से भुगतान करने का वादा लेता है। अब हम निम्नलिखित दो उदाहरणों के द्वारा देखते हैं कि ऋण की क्या भूमिका होती है?

(1) त्यौहार का मौसम

अब से दो महीने बाद त्यौहार का मौसम है और जूता निर्माता सलीम के पास शहर के एक बड़े व्यापारी से 3000 जोड़ी जूते की माँग आती है, जिसे उसे एक महीने के अन्दर पूरा करना है। उत्पादन के काम को समय पर पूरा करने के लिए सलीम को सिलाई और चिपकाने के काम के लिए अतिरिक्त मजदूर रखने की आवश्यकता है। उसे कच्चा माल भी खरीदना है। इन सभी खर्चों को पूरा करने के लिए सलीम दो स्रोतों से ऋण लेता है। पहला, वह चमड़ा व्यापारी को चमड़ा अभी देने का

प्रस्ताव रखता है और बाद में भुगतान करने का वादा करता है। दूसरा, वह इस बड़े व्यापारी से 1000 जूतों के लिए अग्रिम भुगतान के रूप में नकद कर्ज लेता है तथा महीना खत्म होने से पहले पूरा ऑर्डर पहुँचाने का वादा करता है।

महीने के आखिर में सलीम जूते पहुँचाने में कामयाब होता है। उसे अच्छा-खासा लाभ भी होता है और वह उधार लिए धन की अदायगी भी कर देता है।



सलीम उत्पादन के लिए कार्यशील पूँजी की ज़रूरत को ऋण के द्वारा पूरा करता है। ऋण उसे उत्पादन के कार्यशील खर्चों तथा उत्पादन को समय पर पूरा करने में मदद करता है और वह अपनी कमाई बढ़ा पाता है। इस प्रकार ऋण एक महत्वपूर्ण तथा सकारात्मक भूमिका अदा करता है।

(2) स्वप्ना की समस्या

एक छोटी किसान स्वप्ना अपनी 3 एकड़ जमीन पर मूँगफली उगाती है। वह इस उम्मीद पर कि फसल तैयार होने पर कर्ज को अदा कर देगी, खेती के खर्चों के लिए साहूकार से ऋण लेती है। फसल पर कीटनाशकों के हमले से फसल बर्बाद हो जाती है। हालाँकि स्वप्ना फसल पर महाँगी कीटनाशक दवाइयाँ छिड़कती हैं, उससे कोई खास फर्क नहीं पड़ता। वह साहूकार का कर्ज लौटाने में असफल रहती है और साल के अंदर यह कर्ज बड़ी रकम बन जाता है। अगले साल, स्वप्ना खेती के लिए दुबारा उधार लेती है। इस साल फसल सामान्य रहती है, लेकिन इतनी कमाई नहीं होती कि वह अपना कर्ज वापस कर सके। वह कर्ज में फँस जाती है। उसे कर्ज को चुकाने के लिए अपनी जमीन का कुछ हिस्सा बेचना पड़ता है।



ग्रामीण क्षेत्रों में साख की मुख्य माँग फसल उगाने के लिए होती है। फसल उगाने में बीज, खाद, कीटनाशक दवाओं, पानी, बिजली, उपकरणों की मरम्मत इत्यादि पर काफी खर्च होता है। इन आगतों को खरीदने और फसल की बिक्री होने के बीच कम से कम 3-4 महीने का अंतराल होता है। आमतौर से किसान ऋण के आरंभ में फसल उगाने के लिए उधार लेते हैं और फसल तैयार होने के बाद वापस कर देते हैं। उधार की अदायगी मुख्यतः फसल की कमाई पर निर्भर है।

आओ—इन पर विचार करें

- निम्नलिखित तालिका की पूर्ति कीजिए।

	सलीम	स्वप्ना
उन्हें ऋण की आवश्यकता क्यों पड़ी?		
जोखिम क्या था?		
परिणाम क्या हुए?		

- मान लीजिए, सलीम को व्यापारियों से ऑर्डर मिलते रहते हैं। 6 साल बाद उसकी स्थिति क्या होगी?
- कौन से कारण हैं, जो स्वप्ना की स्थिति को जोखिम भरा बनाते हैं? निम्नलिखित कारकों की चर्चा कीजिए— कीटनाशक दवाइयाँ, साहूकारों की भूमिका, मौसम।

ऋण की शर्तें

हर ऋण समझौते में ब्याज दर निश्चित कर दी जाती है, जिसे कर्जदार महाजन को मूल रकम के



स्वप्ना के मामले में फसल बर्बाद हो जाने से कर्ज की अदायगी असंभव हो गई। उसे कर्ज उतारने के लिए अपनी जमीन का कुछ हिस्सा बेचना पड़ा। ऋण ने स्वप्ना की कमाई को बढ़ाने के बजाय उसकी स्थिति बदतर कर दी। इसे आम भाषा में कर्ज-ज़ाल कहा जाता है। इस मामले में ऋण कर्जदार को ऐसी परिस्थिति में धकेल देता है, जहाँ से बाहर निकलना काफी कष्टदायक होता है।

एक स्थिति में ऋण आय बढ़ाने में सहयोग करता है, जिससे व्यक्ति की स्थिति पहले से बेहतर हो जाती है। दूसरी स्थिति में, फसल बर्बाद होने के कारण ऋण व्यक्ति को अपने जाल में फँसा देता है। स्वप्ना को कर्ज उतारने के लिए अपनी जमीन का एक हिस्सा बेचना पड़ता है। स्पष्ट है कि उसकी स्थिति पहले की तुलना में बदतर हुई। ऋण उपयोगी होगा या नहीं, यह परिस्थिति के खतरों और हानि होने पर प्राप्त सहयोग की संभावना पर निर्भर करता है।

साथ अदा करता है। इसके अलावा, उधारदाता कोई समर्थक ऋणाधार (गिरवी रखने के लिए) की माँग कर सकता है। समर्थक ऋणाधार ऐसी संपत्ति है, जिसका मालिक कर्जदार है (जैसे कि भूमि, इमारत, गाड़ी, पशु, बैंकों में पूँजी) और इसका इस्तेमाल वह उधारदाता को गारंटी देने के रूप में करता है, जब तक कि ऋण का भुगतान नहीं हो जाता। यदि कर्जदार उधार वापस नहीं कर पाता, तो उधारदाता को भुगतान प्राप्ति के लिए संपत्ति या समर्थक ऋणाधार बेचने का अधिकार होता है। संपत्ति — जैसे कि जमीन, बैंकों में जमा पूँजी, पशु इत्यादि समर्थक ऋणाधार के आम उदाहरण हैं, जिनका उपयोग कर्ज लेने के लिए किया जाता है।

आवास ऋण

मेघा ने घर खरीदने के लिए बैंक से 5 लाख रुपये का कर्ज लिया। इस कर्ज पर ब्याज की वार्षिक दर 12 प्रतिशत है और इस कर्ज को 10 साल में मासिक किश्तों में लौटाया जाना है। मेघा को बैंक से कर्ज लेने से पहले उसे अपनी नौकरी और वेतन संबंधी रिकार्ड दिखाने पड़ते हैं। बैंक नए घर के सभी कागज ऋणाधार के रूप में रख लेता है, जिन्हें मेघा द्वारा ब्याज समेत कर्ज लौटाने पर वापस किया जाएगा।

मेघा के आवास ऋण के निम्नलिखित विवरणों की पूर्ति करें –

ऋण राशि (रुपये में)	
ऋण-अवधि	
आवश्यक कागजात	
ब्याज दर	
अदायगी का स्वरूप	
समर्थक ऋणाधार	

ब्याज दर, समर्थक ऋणाधार, आवश्यक कागजात और भुगतान के तरीकों को सम्मिलित रूप से ऋण की शर्तें कहा जाता है। ऋण की शर्तों में एक ऋण व्यवस्था से दूसरी ऋण व्यवस्था में काफी फर्क आ जाता है। कर्ज की शर्तें उधारदाता और कर्जदार की प्रकृति पर भी निर्भर करती हैं। अगले भाग में ऐसे उदाहरण दिए गए हैं, जहाँ विभिन्न ऋण व्यवस्थाओं में ऋण की शर्तें अलग-अलग हैं।



आओ—इन पर विचार करें

- उधारदाता उधार देते समय समर्थक ऋणाधार की माँग क्यों करता है?
- हमारे देश की एक बहुत बड़ी आबादी निर्धन है। क्या यह उनके कर्ज लेने की क्षमता को प्रभावित करती है?
- कोष्ठक में दिए गए सही विकल्पों का चयन कर रिक्त स्थानों की पूर्ति करें –

ऋण लेते समय कर्जदार आसान ऋण शर्तों को देखता है। इसका अर्थ है (निम्न/उच्च) ब्याज दर, (आसान/कठिन) अदायगी की शर्तें, (कम/अधिक) समर्थक ऋणाधार एवं आवश्यक कागजात

विविध प्रकार के साख प्रबंध- एक गाँव का उदाहरण

रोहित और रंजन ने कक्षा में ऋण की शर्तों के बारे में पढ़ना खत्म किया था। वे अपने इलाके में प्रचलित विविध प्रकार के ऋण प्रबंधों को जानने को उत्सुक थे – कौन लोग उधार देते थे? कर्जदार कौन थे? ऋण की क्या शर्तें थीं? उन्होंने अपने गाँव के कुछ लोगों से बात करने का फैसला किया। आगे आप उनका लेखा पढ़ सकते हैं।



15, नवम्बर 2019, हम सीधा उन खेतों में जाते हैं जहाँ दिन के इस समय अधिकतर किसान और मजदूर काम कर रहे होंगे। खेतों में आलू की फसल लगी हुई है। पहले हम सोनपुर, एक छोटा-सा गाँव, जहाँ सिंचाई की सुविधाएँ मौजूद हैं, के एक छोटे किसान श्यामल से मिलते हैं।

श्यामल का कहना है कि उसे अपनी 1.5 एकड़ जमीन को जोतने के लिए हर मौसम में उधार लेने की ज़रूरत पड़ती है। कुछ साल पहले तक वह गाँव के महाजन से ऋण लेता था जिस पर उसे 5 प्रतिशत मासिक ब्याज देनी पड़ती थी (60 प्रतिशत वार्षिक)। पिछले कुछ वर्षों से श्यामल गाँव के एक कृषि व्यापारी से 3 प्रतिशत मासिक ब्याज की दर पर ऋण ले रहा है। जुताई के मौसम की शुरुआत होने पर व्यापारी ऋण पर कृषि संबंधित आगतें (जरूरतें) मुहैया करता है, जिसे फसल तैयार हो जाने पर वापस करना होता है।

ऋण पर ब्याज के अलावा व्यापारी किसानों से बाद लेता है कि वह अपनी फसल उसी को बेचेगा। इस तरह व्यापारी निश्चिन्त है कि ऋण की अदायगी समय से हो जायेगी। फसल की कीमतें फसल काटते समय कम होती हैं इसलिए वह किसानों से कम कीमत पर फसल खरीदकर और बाद में कीमत बढ़ने पर बेचकर भारी मुनाफा कमाता है। व्यापारी को उस समय फसल खरीदने से मुनाफा होता है। वह फसल सस्ते में खरीदकर बाद में कीमतें बढ़ने पर बेचता है।



अब हम अरुण से मिलते हैं जो एक किसान मजदूर के काम का निरीक्षण कर रहा है। अरुण के पास 7 एकड़ जमीन है। अरुण सोनपुर के उन कुछ लोगों में से है, जिसे खेती के लिए बैंक से ऋण मिला है। इस ऋण पर वार्षिक ब्याज दर 8.5 प्रतिशत है और इसे अगले तीन वर्षों में कभी भी लौटाया जा सकता है। अरुण की योजना है कि वे फसल तैयार होने पर अपनी उपज का कुछ हिस्सा बेचकर इस ऋण की अदाएंगी कर देगा। वह बाकी आलू की फसल को शीत भंडार गृह में रखकर बैंक से इसके बदले नया ऋण लेने के लिए दरखास्त देना चाहता है। बैंक उन किसानों को ऐसी सुविधा देने के लिए तैयार है जो पहले भी खेती के लिए उससे ऋण ले चुके हैं।

रमा निकट के खेत में कृषि मजदूर के रूप में काम करती है। साल में कई महीने रमा के पास कोई काम नहीं होता और उसे अपने रोजमरा के खर्चों के लिए कर्ज लेना पड़ता है। अचानक बीमार पड़ने पर या परिवार में किसी समारोह पर खर्च करने के लिए भी उसे कर्ज लेना पड़ता है। रमा कर्ज के लिए अपने मालिक पर, जो सोनपुर का मध्यवर्गीय भूस्वामी है, आश्रित है। भूस्वामी उसे 5 प्रतिशत मासिक ब्याज दर पर ऋण देता है। रमा उस कर्ज को भूस्वामी के यहाँ काम करके वापस करती है। अधिकांशतया, रमा को नया ऋण लेना पड़ जाता है, जबकि वह पुराना ऋण लौटा भी नहीं पाती है। वर्तमान में, उसे भूस्वामी के 5,000 रुपये देने हैं। यद्यपि भूस्वामी उसके साथ अच्छा व्यवहार नहीं करता, फिर भी वह उसके लिए लगातार काम करती है ताकि आवश्यकता पड़ने पर उसे ऋण मिल सके। रमा हमें बताती है कि सोनपुर में भूमिहीन लोगों के लिए ऋण का एकमात्र स्रोत भूस्वामी-नियोक्ता ही है।

सहकारी समितियों से ऋण

बैंकों के अलावा ग्रामीण क्षेत्रों में सस्ते ऋण का एक अन्य स्रोत सहकारी समितियाँ हैं। सहकारी समिति के सदस्य अपने संसाधनों को कुछ क्षेत्रों में सहयोग के लिए एकत्र करते हैं। कई प्रकार की सहकारी समितियाँ संभव है, जैसे-किसानों, बुनकरों एवं औद्योगिक मज़दूरों इत्यादि की सहकारी समितियाँ। कृषक सहकारी समिति सोनपुर के नज़दीक एक गाँव में काम करती है। इसके 2300 किसान सदस्य हैं। यह अपने सदस्यों से जमा प्राप्त करती है। इस जमा पूँजी को ऋणाधार मानते हुए, इस सहकारी समिति ने बैंक से बड़ा ऋण प्राप्त किया है। इस पूँजी का इस्तेमाल सदस्यों को कर्ज देने के लिए किया जाता है। यह ऋण लौटाने के बाद कर्ज का दूसरा दौर शुरू किया जा सकता है।

कृषक सहकारी समिति कृषि उपकरण खरीदने, खेती तथा कृषि व्यापार करने, मछली पकड़ने, घर बनाने और अन्य विभिन्न प्रकार के ख़र्चों के लिए ऋण मुहैया कराती है।



आओ—इन पर विचार करें

1. सोनपुर में ऋण के विभिन्न स्रोतों की सूची बनाइए।
2. ऊपर दिए हुए अनुच्छेदों में ऋण के विभिन्न प्रयोगों वाली पक्षियों को रेखांकित कीजिए।
3. सोनपुर के छोटे किसान, मध्यम किसान और भूमिहीन कृषि मज़दूर के लिए ऋण की शर्तों की तुलना कीजिए।
4. श्यामल की तुलना में अरुण को खेती से ज्यादा आय क्यों होगी?
5. क्या सोनपुर के सभी लोगों को सस्ती ब्याज दरों पर कर्ज मिल सकता है? किन लोगों को मिल सकता है?
6. सही उत्तर पर निशान लगाइए –
 - (क) समय के साथ, रमा का ऋण
 - बढ़ जाएगा
 - समान रहेगा
 - घट जाएगा
 - (ख) अरुण सोनपुर के उन लोगों में से है जो बैंक से उधार लेते हैं क्योंकि –
 - गाँव के अन्य लोग साहूकारों से कर्ज लेना चाहते हैं।
 - बैंक समर्थक ऋणाधार की माँग करते हैं जो कि हर किसी के पास नहीं होती।
 - बैंक ऋण पर ब्याज दरें उतनी ही हैं जितना कि व्यापारी लेते हैं।

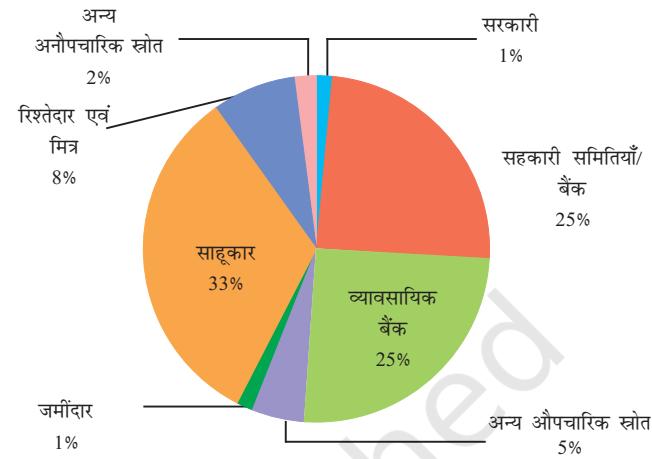
भारत में औपचारिक क्षेत्रक में साख

हमने ऊपर के उदाहरणों में देखा है कि लोग विभिन्न स्रोतों से ऋण प्राप्त करते हैं। विभिन्न प्रकार के ऋणों को दो वर्गों में बांटा जा सकता है – औपचारिक तथा अनौपचारिक क्षेत्रक ऋण। पहले वर्ग में बैंकों और सहकारी समितियों से लिए कर्ज आते हैं। अनौपचारिक उधारदाता में साहूकार, व्यापारी, मालिक, रिश्तेदार, दोस्त इत्यादि आते हैं। आलेख-1 में आप भारत के ग्रामीण परिवारों के लिए ऋण के विभिन्न स्रोतों को देख सकते हैं। क्या अधिक ऋण औपचारिक क्षेत्रक से आ रहा है या अनौपचारिक क्षेत्रक से?

भारतीय रिजर्व बैंक ऋणों के औपचारिक स्रोतों की कार्यप्रणाली पर नज़र रखता है। उदाहरण के लिए, हमने देखा कि बैंक अपनी जमा का एक न्यूनतम नकद हिस्सा अपने पास रखते हैं। आर. बी. आई. नज़र रखता है कि बैंक वास्तव में नकद शेष बनाए हुए हैं। आर.बी.आई. इस पर भी नज़र रखता है कि बैंक केवल लाभ अर्जित करने

लेकिन, बैंक हमारी उच्च आय क्यों चाहेगा?

आलेख 1 – वर्ष 2012 में भारत में 1000 ग्रामीण परिवारों के साख के स्रोत



वाले व्यावसायियों और व्यापारियों को ही ऋण मुहैया नहीं करा रहे, बल्कि छोटे किसानों, छोटे उद्योगों, छोटे कर्जदारों इत्यादि को भी ऋण दे रहे हैं। समय-समय पर, बैंकों द्वारा आर.बी.आई. को यह जानकारी देनी पड़ती है कि वे कितना और किनको ऋण दे रहे हैं और उसकी ब्याज की दरें क्या हैं?

अनौपचारिक क्षेत्रक में ऋणदाताओं की गतिविधियों की देखरेख करने वाली कोई संस्था नहीं है। वे ऐच्छिक दरों पर ऋण दे सकते हैं। उन्हें नाजायज्ञ तरीकों से अपने पैसे वापस लेने से रोकने वाला कोई नहीं है।



औपचारिक ऋणदाताओं की तुलना में अनौपचारिक क्षेत्रक के ज्यादातर ऋणदाता कहीं अधिक ब्याज वसूल करते हैं। इसलिए, अनौपचारिक ऋण कर्जदाता को अधिक महँगा पड़ता है।

ऋण की ऊँची लागत का अर्थ है कर्जदार की आय का अधिकतर हिस्सा ऋण की अदाएगी में ही खर्च हो जाता है। इसलिए, कर्जदारों के पास अपने लिए कम आय बचती है (जैसा कि हम ने सोनपुर के श्यामल के मामले में देखा)। कुछ मामलों में ऋण की ऊँची ब्याज दरों के कारण कर्ज वापस करने की रकम कर्जदार की आय से भी अधिक हो जाती है। इसके कारण ऋण का बोझ बढ़ जाता है (जैसा कि हमने सोनपुर की रमा के मामले में देखा) और व्यक्ति ऋण-जाल में फँस जाता है। ऐसा भी संभव है कि जो लोग कर्ज लेकर अपना उद्यम शुरू करना चाहते हैं, वे ऋण की अधिक लागत को देख कर पीछे हट जाएँ।

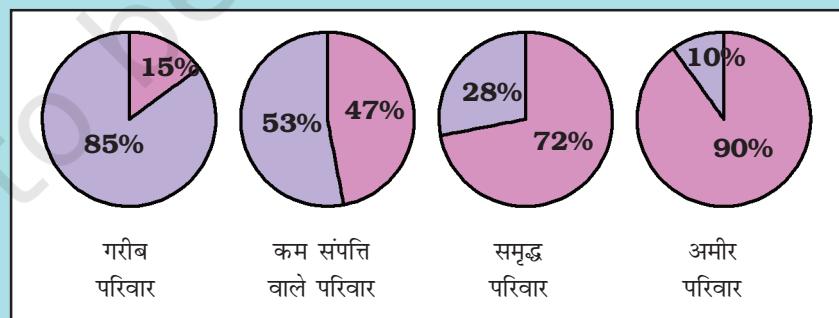
इन सभी कारणों को देखते हुए बैंकों और सहकारी समितियों को ज्यादा कर्ज देना चाहिए। इसके जरिए लोगों की आय बढ़ सकती है और बहुत से लोग अपनी विभिन्न ज़रूरतों के लिए सस्ता कर्ज ले सकेंगे। वे फसल उगा सकते हैं, कोई कारोबार कर सकते हैं, छोटे उद्योग इत्यादि लगा सकते हैं। वे नया उद्योग लगा सकते हैं या वस्तुओं का व्यापार कर सकते हैं। सस्ता और सामर्थ्य के अनुकूल कर्ज देश के विकास के लिए अति आवश्यक है।

औपचारिक और अनौपचारिक साख – किसे क्या मिलता है?

आलेख 2 में शहरी क्षेत्रों के लोगों के लिए ऋण के औपचारिक और अनौपचारिक महत्व को दिखाया गया है। आलेख में गरीब से अमीर लोगों को चार भागों में बाँटा गया है। आप देख सकते हैं कि शहरी क्षेत्रों के निर्धन परिवारों की कर्जों की 85 प्रतिशत ज़रूरतें अनौपचारिक स्रोतों से पूरी होती हैं। इस की तुलना आप शहरी इलाकों के अमीर परिवारों से कीजिए। आप क्या देखते हैं? उनके केवल 10 प्रतिशत कर्ज अनौपचारिक स्रोतों से जबकि 90 प्रतिशत औपचारिक स्रोतों से हैं। इसी तरह की तस्वीर ग्रामीण क्षेत्रों में भी है। अमीर परिवार औपचारिक ऋणदाताओं से सस्ता ऋण ले रहे हैं, जबकि गरीब परिवारों को कर्ज के लिए बहुत सारा पैसा देना पड़ता है।

इस सबसे क्या पता चलता है? पहला, औपचारिक स्रोत अभी भी ग्रामीण परिवारों की कुल ऋण ज़रूरतों का केवल 50 प्रतिशत पूरा कर पाता है। बाकी ज़रूरतें अनौपचारिक स्रोतों से पूरी होती हैं। अनौपचारिक ऋणदाताओं से लिए गये उधार पर आमतौर से ब्याज की दरें बहुत अधिक होती हैं और यह उधार कर्जदाताओं की

आलेख 2 – शहरी परिवारों द्वारा लिए गए कुल ऋण का कितना प्रतिशत औपचारिक तथा कितना प्रतिशत अनौपचारिक था?



नीला: अनौपचारिक स्रोत में ऋण की प्रतिशत

बैंगनी: औपचारिक स्रोत में ऋण का प्रतिशत

आय बढ़ाने का काम कम ही कर पाता है। इसलिए, बैंकों और सहकारी समितियों को अपनी गतिविधियाँ विशेषकर ग्रामीण इलाकों में बढ़ाने की ज़रूरत है, ताकि कर्जदारों की अनौपचारिक स्रोत पर से निर्भरता घटे।

दूसरा, यदि एक तरफ औपचारिक स्रोत के ऋणों का विस्तार होना चाहिए तो दूसरी ओर यह

भी ज़रूरी है कि यह ऋण सभी लोगों को प्राप्त हो सके। वर्तमान समय में, अमीर परिवार ही औपचारिक स्रोतों से ऋण प्राप्त करते हैं जबकि गरीब परिवारों को अनौपचारिक स्रोतों पर ही निर्भर रहना पड़ता है। यह ज़रूरी है कि औपचारिक ऋण का अधिक समान वितरण हो, ताकि गरीब परिवार भी सस्ते ऋण का फायदा उठा सकें।

आओ—इन पर विचार करें

- ऋण के औपचारिक और अनौपचारिक स्रोतों में क्या अन्तर है?
- सभी लोगों के लिए यथोचित दरों पर ऋण क्यों उपलब्ध होना चाहिए?
- क्या भारतीय रिजर्व बैंक के जैसा कोई निरीक्षक होना चाहिए जो अनौपचारिक ऋणदाताओं की गतिविधियों पर नज़र रखे? उसका काम मुश्किल क्यों होगा?
- आपकी समझ में गरीब परिवारों की तुलना में अमीर परिवारों के औपचारिक ऋणों का हिस्सा अधिक क्यों होता है?

रजाई की सिलाई करता
एक मजदूर

क्या आप मानते हैं कि
बैंक मुझे ऋण देगा?



निर्धनों के स्वयं सहायता समूह

पिछले खंड में हमने देखा कि निर्धन परिवार ऋण के लिए अब भी अनौपचारिक स्रोतों पर निर्भर है। ऐसा क्यों है? भारत के सभी ग्रामीण क्षेत्रों में बैंक मौजूद नहीं हैं। जहाँ कहीं मौजूद भी हैं, बैंक से कर्ज लेना अनौपचारिक स्रोत से कर्ज लेने की तुलना में ज्यादा मुश्किल है। जैसा कि हमने मेघा के मामले में देखा, बैंक से कर्ज लेने के लिए ऋणाधार और विशेष कागजातों की ज़रूरत पड़ती

है। ऋणाधार की अनुपलब्धता एक प्रमुख कारण है, जिससे गरीब बैंकों से ऋण नहीं ले पाते। दूसरी ओर, अनौपचारिक ऋणदाता जैसे साहूकार इन कर्जदारों को व्यक्तिगत स्तर पर जानते हैं और इस कारण अक्सर बिना ऋणाधार के भी ऋण देने के लिए तैयार हो जाते हैं। कर्जदार ज़रूरत पड़ने पर पुराना ऋण चुकाये बिना भी, नया कर्ज लेने के लिए साहूकार के पास जा सकते हैं। लेकिन,

महाजन ब्याज की दरें बहुत ऊँची रखते हैं, लेन-देन की लिखा पढ़ी भी पूरी नहीं करते और निर्धन कर्जदारों को तग्ब करते हैं।

हाल के वर्षों में, लोगों ने गरीबों को उधार देने के कुछ नए तरीके अपनाने की कोशिश की है। इन में से एक विचार ग्रामीण क्षेत्रों के गरीबों विशेषकर महिलाओं को छोटे-छोटे स्वयं सहायता समूहों में संगठित करने और उनकी बचत पूँजी को एकत्रित करने पर आधारित है। एक विशेष स्वयं सहायता समूह में एक-दूसरे के पड़ोसी 15-20 सदस्य होते हैं, जो नियमित रूप से मिलते हैं और बचत करते हैं। प्रति व्यक्ति बचत 25 रुपए से लेकर 100 रुपए या अधिक हो सकती है। यह परिवारों की बचत करने की क्षमता पर निर्भर करता है। सदस्य अपनी ज़रूरतों को पूरा करने के लिए छोटे कर्ज समूह से ही कर्ज ले सकते हैं। समूह इन कर्जों पर ब्याज लेता है लेकिन यह साहूकार द्वारा लिए जाने वाले ब्याज से कम होता है। एक या दो वर्षों के बाद, अगर समूह नियमित रूप से बचत करता है, तो समूह बैंक से ऋण लेने के योग्य हो जाता है। ऋण समूह के नाम पर दिया जाता है और इसका मकसद सदस्यों के लिए स्वरोज़गार के अवसरों का सृजन करना है। उदाहरण के लिए, सदस्यों को छोटे-छोटे कर्ज अपनी गिरवी ज़मीन छुड़वाने के लिए, कार्यशील पूँजी की ज़रूरतें (बीज, खाद, बाँस और कपड़े खरीदने के लिए), घर बनाने, सिलाई की मशीन, हथकरघा, पशु इत्यादि संपत्ति खरीदने के लिए दिए जाते हैं।

बचत और ऋण गतिविधियों से संबंधी ज्यादातर महत्वपूर्ण निर्णय समूह के सदस्य स्वयं लेते हैं। समूह दिए जाने वाले ऋण—उसका लक्ष्य, उसकी रकम, ब्याज दर, वापस लौटाने की अवधि आदि के बारे में निर्णय करता

है। इस ऋण को लौटाने की ज़िम्मेदारी भी समूह की होती है। एक भी सदस्य अगर ऋण वापस नहीं लौटाता तो समूह के अन्य सदस्य इस मामले को गंभीरता से लेते हैं। इसी कारण, बैंक निर्धन महिलाओं को ऋण देने के लिए तैयार हो जाते हैं जब वे अपने को स्वयं सहायता समूहों में संगठित कर लेती हैं, यद्यपि उनके पास कोई ऋणाधार नहीं होता।

इस तरह, स्वयं सहायता समूह कर्जदारों को ऋणाधार की कमी की समस्या से उबारने में मदद करते हैं। उन्हें समयानुसार विभिन्न प्रकार की आवश्यकताओं के लिए एक उचित ब्याज दर पर ऋण मिल जाता है। इसके अतिरिक्त यह समूह ग्रामीण क्षेत्रों के गरीबों को संगठित करने में मदद करते हैं। इससे न केवल महिलाएँ आर्थिक रूप से स्वावलंबी हो जाती हैं, बल्कि समूह की नियमित बैठकों के ज़रिए लोगों को एक आम मंच मिलता है, जहाँ वह तरह-तरह के सामाजिक विषयों जैसे, स्वास्थ्य, पोषण और घरेलू हिंसा इत्यादि पर आपस में चर्चा कर पाती हैं।

गुजरात में महिलाओं की स्वयं सहायता समूह की बैठक



बांग्लादेश का ग्रामीण बैंक

बांग्लादेश ग्रामीण बैंक का उचित ब्याज दरों पर गरीबों की ऋण ज़रूरतों को पूरा करने का बड़ा सफल इतिहास रहा है। इसकी शुरुआत 1970 में एक छोटे पैमाने से हुई। वर्ष 2018 में ग्रामीण बैंक के अब 9 लाख सदस्य थे जो बांग्लादेश के 81,600 गाँवों में फैले हुए थे। इससे ऋण लेने वाली ज़्यादातर महिलाएँ हैं जिनका संबंध समाज के गरीब तबके से है। इन कर्जदारों ने दिखा दिया है कि न केवल गरीब महिलाएँ भरोसेमंद कर्जदार हैं, बल्कि वे विभिन्न तरह की छोटी आय वाली गतिविधियों को सफलतापूर्वक शुरू करने और चला सकने में सक्षम हैं।

“अगर गरीब लोगों को सही और उचित शर्तों पर ऋण उपलब्ध कराया जा सकता है, तो लाखों छोटे लोग अपनी लाखों छोटी-छोटी गतिविधियों के ज़रिए विकास का सबसे बड़ा चमत्कार कर सकते हैं।”

प्रो. मोहम्मद युनूस।
ग्रामीण बैंक के संस्थापक एवं 2006 में शांति के लिए नोबेल पुस्कार से सम्मानित।

सारांश

इस अध्याय में हमने मुद्रा के आधुनिक रूपों और बैंकिंग प्रणाली से इसके संबंधों को देखा। एक तरफ जमाकर्ता अपना धन बैंकों में रखते हैं, दूसरी तरफ कर्जदार बैंकों से ऋण लेते हैं। आर्थिक गतिविधियों के लिए ऋण की ज़रूरत होती है। जैसा कि हमने देखा, ऋण के सकारात्मक प्रभाव हो सकते हैं या कुछ परिस्थितियों में वे कर्जदार की स्थिति और बदतर कर सकते हैं। ऋण विभिन्न स्रोतों से उपलब्ध होता है। ये औपचारिक और अनौपचारिक दोनों तरह के स्रोत हो सकते हैं। औपचारिक और अनौपचारिक

ऋणदाताओं में ऋण की शर्तों में बहुत फ़र्क हो सकता है। वर्तमान समय में, अमीर परिवार औपचारिक स्रोतों से ऋण लेते हैं जबकि गरीबों को अब भी अनौपचारिक स्रोतों पर निर्भर रहना पड़ता है। यह अनिवार्य है कि औपचारिक क्षेत्र के कुल ऋणों में बढ़ जाएं ताकि महँगे अनौपचारिक ऋण पर से निर्भरता कम हो। साथ ही, बैंकों और सहकारी समितियों इत्यादि से गरीबों को मिलने वाले औपचारिक ऋण का हिस्सा बढ़ावा दिया जाए। ये दोनों कदम विकास के लिए ज़रूरी हैं।

अध्याय

- जोखिम वाली परिस्थितियों में ऋण कर्जदार के लिए और समस्याएँ खड़ी कर सकता है। स्पष्ट कीजिए।
- मुद्रा आवश्यकताओं के दोहरे संयोग की समस्या को किस तरह सुलझाती है? अपनी ओर से उदाहरण देकर समझाइए।
- अतिरिक्त मुद्रा वाले लोगों और ज़रूरतमंद लोगों के बीच बैंक किस तरह मध्यस्थिता करते हैं?
- 10 रुपये के नोट को देखिए। इसके ऊपर क्या लिखा है? क्या आप इस कथन की व्याख्या कर सकते हैं?
- हमें भारत में ऋण के औपचारिक स्रोतों को बढ़ाने की क्यों ज़रूरत है?
- गरीबों के लिए स्वयं सहायता समूहों के संगठनों के पीछे मूल विचार क्या हैं? अपने शब्दों में व्याख्या कीजिए।
- क्या कारण हैं कि बैंक कुछ कर्जदारों को कर्ज देने के लिए तैयार नहीं होते?

8. भारतीय रिजर्व बैंक अन्य बैंकों की गतिविधियों पर किस तरह नज़र रखता है? यह ज़रूरी क्यों है?
9. विकास में ऋण की भूमिका का विश्लेषण कीजिए।
10. मानव को एक छोटा व्यवसाय करने के लिये ऋण की ज़रूरत है। मानव किस आधार पर यह निश्चित करेगा कि उसे यह ऋण बैंक से लेना चाहिये या साहूकार से? चर्चा कीजिए।
11. भारत में 80 प्रतिशत किसान छोटे किसान हैं, जिन्हें खेती करने के लिए ऋण की ज़रूरत होती है।
 (क) बैंक छोटे किसानों को ऋण देने से क्यों हिचकिचा सकते हैं?
 (ख) वे दूसरे स्रोत कौन हैं, जिनसे छोटे किसान कर्ज ले सकते हैं?
 (ग) उदाहरण देकर स्पष्ट कीजिए कि किस तरह ऋण की शर्तें छोटे किसानों के प्रतिकूल हो सकती हैं।
 (घ) सुझाव दीजिए कि किस तरह छोटे किसानों को सस्ता ऋण उपलब्ध कराया जा सकता है।
12. रिक्त स्थानों की पूर्ति करें –
 (क) परिवारों की ऋण की अधिकांश ज़रूरतें अनौपचारिक स्रोतों से पूरी होती हैं।
 (ख) ऋण की लागत ऋण का बोझ बढ़ाती है।
 (ग) केन्द्रीय सरकार की ओर से करेंसी नोट जारी करता है।
 (घ) बैंक पर देने वाले ब्याज से ऋण पर अधिक ब्याज लेते हैं।
 (ड) सम्पत्ति है जिसका मालिक कर्जदार होता है जिसे वह ऋण लेने के लिए गारंटी के रूप में इस्तेमाल करता है, जब तक ऋण चुकता नहीं हो जाता।
13. सही उत्तर का चयन करें –
 (क) स्वयं सहायता समूह में बचत और ऋण संबंधित अधिकतर निर्णय लिए जाते हैं –
 • बैंक द्वारा
 • सदस्यों द्वारा
 • गैर सरकारी संस्था द्वारा
 (ख) ऋण के औपचारिक स्रोतों में शामिल नहीं है –
 • बैंक
 • सहकारी समिति
 • नियोक्ता

अतिरिक्त परियोजना/कार्यकलाप

नीचे दी गई तालिका शहरी क्षेत्रों के विभिन्न लोगों के व्यवसाय दिखाती है। इन लोगों को किन उद्देश्यों के लिए ऋण की ज़रूरत हो सकती है? रिक्त स्तंभों को भरें।

व्यवसाय	ऋण लेने का कारण
निर्माण मजदूर कंप्यूटर शिक्षित स्नातक छात्र सरकारी सेवा में नियोनित व्यक्ति दिल्ली में प्रवासी मजदूर घरेलू नौकरानी छोटा व्यापारी ऑटो रिक्सा चालक बंद फैक्ट्री का मजदूर	

आगे, लोगों को दो वर्गों में विभाजित कीजिए, जिन्हें आप सोचते हैं कि बैंक से कर्ज मिल सकता है और जिन्हें कर्ज मिलने की आशा नहीं है। आपने वर्गीकरण के लिए किन कारकों का उपयोग किया?

शिक्षक के लिए निर्देश

अध्याय 4 – वैश्वीकरण और भारतीय अर्थव्यवस्था

विश्व के अधिकांश भाग तेजी से एक-दूसरे से जुड़ते जा रहे हैं। यद्यपि देशों के बीच इस पारस्परिक जुड़ाव के अनेक आयाम हैं— सांस्कृतिक, सामाजिक, राजनीतिक और आर्थिक, लेकिन इस अध्याय में अत्यन्त सीमित अर्थ में वैश्वीकरण की चर्चा की गई है। इसमें वैश्वीकरण को बहुराष्ट्रीय कंपनियों के विदेश व्यापार एवं विदेशी निवेश के माध्यम से देशों के बीच एकीकरण के रूप में परिभाषित किया गया है। आप देखेंगे कि इस अध्याय में पोर्टफोलियो निवेश जैसे जटिल मुद्दों को छोड़ दिया गया है।

यदि हम विगत तीस वर्षों पर नजर डालें, तो पाते हैं कि विश्व के दूरस्थ भागों को जोड़ने वाली वैश्वीकरण की प्रक्रिया में बहुराष्ट्रीय कंपनियों की मुख्य भूमिका रही है। बहुराष्ट्रीय कंपनियाँ अपने उत्पादन का दूसरे देशों में क्यों प्रसार कर रही हैं और किस तरह से कर रही हैं? अध्याय के पहले खंड में इसी की चर्चा की गई है। बहुराष्ट्रीय कंपनियों की तीव्र वृद्धि और उनके प्रभाव को मात्रात्मक आकलनों के बजाय मुख्यतः भारतीय संदर्भ से लिए गए उदाहरणों के द्वारा दिखाया गया है। ध्यान रखें कि उदाहरण सामान्य पक्ष की व्याख्या करने में सहायक हैं। पढ़ाते समय धारणाओं पर विशेष बल दिया जाना चाहिए और उदाहरणों का प्रयोग व्याख्या के लिए किया जाना चाहिए। आप जाँच करने तथा नवीन अवधारणाओं को सुदृढ़ करने के लिए बोधगम्य अनुच्छेदों, जैसा कि खंड-II के अंत में दिया गया है, का रचनात्मक उपयोग कर सकते हैं।

वैश्वीकरण की प्रक्रिया एवं इसके प्रभावों को समझने में उत्पादन का एकीकरण और बाजार का एकीकरण एक महत्वपूर्ण धारणा है। इस अध्याय में, वैश्वीकरण की प्रक्रिया में बहुराष्ट्रीय कंपनियों की भूमिका पर प्रकाश डालते हुए इसकी विस्तार से चर्चा की गई है। अगले विषय पर जाने से पहले, आपको सुनिश्चित करना है कि छात्र इन विचारों को पर्याप्त स्पष्टता से आत्मसात कर लें।

वैश्वीकरण को अनेक कारकों ने सुगमता प्रदान की है। इनमें से तीन कारकों पर बल दिया गया है – प्रौद्योगिकी में तीव्र उन्नति, व्यापार और निवेश नीतियों का उदारीकरण और

डब्ल्यू.टी.ओ. जैसे अन्तर्राष्ट्रीय संगठनों का दबाव। प्रौद्योगिकी में उन्नति छात्रों के लिए एक आकर्षक क्षेत्र है और आप उनको कुछ निर्देश देकर उन्हें स्वतः छानबीन करने के लिए प्रोत्साहित कर सकते हैं। उदारीकरण की चर्चा करते समय आपको ध्यान रखना है कि छात्र भारत की उदारीकरण-पूर्व की अर्थव्यवस्था से अपरिचित हैं। उदारीकरण से पूर्व एवं पश्चात् की स्थितियों में तुलना एवं विषमता दिखाने के लिए नाटक का आयोजन किया जा सकता है। इसी प्रकार, डब्ल्यू.टी.ओ. के तहत होने वाली अंतर्राष्ट्रीय संधियाँ और शक्ति का असमान संतुलन रोचक विषय हैं, जिनको व्याख्यान की बजाए चर्चा के रूप में प्रतिपादित किया जा सकता है।

अंतिम खंड में वैश्वीकरण के प्रभावों को शामिल किया गया है। विकास-प्रक्रिया में वैश्वीकरण ने किस सीमा तक योगदान किया है? इस खंड में अध्याय 1 एवं 2 (जैसे, न्यायसंगत विकास लक्ष्य क्या है) के विषय भी ध्यान में रखे गए हैं, जिसका आप संदर्भ दे सकते हैं। इस खंड की चर्चा करते समय स्थानीय पर्यावरण से क्रियाकलापों और उदाहरणों को लेना भी अत्यन्त आवश्यक है। इससे उन संदर्भों को शामिल किया जा सकेगा जिन्हें इस अध्याय में नहीं रखा गया है, जैसे-स्थानीय किसानों पर आयातों का प्रभाव, इत्यादि। ऐसी स्थितियों की विवेचना करने के लिए सामूहिक विचार-मंथन-सत्रों का आयोजन किया जा सकता है।

सूचना के स्रोत

अन्तर्राष्ट्रीय संगठन ने अपनी वेबसाइट www.ilo.org पर न्यायसंगत वैश्वीकरण की अपील की है। ऐसी अपीलें अन्य संगठनों ने भी की हैं। एक अन्य रोचक स्रोत WTO की वेबसाइट <http://www.wto.org> है। यह डब्ल्यू.टी.ओ. में किए जा रहे अनेक प्रकार के समझौतों की जानकारी देता है। कंपनियों से संबंधित जानकारियों के लिए अधिकांश बहुराष्ट्रीय कंपनियों की अपनी वेबसाइट हैं। यदि आप बहुराष्ट्रीय कंपनियों को आलोचनात्मक ढंग से देखना चाहते हैं तो उसके लिए अनुमोदित वेबसाइट www.corporatewatch.org.uk है।



अध्याय 4

वैश्वीकरण और भारतीय अर्थव्यवस्था



1071CH04

आज के विश्व में, उपभोक्ता के रूप में हममें से कुछ के सामने वस्तुओं और सेवाओं के विस्तृत विकल्प हैं। विश्व के शीर्षस्थ विनिर्माताओं द्वारा निर्मित डिजिटल कैमरे, मोबाइल फोन और टेलीविज़न के नवीनतम मॉडल हमारे लिए सुलभ हैं। हमेशा भारत की सड़कों पर गाड़ियों के नए मॉडल देखे जा सकते हैं। वो दिन गुज़र गए, जब भारत की सड़कों पर केवल एम्बेसेडर और फिट कारें ही दिखाई देती थीं। आज भारतीय विश्व की लगभग सभी शीर्ष कंपनियों द्वारा निर्मित कारें खरीद रहे हैं। अनेक दूसरी वस्तुओं के ब्रांडों में भी इसी प्रकार की तीव्र वृद्धि देखी जा सकती है – कमीज़ों से लेकर टेलीविज़नों और प्रसंस्करित फलों के रस तक।

हमारे बाजारों में वस्तुओं के बहुव्यापी विकल्प अपेक्षाकृत नवीन परिघटना है। दो दशक पहले भी आपको भारत के बाजारों में वस्तुओं की ऐसी विविधता नहीं मिलेगी। कुछ ही वर्षों में हमारा बाजार पूर्णतः परिवर्तित हो गया है।

हम इस तीव्र परिवर्तन को कैसे समझ सकते हैं? ऐसे कौन से कारक हैं जो इन परिवर्तनों को ला रहे हैं और ये परिवर्तन लोगों का जीवन किस प्रकार प्रभावित कर रहे हैं? इस अध्याय में हम इन प्रश्नों पर विचार करेंगे।



अन्तर्राष्ट्रीय उत्पादन

बीसवीं शताब्दी के मध्य तक उत्पादन मुख्यतः देशों की सीमाओं के अंदर ही सीमित था। इन देशों की सीमाओं को लांघने वाली वस्तुओं में केवल कच्चा माल, खाद्य पदार्थ और तैयार उत्पाद ही थे। भारत जैसे उपनिवेशों से कच्चा माल एवं खाद्य पदार्थ निर्यात होते थे और तैयार वस्तुओं का आयात होता था। व्यापार ही दूरस्थ देशों को आपस में जोड़ने का मुख्य जरिया था। यह बड़ी कंपनियों, जिन्हें बहुराष्ट्रीय कंपनियाँ कहते हैं,

के परिदृश्य पर उभरने से पहले का युग था। एक बहुराष्ट्रीय कंपनी वह है, जो एक से अधिक देशों में उत्पादन पर नियंत्रण अथवा स्वामित्व रखती है। बहुराष्ट्रीय कंपनियाँ उन प्रदेशों में कार्यालय तथा उत्पादन के लिए कारखाने स्थापित करती हैं, जहाँ उन्हें सस्ता श्रम एवं अन्य संसाधन मिल सकते हैं। उत्पादन लागत में कमी करने तथा अधिक लाभ कमाने के लिए बहुराष्ट्रीय कंपनियाँ ऐसा करती हैं। निम्न उदाहरण पर विचार करते हैं –

एक बहुराष्ट्रीय कंपनी द्वारा उत्पादन का विस्तार

औद्योगिक उपकरण बनाने वाली एक बड़ी बहुराष्ट्रीय कंपनी संयुक्त राज्य अमेरिका के अनुसंधान केन्द्र में अपने उत्पादों का डिजाइन तैयार करती है। उसके पुर्जे चीन में विनिर्मित होते हैं। फिर इन्हें जहाज में लादकर मेक्सिको और पूर्वी यूरोप ले जाया जाता है, जहाँ उपकरण के पुर्जे को जोड़ा जाता है और तैयार उत्पाद को विश्व भर में बेचा जाता है। इस बीच, कंपनी की ग्राहक सेवा का भारत स्थित कॉल सेंटरों के माध्यम से संचालन किया जाता है।

यह बैंगलुरु स्थित एक कॉल सेंटर है जो पर्याप्त दूरसंचार सुविधाओं और इंटरनेट से सुसज्जित है। यह विदेशी ग्राहकों को सूचना एवं मदद उपलब्ध कराता है।



इस उदाहरण में, बहुराष्ट्रीय कंपनी केवल वैश्विक स्तर पर ही अपना तैयार उत्पाद नहीं बेच रही है बल्कि अधिक महत्वपूर्ण यह है कि वस्तुओं और सेवाओं का उत्पादन विश्व स्तर पर कर रही है। परिणामतः उत्पादन प्रक्रिया क्रमशः जटिल ढंग से संगठित हुई है। उत्पादन-प्रक्रिया छोटे भागों में विभाजित है और विश्व भर में, फैली हुई है। ऊपर दिए गए उदाहरण में चीन एक सस्ता विनिर्माण केन्द्र होने का लाभ प्रदान करता है। मेक्सिको और पूर्वी

यूरोप, अमेरिका और यूरोप के बाजारों से अपनी निकटता के कारण लाभप्रद हैं। भारत में अत्यंत कुशल इंजीनियर उपलब्ध हैं, जो उत्पादन के तकनीकी पक्षों को समझ सकते हैं। यहाँ अंग्रेजी बोलने वाले शिक्षित युवक भी हैं, जो ग्राहक देखभाल सेवायें उपलब्ध करा सकते हैं। ये सभी चीज़ें बहुराष्ट्रीय कंपनी की लागत का लगभग 50-60 प्रतिशत बचत कर सकती हैं। अतः वास्तव में, सीमाओं के पार बहुराष्ट्रीय उत्पादन प्रक्रिया के प्रसार से असीमित लाभ हो सकता है।

आओ—इस पर विचार करें

यह दर्शाने के लिए निम्न कथन की पूर्ति करें कि वस्त्र उद्योग में उत्पादन-प्रक्रिया कैसे विश्व-भर में फैली हुई है।

एक ब्रांड लेबल पर 'मेड इन थाइलैण्ड' लिखा है, परन्तु उसमें एक भी थाई उत्पाद नहीं है। हम विनिर्माण-प्रक्रिया का विश्लेषण करते हैं और प्रत्येक चरण में सर्वोत्तम निर्माण को देखते हैं। हम इसे विश्व स्तर पर कर रहे हैं। जैसे, वस्त्र निर्माण में कंपनी कोरिया से सूत ले सकती है

विश्व-भर के उत्पादन को एक-दूसरे से जोड़ना

सामान्यतः बहुराष्ट्रीय कंपनियाँ उसी स्थान पर उत्पादन इकाई स्थापित करती हैं जो बाजार के नज़दीक हो, जहाँ कम लागत पर कुशल और अकुशल श्रम उपलब्ध हो और जहाँ उत्पादन के अन्य कारकों की उपलब्धता सुनिश्चित हो। साथ ही, बहुराष्ट्रीय कंपनियाँ सरकारी नीतियों पर भी नज़र रखती हैं, जो उनके हितों का देखभाल करती हैं। आप बाद में, इस अध्याय में सरकारी नीतियों के बारे में और अध्ययन करेंगे।

इन परिस्थितियों को सुनिश्चित करने के बाद ही बहुराष्ट्रीय कंपनियाँ उत्पादन के लिए कार्यालयों और कारखानों की स्थापना करती हैं। परिसंपत्तियों जैसे — भूमि, भवन, मशीन और अन्य उपकरणों की खरीद में व्यय की गई मुद्रा को निवेश कहते हैं। बहुराष्ट्रीय कंपनियों द्वारा किए गए निवेश को विदेशी निवेश कहते हैं। कोई भी निवेश इस आशा से किया जाता है कि ये परिसंपत्तियाँ लाभ अर्जित करेंगी।

कभी-कभी बहुराष्ट्रीय कंपनियाँ इन देशों की स्थानीय कंपनियों के साथ संयुक्त रूप से उत्पादन करती हैं। संयुक्त उत्पादन से स्थानीय कंपनी को दोहरा लाभ होता है। पहला बहुराष्ट्रीय कंपनियाँ अतिरिक्त निवेश के लिए धन प्रदान कर सकती हैं, जैसे कि तीव्र उत्पादन के लिए मशीनें खरीदने के लिए। दूसरा, बहुराष्ट्रीय कंपनियाँ उत्पादन की नवीनतम प्रौद्योगिकी अपने साथ ला सकती हैं।

हम इस कारखाने को दूसरे देश में स्थानान्तरित कर देंगे। यहाँ पर यह खर्चोला हो गया है।



वैश्वीकरण और भारतीय अर्थव्यवस्था

लेकिन, बहुराष्ट्रीय कंपनियों के निवेश का सबसे आम रास्ता स्थानीय कंपनियों को खरीदना और उसके बाद उत्पादन का प्रसार करना है। अपार संपदा वाली बहुराष्ट्रीय कंपनियाँ यह आसानी से कर सकती हैं। उदाहरण के लिए, एक बहुत बड़ी अमेरिकी बहुराष्ट्रीय कंपनी कारगिल फूड्स ने परख फूड्स जैसी छोटी भारतीय कंपनियों को खरीद लिया है। परख फूड्स ने भारत के विभिन्न भागों में एक बड़ा विपणन तंत्र तैयार किया था, जहाँ उसके ब्राण्ड काफी प्रसिद्ध थे। परख फूड्स के चार तेल शोधक केन्द्र भी थे, जिस पर अब कारगिल 50 लाख पैकेट प्रतिदिन निर्माण क्षमता के साथ भारत में खाद्य तेलों की सबसे बड़ी उत्पादक कंपनी है।

वास्तव में, कई शीर्षस्थ बहुराष्ट्रीय कंपनियों की संपत्ति विकासशील देशों की सरकारों के सम्पूर्ण बजट से भी अधिक है। ऐसी अपार संपत्ति वाली बहुराष्ट्रीय कंपनियों की शक्ति और प्रभाव पर विचार करें।

बहुराष्ट्रीय कंपनियाँ एक अन्य तरीके से उत्पादन नियंत्रित करती हैं। विकसित देशों की बड़ी बहुराष्ट्रीय कंपनियाँ छोटे उत्पादकों को उत्पादन का ऑर्डर देती हैं। वस्त्र, जूते-चप्पल एवं खेल के सामान ऐसे उद्योग हैं, जहाँ विश्वभर में बड़ी संख्या में

लुधियाना के एक घर में एक बड़ी बहुराष्ट्रीय कंपनी के लिए फुटबाल-निर्माण का चित्र



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विकासशील देशों में उत्पादित जीन्स अमेरिका में 6500 रु. में बेची जा रही है।

छोटे उत्पादकों द्वारा उत्पादन किया जाता है। बहुराष्ट्रीय कंपनियों को इन उत्पादों की आपूर्ति की जाती है। फिर इन्हें अपने ब्राण्ड नाम से ग्राहकों को बेचती हैं। इन बड़ी कंपनियों में दूरस्थ उत्पादकों के मूल्य, गुणवत्ता, आपूर्ति और श्रम-शर्तों का निर्धारण करने की प्रचण्ड क्षमता होती है।

इस प्रकार, हम देखते हैं कि बहुराष्ट्रीय कंपनियाँ कई तरह से अपने उत्पादन कार्य का प्रसार कर रही हैं और विश्व के कई देशों की स्थानीय कंपनियों के साथ पारस्परिक संबंध स्थापित कर रही हैं। स्थानीय कंपनियों के साथ साझेदारी द्वारा, आपूर्ति के लिए स्थानीय कंपनियों का इस्तेमाल करके और स्थानीय कंपनियों से निकट प्रतिस्पर्धा करके अथवा उन्हें खरीद कर बहुराष्ट्रीय कंपनियाँ दूरस्थ स्थानों के उत्पादन पर अपना प्रभाव जमा रही हैं। परिणामतः दूर-दूर स्थानों पर फैला उत्पादन परस्पर संबंधित हो रहा है।

आओ—इन पर विचार करें

एक अमेरिकी कंपनी फोर्ड मोटर्स विश्व के 26 देशों में प्रसार के साथ विश्व की सबसे बड़ी मोटरगाड़ी निर्माता कंपनी है। फोर्ड मोटर्स 1995 में भारत आयी और चेन्नई के निकट 1,700 करोड़ रुपए का निवेश करके एक विशाल संयंत्र की स्थापना की। यह संयंत्र भारत में जीपों एवं ट्रकों के प्रमुख निर्माता महिन्द्रा एंड महिन्द्रा के सहयोग से स्थापित किया गया। वर्ष 2017 तक फोर्ड मोटर्स भारतीय बाजारों में 88,000 कारें बेच रही थी, जबकि 1,81,000 कारों का निर्यात भी भारत से दक्षिण अफ्रीका, मेक्सिको, ब्राजील और संयुक्त राज्य अमेरिका किया गया। कंपनी विश्व के दूसरे देशों में अपने संयंत्रों के लिए फोर्ड इंडिया का विकास पुर्जा आपूर्ति केन्द्र के रूप में करना चाहती है।

बायें दिए अनुच्छेद को पढ़ें और प्रश्नों का उत्तर दें।

1. क्या आप मानते हैं कि फोर्ड मोटर्स एक बहुराष्ट्रीय कंपनी है? क्यों?
2. विदेशी निवेश क्या है? फोर्ड मोटर्स ने भारत में कितना निवेश किया था?
3. भारत में उत्पादन संयंत्र स्थापित करके फोर्ड मोटर्स जैसी बहुराष्ट्रीय कंपनियाँ केवल भारत जैसे देशों के विशाल बाजार का ही लाभ नहीं उठाती हैं, बल्कि कम उत्पादन लागत का भी लाभ प्राप्त करती हैं। कथन की व्याख्या करें।
4. आपके विचार से कंपनी अपने वैश्विक कारोबार के लिए कार के पुर्जों के विनिर्माण केन्द्र के रूप में भारत का विकास क्यों करना चाहती है? निम्न कारकों पर विचार करें—
(अ) भारत में श्रम और अन्य संसाधनों पर लागत (ब) कई स्थानीय विनिर्माताओं की उपस्थिति, जो फोर्ड मोटर्स को कल-पुर्जों की आपूर्ति करते हैं (स) अधिक संख्या में भारत और चीन के ग्राहकों से निकटता।
5. भारत में फोर्ड मोटर्स द्वारा कारों के निर्माण से उत्पादन किस प्रकार परस्पर संबंधित होगा?
6. बहुराष्ट्रीय कंपनियाँ, अन्य कंपनियों से किस प्रकार अलग हैं?
7. लगभग सभी बहुराष्ट्रीय कंपनियाँ, अमेरिका, जापान या यूरोप की हैं जैसे, नोकिया, कोका-कोला, पेप्सी, होन्डा, नाइकी। क्या आप अनुमान कर सकते हैं कि ऐसा क्यों है?



भारतीय मजदूरों द्वारा निर्मित कारें, बहुराष्ट्रीय कंपनियों द्वारा विदेशों में बिक्री के लिए लादी जा रही हैं।

विदेश व्यापार और बाजारों का एकीकरण

लम्बे समय से विदेश व्यापार विभिन्न देशों को आपस में जोड़ने का मुख्य माध्यम रहा है। इतिहास में आपने भारत और दक्षिण एशिया को पूर्व और पश्चिम के बाजारों से जोड़ने वाले व्यापार मार्गों और इन मार्गों से होने वाले गहन व्यापार के बारे में पढ़ा होगा। आपको यह भी याद होगा कि व्यापारिक हितों के कारण ही व्यापारिक कंपनियाँ जैसे, ईस्ट इंडिया कंपनी भारत की ओर आकर्षित हुई। आखिरकार विदेशी व्यापार का बुनियादी कार्य क्या है?

सरल शब्दों में कहा जाए, तो विदेश व्यापार घरेलू बाजारों अर्थात् अपने देश के बाजारों से बाहर के बाजारों में पहुँचने के लिए उत्पादकों को एक अवसर प्रदान करता है। उत्पादक केवल अपने देश के बाजारों में ही अपने उत्पाद नहीं बेच सकते हैं, बल्कि विश्व के अन्य देशों के बाजारों में भी प्रतिस्पर्धा कर सकते हैं। इसी प्रकार, दूसरे देशों में उत्पादित वस्तुओं के आयात से खरीददारों के समक्ष उन वस्तुओं के घरेलू उत्पादन के अन्य विकल्पों का विस्तार होता है।



अब हम भारत के बाजार पर चीनी खिलौनों
के प्रभाव के उदाहरण के द्वारा विदेश
व्यापार के प्रभाव का अध्ययन करते हैं।

भारत में चीन के खिलौने

चीन के विनिर्माताओं को भारत में खिलौने निर्यात करने को एक अवसर का पता चलता है, जहाँ खिलौने अधिक मूल्य पर बेचे जा रहे हैं। वे भारत को खिलौने निर्यात करना आरम्भ करते हैं। अब भारत में खरीदारों के पास भारतीय और चीनी खिलौनों के बीच चयन करने का विकल्प है। सस्ते दाम एवं नवीन डिजाइनों के कारण चीनी खिलौने भारतीय बाजारों में अधिक लोकप्रिय हैं। एक वर्ष में ही खिलौने की 70-80 प्रतिशत दुकानों में भारतीय खिलौनों का स्थान चीनी खिलौनों ने ले लिया है। अब भारत के बाजारों में

खिलौने पहले की तुलना में सस्ते हैं।

यहाँ क्या हो रहा है? व्यापार के कारण चीनी खिलौने भारत के बाजारों में आए। भारतीय और चीनी खिलौनों की प्रतिस्पर्धा में चीनी खिलौने बेहतर साबित हुए। भारतीय खरीदारों के समक्ष कम कीमत पर खिलौनों के अपेक्षाकृत अधिक विकल्प हैं। इससे चीन के खिलौना निर्माताओं को अपना व्यवसाय फैलाने के लिए एक अवसर प्राप्त होता है। इसके विपरीत, भारतीय खिलौना निर्माताओं को हानि होती है, क्योंकि उनके खिलौने कम बिकते हैं।



सामान्यतः व्यापार के खुलने से वस्तुओं का एक बाजार से दूसरे बाजार में आवागमन होता है। बाजार में वस्तुओं के विकल्प बढ़ जाते हैं। दो बाजारों में एक ही वस्तु का मूल्य एक समान होने लगता है। अब दो देशों के उत्पादक एक दूसरे से हजारों मील दूर होकर भी एक दूसरे से प्रतिस्पर्धा कर सकते हैं। इस प्रकार, विदेश व्यापार विभिन्न देशों के बाजारों को जोड़ने या एकीकरण में सहायता होता है।



सिलेसिलाएं वस्त्रों के छोटे व्यापारी बहुराष्ट्रीय कंपनियों के ब्रांड और आयात दोनों से कड़ी प्रतिस्पर्धा का सामना करते हुए।

आओ—इन पर विचार करें

1. अतीत में देशों को जोड़ने वाला मुख्य माध्यम क्या था? अब यह अलग कैसे है?
2. विदेश व्यापार और विदेशी निवेश में अंतर स्पष्ट करें।
3. हाल के वर्षों में चीन भारत से इस्पात आयात कर रहा है। व्याख्या करें कि चीन द्वारा इस्पात का आयात कैसे प्रभावित करेगा—
 - (क) चीन की इस्पात कंपनियों को
 - (ख) भारत की इस्पात कंपनियों को
 - (ग) चीन में अन्य औद्योगिक वस्तुओं के उत्पादन के लिए इस्पात खरीदने वाले उद्योगों को
4. चीन के बाजारों में भारत से इस्पात का आयात किस प्रकार दोनों देशों के इस्पात-बाजार के एकीकरण में सहायता करेगा? व्याख्या करें।

वैश्वीकरण क्या है?

विगत दो तीन दशकों से अधिकांश बहुराष्ट्रीय कंपनियाँ विश्व में उन स्थानों की तलाश कर रही हैं, जो उनके उत्पादन के लिए सस्ते हों। इन देशों में बहुराष्ट्रीय कंपनियों के निवेश में वृद्धि हो रही है, साथ ही विभिन्न देशों के बीच विदेश व्यापार में भी तीव्र वृद्धि हो रही है। विदेश व्यापार का एक बड़ा भाग बहुराष्ट्रीय कंपनियों द्वारा नियंत्रित है। जैसे, भारत में फोर्ड मोर्टस का कार संयंत्र, केवल भारत के लिए ही कारों का निर्माण नहीं करता, बल्कि वह अन्य विकासशील देशों को कारें और विश्व भर में अपने कारखानों के लिए कार-पुर्जों का भी निर्यात करता है। इसी प्रकार, अधिकांश बहुराष्ट्रीय कंपनियों के क्रियाकलाप में वस्तुओं और सेवाओं का बड़े पैमाने पर व्यापार शामिल होता है।



वैश्वीकरण और भारतीय अर्थव्यवस्था

अधिक विदेश व्यापार और अधिक विदेशी निवेश के परिणामस्वरूप विभिन्न देशों के बाजारों एवं उत्पादनों में एकीकरण हो रहा है। विभिन्न देशों के बीच परस्पर संबंध और तीव्र एकीकरण की प्रक्रिया ही वैश्वीकरण है। बहुराष्ट्रीय कंपनियाँ वैश्वीकरण की प्रक्रिया में मुख्य भूमिका निभा रही हैं। विभिन्न देशों के बीच अधिक से अधिक वस्तुओं और सेवाओं, निवेश और प्रौद्योगिकी का आदान-प्रदान हो रहा है। विगत कुछ दशकों की तुलना में विश्व के

अधिकांश भाग एक-दूसरे के अपेक्षाकृत अधिक सम्पर्क में आए हैं।

वस्तुओं, सेवाओं, निवेशों और प्रौद्योगिकी के अतिरिक्त विभिन्न देशों को आपस में जोड़ने का एक और माध्यम हो सकता है। यह माध्यम है विभिन्न देशों के बीच लोगों का आवागमन। प्रायः लोग बेहतर आय, बेहतर रोज़गार एवं शिक्षा की तलाश में एक देश से दूसरे देश में आवागमन करते हैं किन्तु, विगत कुछ दशकों में अनेक प्रतिबंधों के कारण विभिन्न देशों के बीच लोगों के आवागमन में अधिक वृद्धि नहीं हुई है।

आओ—इन पर विचार करें

1. वैश्वीकरण प्रक्रिया में बहुराष्ट्रीय कंपनियों की क्या भूमिका है?
2. वे कौन से विभिन्न तरीके हैं, जिनके द्वारा देशों को परस्पर संबंधित किया जा सकता है?
3. सही विकल्प का चयन करें –
देशों को जोड़ने से वैश्वीकरण के परिणाम होंगे
 (क) उत्पादकों के बीच कम प्रतिस्पर्धा होगी
 (ख) उत्पादकों के बीच अधिक प्रतिस्पर्धा होगी
 (ग) उत्पादकों के बीच प्रतिस्पर्धा में परिवर्तन नहीं होगा



वैश्वीकरण को संभव बनाने वाले कारक

प्रौद्योगिकी में तीव्र उन्नति वह मुख्य कारक है जिसने वैश्वीकरण की प्रक्रिया को उत्प्रेरित किया। जैसे, विगत पचास वर्षों में परिवहन प्रौद्योगिकी में बहुत उन्नति हुई है। इसने लम्बी दूरियों तक वस्तुओं की तीव्रतर आपूर्ति को कम लागत पर संभव किया है।



वस्तुओं के परिवहन के लिए कंटेनर

वस्तुओं को कंटेनरों में रखा गया है, जिससे इन्हें जहाज़ों, रेलों, वायुयानों एवं ट्रकों पर बिना क्षति के लादा जा सके। कंटेनरों से डुलाई-लागत में भारी बचत हुई है और माल को बाजारों तक पहुँचाने की गति में वृद्धि हुई है। इसी प्रकार, वायु यातायात की लागत में गिरावट आयी है। परिणामतः वायुमार्ग से अपेक्षाकृत अधिक मात्रा में वस्तुओं का परिवहन संभव हुआ है।

इससे भी अधिक उल्लेखनीय है सूचना एवं संचार प्रौद्योगिकी का विकास। वर्तमान समय में दूरसंचार, कंप्यूटर और इंटरनेट के क्षेत्र में प्रौद्योगिकी द्वुत गति से परिवर्तित हो रही है। दूरसंचार सुविधाओं (टेलीग्राफ, टेलीफोन, मोबाइल फोन एवं फैक्स) का विश्व भर में एक-दूसरे से सम्पर्क करने, सूचनाओं को तत्काल प्राप्त करने और दूरवर्ती क्षेत्रों से संवाद करने में प्रयोग किया जाता है। ये सुविधाएँ संचार उपग्रहों द्वारा सुगम हुई हैं। जैसा कि आप जानते होंगे, जीवन के लगभग प्रत्येक क्षेत्र में कंप्यूटरों का प्रवेश हो गया है। आपने इंटरनेट के चमत्कारिक संसार में भी प्रवेश किया होगा, जहाँ जो कुछ भी आप जानना चाहते हैं,

लगभग उसकी जानकारी प्राप्त कर सकते हैं और सूचनाओं को आपस में बाँट सकते हैं। इंटरनेट से हम तत्काल इलेक्ट्रॉनिक डाक (ई-मेल) भेज सकते हैं और अत्यंत कम मूल्य पर विश्व-भर में बात (वॉयस मेल) कर सकते हैं।



सूचना एवं संचार प्रौद्योगिकी (संक्षेप में आई.टी.) ने विभिन्न देशों के बीच सेवाओं के उत्पादन के प्रसार में मुख्य भूमिका निभायी है। हम देखते हैं कैसे?



यह बहुत अच्छी पत्रिका लग रही है। लेकिन मेरी पाठ्यपुस्तिका की छपाई ऐसी क्यों नहीं है? मैं अपनी पुस्तक में बड़ी मुश्किल से शब्दों को पढ़ सकती हूँ।

नहीं मेरे बच्चे, यह छपाई मशीन आम भारतीय के लिए नहीं है।

वैश्वीकरण में संचार प्रौद्योगिकी का उपयोग

लंदन के पाठकों के लिए प्रकाशित एक समाचार पत्रिका की डिजाइनिंग और छपाई दिल्ली में की जानी है। पत्रिका का पाठ्य-विषय इंटरनेट के द्वारा दिल्ली कार्यालय को भेज दिया जाता है। दिल्ली कार्यालय में डिज़ाइनर दूरसंचार सुविधाओं का उपयोग करके लंदन कार्यालय से पत्रिका की डिज़ाइन के बारे में निर्देश प्राप्त करते हैं। डिज़ाइन तैयार करने का काम कंप्यूटर पर किया जाता है। छपाई के बाद पत्रिकाओं को वायुमार्ग से लंदन भेजा जाता है। यहाँ तक कि डिज़ाइन और छपाई के पैसे का भुगतान इंटरनेट (ई-बैंकिंग) के द्वारा लंदन के एक बैंक से दिल्ली के एक बैंक को तत्काल कर दिया जाता है।

आओ—इन पर विचार करें

- ऊपर दिए गए उदाहरण में, उत्पादन में प्रौद्योगिकी के प्रयोग का उल्लेख करने वाले शब्दों को रेखांकित करें।
- सूचना प्रौद्योगिकी वैश्वीकरण से कैसे जुड़ी हुई है? क्या सूचना प्रौद्योगिकी के प्रसार के बिना वैश्वीकरण संभव होता?

विदेश व्यापार तथा विदेशी निवेश का उदारीकरण

हम भारत में चीनी खिलौनों के आयात वाले उदाहरण पर वापस लौटते हैं। मान लीजिए कि भारत सरकार खिलौनों के आयात पर कर लगाती है। तब क्या होगा? इसका अर्थ है कि जो इन खिलौनों का आयात करना चाहते हैं, उन्हें इन पर कर देना होगा। कर के कारण खरीददारों को आयातित खिलौनों की अधिक कीमत चुकानी होगी। चीन के खिलौने अब भारत के बाजारों में इतने सस्ते नहीं रह जाएँगे और चीन से उनका आयात स्वतः कम हो जाएगा। भारत के खिलौना-निर्माता अधिक समृद्ध हो जाएँगे।

आयात पर कर, व्यापार अवरोधक का एक उदाहरण है। इसे अवरोधक इसलिए कहा गया है, क्योंकि यह कुछ प्रतिबंध लगाता है। सरकारें व्यापार अवरोधक का प्रयोग विदेश व्यापार में वृद्धि या कटौती (नियमित करने) करने और देश में किस प्रकार की वस्तुएँ कितनी मात्रा में आयातित होनी चाहिए, यह निर्णय करने के लिए कर सकती हैं।

स्वतंत्रता के बाद भारत सरकार ने विदेश व्यापार एवं विदेशी निवेश पर प्रतिबंध लगा रखा था। देश के उत्पादकों को विदेशी प्रतिस्पर्धा से संरक्षण प्रदान करने के लिए यह अनिवार्य माना गया। 1950 और 1960 के दशकों में उद्योगों का उदय हो रहा था और इस अवस्था में आयात से प्रतिस्पर्धा इन उद्योगों को बढ़ने नहीं देती। इसीलिए,

भारत ने केवल अनिवार्य चीजों जैसे, मशीनरी, उर्वरक और पेट्रोलियम के आयात की ही अनुमति दी। ध्यान दीजिए कि सभी विकसित देशों ने विकास के प्रारंभिक चरणों में घरेलू उत्पादकों को विभिन्न तरीकों से संरक्षण दिया है।

भारत में करीब सन् 1991 के प्रारंभ से नीतियों में कुछ दूरगामी परिवर्तन किए गए। सरकार ने यह निश्चय किया कि भारतीय उत्पादकों के लिए विश्व के उत्पादकों से प्रतिस्पर्धा करने का समय आ गया है। यह महसूस किया गया कि प्रतिस्पर्धा से देश में उत्पादकों के प्रदर्शन में सुधार होगा, क्योंकि उन्हें अपनी गुणवत्ता में सुधार करना होगा। इस निर्णय का प्रभावशाली अंतर्राष्ट्रीय संगठनों ने समर्थन किया।

अतः विदेश व्यापार एवं विदेशी निवेश पर से अवरोधों को काफी हद तक हटा दिया गया। इसका अर्थ है कि वस्तुओं का आयात-निर्यात सुगमता से किया जा सकता था और विदेशी कंपनियाँ यहाँ अपने कार्यालय और कारखाने स्थापित कर सकती थीं।

सरकार द्वारा अवरोधों अथवा प्रतिबंधों को हटाने की प्रक्रिया उदारीकरण के नाम से जानी जाती है। व्यापार के उदारीकरण से व्यावसायियों को मुक्त रूप से निर्णय लेने की अनुमति मिली है कि वे क्या आयात या निर्यात करना चाहते हैं। सरकार पहले की तुलना में कम नियंत्रण करती है और इसलिए उसे अधिक उदार कहा जाता है।

आओ—इन पर विचार करें

- विदेश व्यापार के उदारीकरण से आप क्या समझते हैं?
- आयात पर कर एक प्रकार का व्यापार अवरोधक है। सरकार आयात होने वाली वस्तुओं की संख्या भी सीमित कर सकती है। इसे कोटा कहते हैं। क्या आप चीन के खिलौनों के उदाहरण से व्याख्या कर सकते हैं कि व्यापार अवरोधक के रूप में कोटा का प्रयोग कैसे किया जा सकता है? आपके विचार से क्या इसका प्रयोग किया जाना चाहिए? चर्चा करें।

विश्व व्यापार संगठन

हमने देखा कि कुछ बहुत प्रभावशाली अन्तर्राष्ट्रीय संगठनों ने भारत में विदेश व्यापार एवं विदेशी निवेश के उदारीकरण का समर्थन किया। इन संगठनों का मानना है कि विदेश व्यापार और विदेशी निवेश पर सभी अवरोधक हानिकारक हैं। कोई अवरोधक नहीं होना चाहिए। देशों के बीच मुक्त व्यापार होना चाहिए। विश्व के सभी देशों को अपनी नीतियाँ उदार बनानी चाहिए।

विश्व व्यापार संगठन (डब्ल्यू. टी. ओ.) एक ऐसा संगठन है, जिसका ध्येय अन्तर्राष्ट्रीय व्यापार को उदार बनाना है। विकसित देशों की पहल पर शुरू किया गया विश्व व्यापार संगठन अन्तर्राष्ट्रीय

व्यापार से संबंधित नियमों को निर्धारित करता है और यह देखता है कि इन नियमों का पालन हो। विश्व के लगभग 160 देश विश्व व्यापार संगठन के सदस्य हैं।

यद्यपि विश्व व्यापार संगठन सभी देशों को मुक्त व्यापार की सुविधा देता है, परंतु व्यवहार में यह देखा गया है कि विकसित देशों ने अनुचित ढंग से व्यापार अवरोधकों को बरकरार रखा है। दूसरी ओर, विश्व व्यापार संगठन के नियमों ने विकासशील देशों के व्यापार अवरोधों को हटाने के लिए विवश किया है। इसका एक उदाहरण कृषि उत्पादों के व्यापार पर वर्तमान बहस है।

व्यापार व्यवहारों पर वाद-विवाद

आपने अध्याय-2 में देखा है कि भारत में अधिकांश रोज़गार और सकल घरेलू उत्पाद (जी. डी. पी.) का महत्वपूर्ण भाग कृषि क्षेत्र प्रदान करता है। इसकी तुलना में विकसित देशों, जैसे अमेरिका के सकल घरेलू उत्पाद में कृषि का हिस्सा मात्र एक प्रतिशत और कुल रोज़गार में केवल 0.5 प्रतिशत है। फिर भी, अमेरिका के कृषि क्षेत्र में कार्यरत इतने कम प्रतिशत लोग भी अमेरिकी सरकार से उत्पादन और दूसरे देशों को निर्यात करने के लिए बहुत अधिक धन राशि प्राप्त करते हैं। इस भारी धन राशि के कारण अमेरिकी किसान अपने कृषि उत्पादों को असाधारण रूप से कम कीमत पर बेच सकते हैं। अधिशेष कृषि उत्पादों को दूसरे देशों के बाजारों में कम कीमत पर बेचा जाता है जो इन देशों के कृषकों को बुरी तरह प्रभावित करते हैं।

यही कारण है कि विकासशील देश, विकसित देशों की सरकारों से सवाल करते हैं।

कर रहे हैं कि 'हमने विश्व व्यापार संगठन के नियमों के अनुसार व्यापार अवरोधकों को कम कर दिया, लेकिन आप लोगों ने विश्व व्यापार संगठन के नियमों को नज़रअंदाज़ कर दिया और अपने किसानों को भारी धन राशि देना बरकरार रखा है। आप लोगों ने हमारी सरकारों को अपने किसानों की सहायता बंद करने को कहा, परन्तु आप स्वयं यहीं काम कर रहे हैं। क्या यह मुक्त और न्यायसंगत व्यापार है?'



आओ—इन पर विचार करें

- रिक्त स्थानों की पूर्ति करें –

विश्व व्यापार संगठन देशों की पहल पर शुरू हुआ था। विश्व व्यापार संगठन का ध्येय है। विश्व व्यापार संगठन सभी देशों के लिए से संबंधित नियम बनाता है और देखता है कि व्यवहार में, देशों के बीच व्यापार नहीं है। विकासशील देश, जैसे, भारत है जबकि अधिकांश स्थितियों में विकसित देशों ने अपने उत्पादकों को संरक्षण देना जारी रखा है।

- आपके विचार से विभिन्न देशों के बीच अधिकाधिक न्यायसंगत व्यापार के लिए क्या किया जा सकता है?
- उपर्युक्त उदाहरण में, हमने देखा कि अमेरिकी सरकार किसानों को उत्पादन के लिए भारी धन राशि देती है। कभी-कभी सरकार कुछ विशेष प्रकार की वस्तुओं जैसे पर्यावरण के अनुकूल वस्तुओं के उत्पादन को बढ़ावा देने के लिए सहायता देती है। यह न्यायसंगत है या नहीं, चर्चा करें।

भारत में वैश्वीकरण का प्रभाव

विगत बीस वर्षों में भारतीय अर्थव्यवस्था के वैश्वीकरण ने एक लम्बी दूरी तय की है। इसका लोगों के जीवन पर क्या प्रभाव पड़ा है? हम कुछ प्रमाण देखते हैं।

वैश्वीकरण और उत्पादकों-स्थानीय एवं विदेशी दोनों, के बीच वृहतर प्रतिस्पर्धा से उपभोक्ताओं, विशेषकर शहरी क्षेत्र में धनी वर्ग के उपभोक्ताओं को लाभ हुआ है। इन उपभोक्ताओं के समक्ष पहले से अधिक विकल्प हैं और वे अब अनेक उत्पादों की उत्कृष्ट गुणवत्ता और कम कीमत से लाभान्वित हो रहे हैं। परिणामतः ये लोग पहले की तुलना में आज अपेक्षाकृत उच्चतर जीवन स्तर का आनन्द ले रहे हैं। उत्पादकों और श्रमिकों पर वैश्वीकरण का एक समान प्रभाव नहीं पड़ा है।

पहला, विगत 20 वर्षों में बहुराष्ट्रीय कंपनियों ने भारत में अपने निवेश में वृद्धि की है, जिसका अर्थ है कि भारत में निवेश करना उनके लिए लाभप्रद रहा है। बहुराष्ट्रीय कंपनियों ने शहरी इलाकों के उद्योगों जैसे सेलफोन, मोटर गाड़ियों, इलेक्ट्रॉनिक उत्पादों, ठंडे पेय पदार्थों और जंक खाद्य पदार्थों एवं बैंकिंग जैसी सेवाओं के निवेश में रुचि दिखाई है। इन उत्पादों के अधिकांश खरीदार संपन्न वर्ग के लोग हैं। इन उद्योगों और सेवाओं में नये रोजगार उत्पन्न हुए हैं। साथ ही, इन उद्योगों को कच्चे माल इत्यादि की आपूर्ति करनेवाली स्थानीय कंपनियाँ समृद्ध हुईं।



विदेशी निवेश आकर्षित करने के लिए उठाए गए कदम

हाल के वर्षों में भारत की केन्द्र एवं राज्य सरकारें भारत में निवेश हेतु विदेशी कंपनियों को आकर्षित करने के लिए विशेष कदम उठा रही हैं। औद्योगिक क्षेत्रों, जिन्हें विशेष आर्थिक क्षेत्र कहा जाता है, की स्थापना की जा रही है। विशेष आर्थिक क्षेत्रों में विश्व स्तरीय सुविधाएँ-बिजली, पानी, सड़क, परिवहन, भण्डारण, मनोरंजन और शैक्षिक सुविधाएँ उपलब्ध होनी चाहिए। विशेष आर्थिक क्षेत्र में उत्पादन इकाइयाँ स्थापित करने वाली कंपनियों को आर्थिक पाँच वर्षों तक कोई कर नहीं देना पड़ता है।

विदेशी निवेश आकर्षित करने हेतु सरकार ने श्रम-कानूनों में लचीलापन लाने की अनुमति दे दी है। आपने अध्याय-2 में देखा है कि संगठित क्षेत्र की कंपनियों को कुछ नियमों का अनुपालन करना पड़ता है। जिसका उद्देश्य श्रमिक अधिकारों का संरक्षण करना

है। हाल के वर्षों में सरकार ने कंपनियों को अनेक नियमों से छूट लेने की अनुमति दे दी है। अब नियमित आधार पर श्रमिकों को रोजगार देने के बजाय कंपनियों में जब काम का अधिक दबाव होता है, तो लोचदार ढंग से छोटी अवधि के लिए श्रमिकों को कार्य पर रखती हैं। कंपनी की श्रम लागत में कटौती करने के लिए ऐसा किया जाता है। फिर भी, विदेशी कंपनियाँ अभी भी संतुष्ट नहीं हैं और श्रम कानूनों में और अधिक लचीलेपन की माँग कर रही हैं।



दूसरा, अनेक शीर्ष भारतीय कंपनियाँ बढ़ी हुई प्रतिस्पर्धा से लाभान्वित हुई हैं। इन कंपनियों ने नवीनतम प्रौद्योगिकी और उत्पादन प्रणाली में निवेश किया और अपने उत्पादन-मानकों को ऊँचा उठाया है। कुछ ने विदेशी कंपनियों के साथ सफलतापूर्वक सहयोग कर लाभ अर्जित किया।

इससे भी आगे, वैश्वीकरण ने कुछ बड़ी भारतीय कंपनियों को बहुराष्ट्रीय कंपनियों के रूप में उभरने के योग्य बनाया है। टाटा मोटर्स (मोटरगाड़ियाँ), इंफोसिस (आई.टी.), रैनबैकसी (दवाइयाँ), एशियन पेंट्स (पेंट), सुंदरम फास्नर्स (नट और बोल्ट) कुछ ऐसी भारतीय कंपनियाँ हैं,

जो विश्व स्तर पर अपने क्रियाकलापों का प्रसार कर रही हैं।

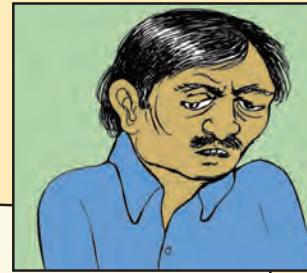
वैश्वीकरण ने सेवा प्रदाता कंपनियों विशेषकर सूचना और संचार प्रौद्योगिकी वाली कंपनियों के लिए नये अवसरों का सृजन किया है। भारतीय कंपनी द्वारा लंदन स्थित कंपनी के लिए पत्रिका का प्रकाशन और कॉल सेंटर इसके उदाहरण हैं। इसके अतिरिक्त आँकड़ा प्रविष्टि (डाटा एन्ट्री), लेखाकरण, प्रशासनिक कार्य, इंजीनियरिंग जैसी कई सेवायें भारत जैसे देशों में अब सस्ते में उपलब्ध हैं और विकसित देशों को निर्यात की जाती है।

आओ—इन पर विचार करें

- प्रतिस्पर्धा से भारत के लोगों को कैसे लाभ हुआ है?
- क्या और भारतीय कंपनियों को बहुराष्ट्रीय कंपनियों के रूप में उभारना चाहिए? इससे देश की जनता को क्या लाभ होगा?
- सरकारें अधिक विदेशी निवेश आकर्षित करने का प्रयास क्यों करती हैं?
- अध्याय 1 में हमने देखा कि एक का विकास दूसरे के लिए कैसे विध्वंसक हो सकता है। भारत के कुछ लोगों ने विशेष आर्थिक क्षेत्रों (सेज) की स्थापना का विरोध किया है। पता कीजिए, ये लोग कौन हैं और ये इसका विरोध क्यों कर रहे हैं?

छोटे उत्पादक – प्रतिस्पर्धा करो या नष्ट हो जाओ

वैश्वीकरण ने बड़ी संख्या में छोटे उत्पादकों और श्रमिकों के लिए बड़ी चुनौतियाँ खड़ी की हैं।



बढ़ती प्रतियोगिता

रवि को यह अपेक्षा नहीं थी कि उसे एक उद्योगपति के रूप में अपने जीवन की छोटी अवधि में ही संकट का सामना करना पड़ेगा। रवि ने सन् 1992 में तमिलनाडु के एक औद्योगिक शहर होसुर में संधारित्रों का निर्माण करने वाली अपनी कंपनी शुरू करने के लिए बैंक से ऋण लिया। संधारित्रों का इस्तेमाल ट्यूबलाइटों, टेलीविजनों सहित अनेक घरेलू इलेक्ट्रॉनिक उपकरणों में होता है। तीन वर्षों के भीतर वह अपने उत्पादन का विस्तार करने में सक्षम हो गया और उसकी कंपनी में 20 कर्मचारी काम करने लगे।

अपनी कंपनी चलाने में उसका संघर्ष तब प्रारंभ हुआ, जब सरकार ने सन् 2001 में विश्व व्यापार संगठन के समझौते के अनुसार संधारित्रों के आयात पर से प्रतिबंधों को हटा दिया। उसके मुख्य ग्राहकों में

टेलीविजन कंपनियाँ थीं, जो टेलीविजन सेटों का निर्माण करने के लिए संधारित्रों सहित विभिन्न पुर्जे थोक में खरीदती और टेलीविजन सेटों का निर्माण करती हैं। किंतु बहुराष्ट्रीय कंपनियों के ब्रांडों से प्रतिस्पर्धा ने भारतीय टेलीविजन कंपनियों को बहुराष्ट्रीय कंपनियों के लिए संयोजन-कार्य करने के लिए विवश कर दिया। उनमें से कुछ जब संधारित्र खरीदती थीं, तो वे इनका आयात करना पसंद करती थीं, क्योंकि आयातित सामानों की कीमत रवि जैसे लोगों द्वारा निर्धारित कीमत से आधी होती थी।

अब रवि वर्ष 2000 में निर्मित संधारित्रों से आधे से भी कम संधारित्रों का निर्माण करता है और उसके लिए केवल सात श्रमिक काम कर रहे हैं। रवि के अनेक दोस्तों ने, जो हैदराबाद और चेन्नई में इसी व्यवसाय में थे, अपनी इकाइयाँ बंद कर दीं।

बैटरी, संधारित्र, प्लास्टिक, खिलौने, यायरों, डेयरी उत्पादों एवं खाद्य तेल के उद्योग कुछ ऐसे उदाहरण हैं, जहाँ प्रतिस्पर्धा के कारण छोटे विनिर्माताओं पर कड़ी मार पड़ी है। कई इकाइयाँ बंद हो गईं, जिसके चलते अनेक श्रमिक बेरोजगार हो गए। भारत में लघु उद्योगों में कृषि के बाद सबसे अधिक श्रमिक (2 करोड़) नियोजित हैं।

आओ—इन पर विचार करें

1. रवि की लघु उत्पादन इकाई बढ़ती प्रतिस्पर्धा से किस प्रकार प्रभावित हुई?
2. दूसरे देशों के उत्पादकों की तुलना में उत्पादन लागत अधिक होने के कारण क्या रवि जैसे उत्पादकों को उत्पादन रोक देना चाहिए? आप क्या सोचते हैं?
3. नवीनतम अध्ययनों ने संकेत किया है कि भारत के लघु उत्पादकों को बाजार में बेहतर प्रतिस्पर्धा के लिए तीन चीजों की आवश्यकता है – (अ) बेहतर सड़कें, बिजली, पानी, कच्चा माल, विपणन और सूचना तंत्र, (ब) प्रौद्योगिकी में सुधार एवं आधुनिकीकरण और (स) उचित व्याज दर पर साख की समय पर उपलब्धता।
 - क्या आप व्याख्या कर सकते हैं कि ये तीन चीजें भारतीय उत्पादकों को किस प्रकार मदद करेंगी?
 - क्या आप मानते हैं कि बहुराष्ट्रीय कंपनियाँ इन क्षेत्रों में निवेश करने के लिए इच्छुक होंगी? क्यों?
 - क्या आप मानते हैं कि इन सुविधाओं को उपलब्ध कराने में सरकार की भूमिका है? क्यों?
 - क्या आप कोई ऐसा उपाय सुझा सकते हैं जिसे कि सरकार अपना सके? चर्चा करें।

प्रतिस्पर्धा और अनिश्चित रोज़गार

वैश्वीकरण और प्रतिस्पर्धा के दबाव ने श्रमिकों के जीवन को व्यापक रूप से प्रभावित किया है। बढ़ती प्रतिस्पर्धा के कारण अधिकांश नियोक्ता इन दिनों श्रमिकों को रोज़गार देने में लचीलापन पसंद करते हैं। इसका अर्थ है कि श्रमिकों का रोज़गार अब सुनिश्चित नहीं है।

अब हम देखते हैं कि भारत में वस्त्र निर्यात उद्योग प्रतिस्पर्धा के दबाव को कैसे सहन कर रहे हैं?



वस्त्र निर्यातक फैक्ट्री में महिला श्रमिक – यद्यपि वैश्वीकरण ने महिलाओं को काम के लिए अवसर प्रदान किया है, परन्तु रोज़गार की स्थितियाँ यह प्रदर्शित करती हैं कि महिलाओं को लाभ में भागीदारी समुचित रूप से नहीं मिली।

अमेरिका और यूरोप में वस्त्र उद्योग की बड़ी बहुराष्ट्रीय कंपनियाँ भारतीय निर्यातकों को वस्तुओं की आपूर्ति के लिए आर्डर देती हैं। विश्वव्यापी नेटवर्क से युक्त बड़ी बहुराष्ट्रीय कंपनियाँ लाभ को अधिकतम करने के लिए सबसे सस्ती वस्तुएँ खोजती हैं। इन बड़े आर्डरों को प्राप्त करने के लिए भारतीय वस्त्र निर्यातक अपनी लागत कम करने की कड़ी कोशिश करते हैं। चूँकि कच्चे माल पर लागत में कटौती नहीं की जा सकती, इसलिए नियोक्ता श्रम-लागत में कटौती करने की कोशिश करते हैं। जहाँ पहले कारखाने श्रमिकों को स्थायी आधार पर रोज़गार देते थे, वहाँ वे अब अस्थायी रोज़गार देते हैं, ताकि श्रमिकों को वर्ष भर वेतन नहीं देना पड़े। श्रमिकों को बहुत लम्बे कार्य-घंटों तक काम करना पड़ता है और अत्यधिक माँग की अवधि में नियमित रूप से रात में भी काम करना पड़ता है। मजदूरी काफी कम होती है और श्रमिक अपनी रोज़ी-रोटी के लिए अतिरिक्त समय में भी काम करने के लिए विवश हो जाते हैं।

हालाँकि वस्त्र निर्यातकों के बीच प्रतिस्पर्धा से बहुराष्ट्रीय कंपनियों को अधिक लाभ कमाने में मदद मिली है, परन्तु वैश्वीकरण के कारण मिले लाभ में श्रमिकों को न्यायसंगत हिस्सा नहीं दिया गया है।

कपड़ा श्रमिक

35 वर्षीया सुशीला ने दिल्ली के एक वस्त्र निर्यातक उद्योग में एक श्रमिक के रूप में कई वर्ष काम किया। जब वह एक स्थायी श्रमिक के रूप में नियुक्त थी तो स्वास्थ्य बीमा, भविष्य निधि एवं अतिरिक्त समय में कार्य करने के लिए दुगुनी मजदूरी की हकदार थी। जब 1990 के दशक के अंतिम वर्षों में सुशीला की फैक्ट्री बंद हो गई, तो छह माह तक रोज़गार की तलाश करने के बाद अंततः उसे अपने घर से 30 कि.मी. दूर एक रोज़गार मिला। कई वर्षों तक इस फैक्ट्री में काम करने के बावजूद वह एक अस्थायी श्रमिक है और पहले की तुलना में आधे से भी कम कमा पाती है। वह सप्ताह के सातों दिन सुबह 7.30 बजे अपने घर से निकलती है और शाम 10 बजे वापस आती है। एक दिन काम नहीं करने का अर्थ है, उस दिन की मजदूरी नहीं मिलना। उसे अब कोई अन्य लाभ नहीं मिलता है जो पहले मिलता था। उसके घर के समीप की फैक्ट्रियों को काफी अस्थिर आर्डर मिलते हैं और इसलिए वे कम वेतन भी देती हैं।

उपरोक्त कार्य-परिस्थितियाँ और श्रमिकों की कठिनाइयाँ भारत के अनेक औद्योगिक इकाइयों और सेवाओं में सामान्य बात हो गई है। आज अधिकांश श्रमिक असंगठित क्षेत्र में नियोजित हैं। यही नहीं, संगठित क्षेत्र में क्रमशः कार्य-परिस्थितियाँ असंगठित क्षेत्र के समान होती जा रही है। संगठित क्षेत्रके श्रमिकों जैसे सुशीला को अब कोई संरक्षण और लाभ नहीं मिलता है, जिसका वह पहले उपभोग करती थी।

आओ—इन पर विचार करें

1. वस्त्र उद्योग के श्रमिकों, भारतीय निर्यातकों और विदेशी बहुराष्ट्रीय कंपनियों को प्रतिस्पर्धा ने किस प्रकार प्रभावित किया है?
2. वैश्वीकरण से मिले लाभों में श्रमिकों को न्यायसंगत हिस्सा मिल सके, इसके लिए प्रत्येक निम्न वर्ग क्या कर सकता है?
 - (क) सरकार
 - (ख) निर्यातक फैक्ट्रियों के नियोक्ता
 - (ग) बहुराष्ट्रीय कंपनियाँ
 - (घ) श्रमिक
3. वर्तमान समय में भारत में बहस है कि क्या कंपनियों को रोजगार नीतियों के मुद्दे पर लचीलापन अपनाना चाहिए। इस अध्याय के आधार पर नियोक्ताओं और श्रमिकों के पक्षों का संक्षिप्त विवरण दें।

न्यायसंगत वैश्वीकरण के लिए संघर्ष

उपर्युक्त प्रमाण यह संकेत करते हैं कि वैश्वीकरण सभी के लिए लाभप्रद नहीं रहा है। शिक्षित, कुशल और संपन्न लोगों ने वैश्वीकरण से मिले नये अवसरों का सर्वोत्तम उपयोग किया है। दूसरी ओर, अनेक लोगों को लाभ में हिस्सा नहीं मिला है।

चूँकि वैश्वीकरण अब एक सच्चाई है, तो वैश्वीकरण को अधिक 'न्यायसंगत' कैसे बनाया जा सकता है? न्यायसंगत वैश्वीकरण सभी के लिए अवसर प्रदान करेगा और यह सुनिश्चित भी करेगा कि वैश्वीकरण के लाभों में सबकी बेहतर हिस्सेदारी हो।

सरकार इसे संभव बनाने में महत्वपूर्ण भूमिका निभा सकती है। इसकी नीतियों को केवल धनी और प्रभावशाली लोगों को ही नहीं बल्कि देश के सभी लोगों के हितों का संरक्षण करना चाहिए। आपने सरकार द्वारा किए जाने वाले कुछ उपायों के बारे में पढ़ा है। जैसे, सरकार यह सुनिश्चित

कर सकती है कि श्रमिक कानूनों का उचित कार्यान्वयन हो और श्रमिकों को अपने अधिकार मिले। यह छोटे उत्पादकों को कार्य-निष्पादन में सुधार के लिए उस समय तक मदद कर सकती है, जब तक वे प्रतिस्पर्धा के लिए सक्षम न हो जायें। यदि जरूरी हुआ तो सरकार व्यापार और निवेश अवरोधकों का उपयोग कर सकती है। यह 'न्यायसंगत नियमों' के लिए विश्व व्यापार संगठन से समझौते भी कर सकती है। विश्व व्यापार संगठन में विकसित देशों के वर्चस्व के विरुद्ध समान हितों वाले विकासशील देशों को मिलकर लड़ना होगा।

विगत कुछ वर्षों में, बड़े अभियानों और जनसंगठनों के प्रतिनिधियों ने विश्व व्यापार संगठन के व्यापार और निवेश से संबंधित महत्वपूर्ण निर्णयों को प्रभावित किया है। यह प्रदर्शित करता है कि जनता भी न्यायसंगत वैश्वीकरण के संघर्ष में महत्वपूर्ण भूमिका निभा सकती है।

70 आर्थिक विकास की समझ



हांगकांग में डब्लूटीओ. के खिलाफ प्रदर्शन-2005

सारांश

इस अध्याय में हमने वैश्वीकरण की वर्तमान अवस्था का अध्ययन किया। वैश्वीकरण विभिन्न देशों के बीच तीव्र एकीकरण की प्रक्रिया है। यह अधिकाधिक विदेशी निवेश और विदेश व्यापार के द्वारा संभव हो रहा है। बहुराष्ट्रीय कंपनियाँ वैश्वीकरण की प्रक्रिया में मुख्य भूमिका निभा रही हैं। अधिक से अधिक बहुराष्ट्रीय कंपनियाँ विश्व के उन स्थानों की खोज कर रही हैं, जो उनके उत्पादन के लिए ज्यादा सस्ते हाँ। परिणामतः उत्पादन कार्य जटिल ढंग से संगठित किया जा रहा है।

देशों के बीच उत्पादन को संगठित करने में प्रौद्योगिकी, विशेषकर सूचना प्रौद्योगिकी ने एक बड़ी भूमिका निभायी है।

साथ ही, व्यापार और निवेश के उदारीकरण ने व्यापार और निवेश अवरोधकों को हटाकर वैश्वीकरण को सुगम बनाया है। अन्तर्राष्ट्रीय स्तर पर, विश्व व्यापार संगठन ने व्यापार और निवेश के उदारीकरण के लिए विकासशील देशों पर दबाव डाला है।

जबकि वैश्वीकरण से धनी उपभोक्ता और कुशल, शिक्षित एवं धनी उत्पादक ही लाभान्वित हुए हैं परन्तु बढ़ती प्रतिस्पर्धा से अनेक छोटे उत्पादक और श्रमिक प्रभावित हुए हैं। न्यायसंगत वैश्वीकरण सभी के लिए अवसरों का सृजन करेगा और यह भी सुनिश्चित करेगा कि वैश्वीकरण के लाभों में सभी की बेहतर हिस्सेदारी हो।

अध्यास

1. वैश्वीकरण से आप क्या समझते हैं? अपने शब्दों में स्पष्ट कीजिए।
2. भारत सरकार द्वारा विदेश व्यापार एवं विदेशी निवेश पर अवरोधक लगाने के क्या कारण थे? इन अवरोधकों को सरकार क्यों हटाना चाहती थी?
3. श्रम कानूनों में लचीलापन कंपनियों को कैसे मदद करेगा?
4. दूसरे देशों में बहुराष्ट्रीय कंपनियाँ किस प्रकार उत्पादन या उत्पादन पर नियंत्रण स्थापित करती हैं?
5. विकसित देश, विकासशील देशों से उनके व्यापार और निवेश का उदारीकरण क्यों चाहते हैं? क्या आप मानते हैं कि विकासशील देशों को भी बदल में ऐसी माँग करनी चाहिए?
6. ‘वैश्वीकरण का प्रभाव एक समान नहीं है’। इस कथन की अपने शब्दों में व्याख्या कीजिए।
7. व्यापार और निवेश नीतियों का उदारीकरण वैश्वीकरण प्रक्रिया में कैसे सहायता पहुँचाती हैं?
8. विदेश व्यापार विभिन्न देशों के बाजारों के एकीकरण में किस प्रकार मदद करता है? यहाँ दिए गए उदाहरण से भिन्न उदाहरण सहित व्याख्या कीजिए।
9. वैश्वीकरण भविष्य में जारी रहेगा। क्या आप कल्पना कर सकते हैं कि आज से बीस वर्ष बाद विश्व कैसा होगा? अपने उत्तर का कारण दीजिए।
10. मान लीजिए कि आप दो लोगों को तर्क करते हुए पाते हैं – एक कह रहा है कि वैश्वीकरण ने हमारे देश के विकास को क्षति पहुँचाई है, दूसरा कह रहा है कि वैश्वीकरण ने भारत के विकास में सहायता की है। इन लोगों को आप कैसे जवाब दोगे?
11. रिक्त स्थानों की पूर्ति कीजिए –
दो दशक पहले की तुलना में भारतीय खरीददारों के पास वस्तुओं के अधिक विकल्प हैं। यह की प्रक्रिया से नजदीक से जुड़ा हुआ है। अनेक दूसरे देशों में उत्पादित वस्तुओं को भारत के बाजारों में बेचा जा रहा है। इसका अर्थ है कि अन्य देशों के साथ बढ़ रहा है। इससे भी आगे भारत में बहुराष्ट्रीय कंपनियाँ द्वारा उत्पादित ब्रांडों की बढ़ती संख्या हम बाजारों में देखते हैं। बहुराष्ट्रीय कंपनियाँ भारत में निवेश कर रही हैं क्योंकि। जबकि बाजार में उपभोक्ताओं के लिए अधिक विकल्प इसलिए बढ़ते और के प्रभाव का अर्थ है उत्पादकों के बीच अधिकतम।
12. निम्नलिखित को सुमेलित कीजिए –
 - (क) बहुराष्ट्रीय कंपनियाँ छोटे उत्पादकों से सस्ते दरों पर खरीदती हैं। (अ) मोटर गाड़ियों
 - (ख) आयात पर कर और कोटा का उपयोग, व्यापार नियमन (ब) कपड़ा, जूते-चप्पल, खेल के सामान के लिए किया जाता है।
 - (ग) विदेशों में निवेश करने वाली भारतीय कंपनियाँ (स) कॉल सेंटर
 - (घ) आई.टी. ने सेवाओं के उत्पादन के प्रसार में सहायता की है। (द) टाटा मोटर्स, इंफोसिस रैनबैक्सी
 - (ङ) अनेक बहुराष्ट्रीय कंपनियाँ ने उत्पादन करने के लिए निवेश किया है। (य) व्यापार अवरोधक

13. सही विकल्प का चयन कीजिए –

- (अ) वैश्वीकरण के विगत दो दशकों में हुत आवागमन देखा गया है
(क) देशों के बीच वस्तुओं, सेवाओं और लोगों का
(ख) देशों के बीच वस्तुओं, सेवाओं और निवेशों का
(ग) देशों के बीच वस्तुओं, निवेशों और लोगों का
- (आ) विश्व के देशों में बहुराष्ट्रीय कंपनियों द्वारा निवेश का सबसे अधिक सामान्य मार्ग है
(क) नये कारखानों की स्थापना
(ख) स्थानीय कंपनियों को खरीद लेना
(ग) स्थानीय कंपनियों से साझेदारी करना
- (इ) वैश्वीकरण ने जीवन-स्तर के सुधार में सहायता पहुँचाई है।
(क) सभी लोगों के
(ख) विकसित देशों के लोगों के
(ग) विकासशील देशों के श्रमिकों के
(घ) उपर्युक्त में से कोई नहीं

अतिरिक्त परियोजना/कार्यकलाप

- कुछ ब्रांडेड उत्पादों को लीजिए, जिनका हम रोजाना इस्तेमाल करते हैं (साबुन, टूथपेस्ट, कपड़े, इलेक्ट्रॉनिक वस्तुएँ इत्यादि)। जाँच कीजिए कि इनमें से कौन-कौन बहुराष्ट्रीय कंपनियों द्वारा उत्पादित हैं।
- अपनी पसंद के किसी भी भारतीय उद्योग या सेवा को लीजिए। उद्योग के निम्नलिखित पहलुओं पर लोगों के साक्षात्कारों, समाचार-पत्रों एवं पत्रिकाओं की कतरनों, पुस्तकों, दूरदर्शन एवं इंटरनेट से जानकारियाँ और फोटो संकलित कीजिए –
(क) उद्योग में विविध उत्पादक/कंपनियाँ।
(ख) क्या उत्पाद अन्य देशों को निर्यात होता है?
(ग) क्या उत्पादकों के बीच बहुराष्ट्रीय कंपनियाँ हैं?
(घ) उद्योग में प्रतिस्पर्धा।
(ङ) उद्योग में कार्य-परिस्थितियाँ।
(च) क्या विगत पंद्रह वर्षों में उद्योग में कोई बड़ा बदलाव आया है?
(छ) उद्योग में कार्यरत लोगों की समस्याएँ।

शिक्षक के लिए निर्देश

अध्याय 5 – उपभोक्ता अधिकार

यह अध्याय हमारे देश में बाजार की कार्यविधि के संदर्भ में उपभोक्ता अधिकारों के मुद्दे पर विचार करता है। बाजार में असमान स्थितियों के बहुत से पहलू हैं तथा नियमों और कानूनों को लागू करने की स्थिति असंतोषप्रद है। इसलिए, नये उपभोक्ताओं को वास्तविकता से परिचित कराने और उपभोक्ता आंदोलन में भाग लेने हेतु उन्हें प्रोत्साहित करने की ज़रूरत है (नये उपभोक्ताओं को उपभोक्ता के रूप में सावधान और जानकार नागरिक बनाना है)। यह अध्याय कुछ घटनाओं के उदाहरण प्रस्तुत करता है कि कैसे वास्तविक जीवन में कुछ उपभोक्ता शोषण का शिकार हुए थे और कैसे वैध संस्थाओं ने उनके उपभोक्ता अधिकारों की रक्षा की हैं और क्षतिपूर्ति प्राप्त करने में उन्हें सहायता प्रदान की। इन घटनाओं का विवरण छात्रों को उनके जीवन अनुभवों को आसपास की घटनाओं से जोड़ने में समर्थ बनाएगा। हमें छात्रों को इस योग्य बनाना है कि वे समझदार उपभोक्ता के रूप में जागरूक होकर उपभोक्ता आंदोलन को नयी दिशा दें और अपने लंबे संघर्षों द्वारा लोगों की सक्रिय भागीदारी बढ़ाएँ। यह अध्याय कुछ ऐसे संगठनों के बारे में भी जानकारी देता है, जो विभिन्न प्रकार से उपभोक्ताओं की मदद करते हैं। अध्याय के अंत में भारत में उपभोक्ता आंदोलन के कुछ गंभीर मुद्दों को बताया गया है।

शिक्षण के तरीके/सूचना के स्रोत

इस अध्याय में प्रश्नों, संदर्भ अध्ययनों और गतिविधियों को शामिल किया गया है। इन मुद्दों पर छात्रों का समूहों में विचार-विमर्श करना बेहतर होगा। इनमें से कुछ का उत्तर व्यक्तिगत रूप से लिख कर दिया जा सकता है।

आप प्रत्येक क्रियाकलाप का आरंभ उस पर एक गहन परिचर्चा-सत्र के साथ कर सकते हैं। साथ ही, इस अध्याय में आपकी भूमिका निर्धारित करने के लिए अनेक संभावनाएँ हैं, जो मुद्दों को गहराई से समझने और अपने अनुभवों को लोगों में बाँटने का बेहतर तरीका हो सकती हैं। सम्मिलित

रूप से इश्तहार बनाना इन मुद्दों पर विचार करने का दूसरा तरीका है। इस अध्याय में कई गतिविधियों को रखा गया है, जिनको पूरा करने के लिए विभिन्न संस्थाओं से संपर्क करने की आवश्यकता पड़ेगी। यात्राओं की ज़रूरत पड़ेगी। ये संस्थाएँ उपभोक्ता संरक्षण परिषदें, उपभोक्ता संस्थाएँ, जिला/राज्य/राष्ट्रीय स्तर उपभोक्ता विवाद निवारण आयोग, खुदरा दुकानें, बाजारों आदि की हो सकती हैं। छात्रों के अधिकाधिक अनुभवों को प्राप्त करने के लिए संपर्कों का आयोजन करें। संपर्कों के उद्देश्यों के बारे में उनसे परिचर्चा करें, काम शुरू करने से पहले की सावधानी, अन्य ज़रूरी चीज़ें और कार्य (रिपोर्ट, प्रस्ताव, नियमावली, सामान आदि) जो उन्हें यात्रा के बाद प्राप्त होंगी, उन पर चर्चा करें। इस अध्याय में छात्र पत्र लेखन और वार्तालाप में हिस्सा ले सकते हैं। हमें इस अध्याय के अभ्यासों की भाषा के प्रति संवेदनात्मक होना पड़ेगा।

इस अध्याय में प्रामाणिक वेबसाइटों, पुस्तकों, समाचार-पत्रों और पत्रिकाओं से सामग्री संकलित की गई है। उदाहरण के लिए, <https://consumeraffairs.nic.in> केंद्रीय सरकार की उपभोक्ता मामले, भोजन एवं सार्वजनिक वितरण के मंत्रालय की वेबसाइट है। दूसरी वेबसाइट www.cuts-international.org जो भारत में लगभग चालीस वर्षों से अधिक समय से काम कर रही उपभोक्ता संगठन की वेबसाइट है। यह भारत में उपभोक्ता को जागरूक बनाने के लिए विभिन्न प्रकार की सामग्री प्रकाशित करती है। इसे छात्रों के बीच साझेदारी की आवश्यकता है ताकि वे भी अपने कार्यकलापों में हिस्से के रूप में संकलित कर सकें। इसलिए, वे कार्यकलापों से प्राप्त सामग्री को भी इकट्ठा कर सकते हैं। उदाहरण के लिए, विभिन्न घटनाओं की जानकारी समाचार-पत्रों के अंशों और उपभोक्ता अदालतों में संघर्ष कर रहे उपभोक्ताओं से ली जा सकती है। छात्र उपभोक्ता संरक्षण परिषदों, उपभोक्ता अदालतों और इंटरनेट जैसे विभिन्न स्रोतों से सामग्री को संकलित करें और पढ़ें।

बाजार में उपभोक्ता

बाजार में हमारी भागीदारी उत्पादक और उपभोक्ता दोनों रूपों में होती है। वस्तुओं एवं सेवाओं के उत्पादक के रूप में, हम पहले वर्णित कृषि, उद्योग या सेवा जैसे क्षेत्रों में कार्यरत हो सकते हैं। उपभोक्ताओं की भागीदारी बाजार में तब होती है, जब वे अपनी आवश्यकतानुसार वस्तुओं या सेवाओं को खरीदते हैं। उपभोक्ता के रूप में लोगों द्वारा उपभोग किए जानेवाली ये अंतिम वस्तुएँ होती हैं।

पिछले अध्यायों में हमने विकास को बढ़ावा देने के लिए ज़रूरी नियमों और नियंत्रणों या इसके लिए उठाये गए कदमों की आवश्यकता का वर्णन किया है। इनका महत्व असंगठित क्षेत्र के मजदूरों की सुरक्षा के लिए उसी तरह हो सकता है, जिस तरह साहूकारों द्वारा लगाए जाने वाले उच्च ब्याज दर से लोगों को बचाने के लिए नियमों और नियंत्रणों की ज़रूरत होती है। इसी प्रकार से पर्यावरण की सुरक्षा के लिए नियमों एवं विनियमों की आवश्यकता है।

उदाहरण के लिए, अनौपचारिक क्षेत्रों के साहूकार जिनके बारे में आप पहले के अध्याय 3 में पढ़ चुके हैं, कर्जदार पर बंधन डालने के लिए तरह-तरह के दाँव-पेच अपनाते हैं। सामयिक ऋण के कारण वे उत्पादक को उत्पाद निम्न दर पर बेचने के लिए मजबूर कर सकते हैं। वे स्वप्ना जैसी महिला को ऋण चुकाने के लिए अपनी जमीन बेचने को विवश कर सकते हैं। इसी प्रकार, असंगठित क्षेत्र में काम करनेवाले बहुत से लोगों को निम्न वेतन पर कार्य करना पड़ता है और उन परिस्थितियों को झेलना पड़ता है, जो न्यायोचित नहीं होती हैं और प्रायः उनके स्वास्थ्य के लिए हानिकारक भी होती हैं। ऐसे शोषण को रोकने के लिए और उनकी सुरक्षा हेतु हमने नियमों एवं विनियमों की बात की है। ऐसी कई संस्थाएँ हैं

उन्होंने जानबूझकर इसे ऐसा बनाया कि कुछ महीनों में ये बेकार हो जाए, ताकि मुझे नया खरीदना पड़े।

जिन्होंने यह सुनिश्चित करने के लिए लम्बा संघर्ष किया है कि इन नियमों का अनुपालन हो।

बाजार में भी उपभोक्ताओं की सुरक्षा के लिए नियम एवं विनियमों की आवश्यकता होती है, क्योंकि अकेला उपभोक्ता प्रायः स्वयं को कमज़ोर स्थिति में पाता है। खरीदी गयी वस्तु या सेवा के बारे में जब भी कोई शिकायत होती है, तो विक्रेता सारा उत्तरदायित्व क्रेता पर डालने का प्रयास करता है। सामान्यतः उनकी प्रतिक्रिया होती है: “आपने जो खरीदा है अगर वह पसंद नहीं है तो कहीं और जाइए।” मानो, बिक्री हो जाने के बाद विक्रेता की कोई जिम्मेदारी नहीं रह जाती। उपभोक्ता आंदोलन, जिसके बारे में हम आगे बात करेंगे, इस स्थिति को बदलने का एक प्रयास है।

बाजार में शोषण कई रूपों में होता है। उदाहरणार्थ, कभी-कभी व्यापारी अनुचित व्यापार करने लग जाते हैं, जैसे दुकानदार उचित वजन से कम वजन तौलते हैं या व्यापारी उन शुल्कों को जोड़ देते हैं, जिनका वर्णन पहले न किया गया हो या मिलावटी/दोषपूर्ण वस्तुएँ बेची जाती हैं।

जब उत्पादक थोड़े और शक्तिशाली होते हैं और उपभोक्ता कम मात्रा में खरीदारी करते हैं और बिखरे हुए होते हैं, तो बाजार उचित तरीके से कार्य नहीं करता है। विशेष रूप से यह स्थिति तब होती है, जब इन वस्तुओं का उत्पादन बड़ी कंपनियाँ कर रही हों। अधिक पूँजीवाली, शक्तिशाली और समृद्ध कंपनियाँ विभिन्न प्रकार से चालाकीपूर्वक बाजार को प्रभावित कर सकती हैं। उपभोक्ताओं को आकर्षित करने के लिए वे समय-समय पर मीडिया और अन्य स्रोतों से गलत सूचना देते हैं। उदाहरण के लिए, एक कंपनी ने यह दावा करते हुए कि माता के दूध से हमारा



उत्पाद बेहतर है, सर्वाधिक वैज्ञानिक उत्पाद के रूप में शिशुओं के लिए दूध का पाउडर पूरे विश्व में कई वर्षों तक बेचा। कई वर्षों के लगातार संघर्ष के बाद कंपनी को यह स्वीकार करना पड़ा कि वह झूठे दावे करती आ रही थी। इसी तरह, सिगरेट उत्पादक कंपनियों से यह बात मनवाने के लिए कि उनका उत्पाद कैंसर का कारण हो सकता है, न्यायालय में लंबी लड़ाई लड़नी पड़ी। अतः उपभोक्ताओं की सुरक्षा सुनिश्चित करने के लिए नियम और विनियमों की आवश्यकता है।



आओ—इन पर विचार करें

1. वे कौन-से विभिन्न तरीके हैं, जिनके द्वारा बाजार में लोगों का शोषण हो सकता है?
2. अपने अनुभव से एक ऐसे उदाहरण पर विचार करें, जहाँ आपको यह लगा हो कि बाजार में 'धोखा' दिया जा रहा था। कक्षा में चर्चा करें।
3. आपकी राय में उपभोक्ताओं की सुरक्षा के लिए सरकार की क्या भूमिका होनी चाहिए?

उपभोक्ता आंदोलन

उपभोक्ता आंदोलन का प्रारंभ उपभोक्ताओं के असंतोष के कारण हुआ, क्योंकि विक्रेता कई अनुचित व्यावसायिक व्यवहारों में शामिल होते थे। बाजार में उपभोक्ता को शोषण से बचाने के लिए कोई कानूनी व्यवस्था उपलब्ध नहीं थी। लम्बे समय तक, जब एक उपभोक्ता एक विशेष ब्रांड उत्पाद या दुकान से संतुष्ट नहीं होता था तो सामान्यतः वह उस ब्रांड उत्पाद को खरीदना बंद कर देता था या उस दुकान से खरीददारी करना बंद कर देता था। यह मान लिया जाता था कि यह उपभोक्ता की जिम्मेदारी है कि एक वस्तु या सेवा को खरीदते वक्त वह सावधानी बरते। संस्थाओं को लोगों में जागरूकता लाने में, भारत और पूरे विश्व में कई वर्ष लग गए। इसने वस्तुओं और सेवाओं की गुणवत्ता सुनिश्चित करने की जिम्मेदारी विक्रेताओं पर भी डाल दिया।

भारत में 'सामाजिक बल' के रूप में उपभोक्ता आंदोलन का जन्म, अनैतिक और अनुचित व्यवसाय कार्यों से उपभोक्ताओं के हितों की रक्षा करने और प्रोत्साहित करने की आवश्यकता के साथ हुआ। अत्यधिक खाद्य कमी, जमाखोरी, कालाबाजारी, खाद्य पदार्थों एवं खाद्य तेल में मिलावट की वजह से 1960 के दशक में व्यवस्थित रूप में उपभोक्ता आंदोलन का उदय हुआ। 1970 के दशक तक उपभोक्ता संस्थाएँ वृहत् स्तर पर उपभोक्ता अधिकार से संबंधित आलेखों के लेखन और प्रदर्शनी का आयोजन का कार्य करने लगीं थीं। उन्होंने सड़क यात्री परिवहन में अत्यधिक भीड़-भाड़ और राशन दुकानों में होने वाले अनुचित कार्यों पर नज़र रखने के लिए उपभोक्ता दल बनाया। हाल में, भारत में उपभोक्ता दलों की संख्या में भारी वृद्धि हुई है।

उपभोक्ता इंटरनेशनल

1985 में संयुक्त राष्ट्र ने उपभोक्ता सुरक्षा के लिए संयुक्त राष्ट्र के दिशा-निर्देशों को अपनाया। यह उपभोक्ताओं की सुरक्षा के लिए उपयुक्त तरीके अपनाने हेतु राष्ट्रों के लिए और ऐसा करने के लिए अपनी सरकारों को मजबूर करने हेतु 'उपभोक्ता की वकालत करने वाले समूह' के लिए, एक हथियार था। अंतर्राष्ट्रीय स्तर पर यह उपभोक्ता आंदोलन का आधार बना। आज उपभोक्ता इंटरनेशनल 100 से भी अधिक देशों के 200 संस्थाओं का एक संरक्षक संस्था बन गया है।



इन सभी प्रयासों के परिणामस्वरूप, यह आंदोलन बहुत स्तर पर उपभोक्ताओं के हितों के खिलाफ और अनुचित व्यवसाय शैली को सुधारने के लिए व्यावसायिक कंपनियों और सरकार दोनों पर दबाव डालने में सफल हुआ। 1986 में भारत सरकार द्वारा एक बड़ा कदम उठाया गया। यह उपभोक्ता सुरक्षा अधिनियम, 1986 कानून का बनना था, जो COPRA के नाम से प्रसिद्ध है। आप COPRA के बारे में आगे पढ़ेंगे।

आओ—इन पर विचार करें

- उपभोक्ता दलों द्वारा कौन-कौन से उपाय अपनाए जा सकते हैं?
- नियम एवं कानून होने के बावजूद उनका अनुपालन नहीं होता है। क्यों? विचार-विमर्श करें।



उपभोक्ता अधिकार

सुरक्षा सबका अधिकार है

रेजी का कष्ट

रेजी मेथ्यू, कक्षा 9 का एक स्वस्थ लड़का, केरल के एक निजी चिकित्सालय में टॉन्सिल निकलवाने के लिए भर्ती हुआ। एक ई.एन.टी. सर्जन ने सामान्य बेहोशी की दवा देकर टॉन्सिल निकालने के लिए ऑपरेशन किया। अनुचित बेहोशी के कारण रेजी में दिमागी असामान्यता के लक्षण आ गए, जिसकी वजह से वह जीवन भर के लिए अपंग हो गया।

उसके पिता ने सेवा में चिकित्सा की गलती और लापरवाही के लिए राज्य उपभोक्ता विवाद निवारण समिति में 5,00,000 के मुआवजे का दावा किया। राज्य समिति ने यह कह कर

मामला खारिज कर दिया कि सबूत पर्याप्त नहीं है। रेजी के पिता ने दिल्ली स्थित राष्ट्रीय उपभोक्ता विवाद निवारण समिति में पुनः अपील की। मामले की जाँच करने के बाद राष्ट्रीय समिति ने अस्पताल को चिकित्सा में लापरवाही का दोषी पाया और हर्जना देने का निर्देश दिया।



रेजी की व्यथा यह साबित करती है कि कैसे एक अस्पताल में चिकित्सकों और कर्मचारियों द्वारा बेहोश करने में लापरवाही के कारण एक छात्र जिन्दगी भर के लिए अपंग हो जाता है। जब हम एक उपभोक्ता के रूप में बहुत-सी वस्तुओं और सेवाओं का उपयोग करते हैं, तो हमें वस्तुओं के बाजारीकरण और सेवाओं की प्राप्ति के खिलाफ सुरक्षित रहने का अधिकार होता है, क्योंकि ये जीवन और संपत्ति के लिए खतरनाक होते हैं। उत्पादकों के लिए आवश्यक है कि वे सुरक्षा नियमों और विनियमों का पालन करें। ऐसी बहुत सी वस्तुएँ और सेवाएँ हैं, जिन्हें हम खरीदते हैं तो सुरक्षा की दृष्टि से खास सावधानी की जरूरत होती है। उदाहरण के लिए, प्रेशर कूकर में एक सेफ्टी वॉल्व होता है, जो यदि खराब हो तो भयंकर दुर्घटना का कारण हो सकता है। सेफ्टी वॉल्व के निर्माता को इसकी उच्च गुणवत्ता सुनिश्चित करनी चाहिए। आपको सार्वजनिक या सरकारी कार्यवाहियों को देखकर यह सुनिश्चित करना होगा कि गुणवत्ता का पालन किया गया है या नहीं? फिर भी हमें बाजार में निम्न गुणवत्तावाले उत्पाद प्राप्त होते हैं, क्योंकि इन नियमों का पर्यवेक्षण उचित रूप से नहीं हो रहा है और उपभोक्ता आंदोलन भी बहुत ज्यादा मजबूत नहीं है।

आओ—इन पर विचार करें

- निम्नलिखित उत्पादों/सेवाओं (आप सूची में नया नाम जोड़ सकते हैं) पर चर्चा करें कि इनमें उत्पादकों द्वारा किन सुरक्षा नियमों का पालन करना चाहिए?
(क) एल.पी.जी. सिलिंडर (ख) सिनेमा थिएटर (ग) सर्कस (घ) दवाइयाँ (च) खाद्य तेल
(छ) विवाह पंडाल (ज) एक बहुमंजिली इमारत
- आपने आसपास के लोगों के साथ हुई किसी दुर्घटना या लापरवाही की किसी घटना का पता कीजिए, जहाँ आपको लगता हो कि उसका जिम्मेदार उत्पादक है। इस पर विचार-विमर्श करें।

उपभोक्ता अधिकार

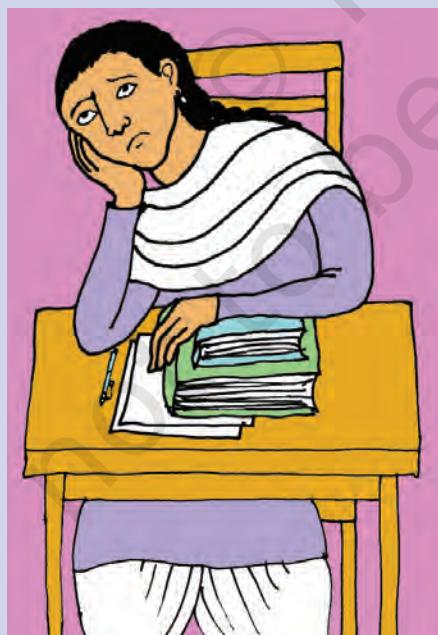
वस्तुओं और सेवाओं के बारे में जानकारी

जब आप कोई वस्तु खरीदेंगे तो उसके पैकेट पर कुछ खास जानकारियाँ पाएँगे। ये जानकारियाँ उस वस्तु के अवयवों, मूल्य, बैच संख्या, निर्माण की तारीख, खराब होने की अंतिम तिथि और वस्तु बनाने वाले के पते के बारे में होती हैं। जब हम कोई दवा खरीदते हैं तो उस दवा के 'उचित प्रयोग के बारे में निर्देश' और उस दवा के प्रयोग के अन्य प्रभावों और खतरों से संबंधित जानकारी प्राप्त कर सकते हैं। जब आप वस्त्र खरीदेंगे तो 'धुलाई संबंधी निर्देश' प्राप्त करेंगे।

आखिर ऐसे नियम क्यों बनाये गए हैं कि वस्तु बनाने वाले को ये जानकारियाँ देनी पड़ती हैं? यह इसलिए कि उपभोक्ता जिन वस्तुओं और सेवाओं को खरीदता है, उसके बारे में उसे सूचना पाने का अधिकार है। तब उपभोक्ता वस्तु की किसी भी प्रकार की खराबी होने पर शिकायत कर सकता है, मुआवजे पाने या वस्तु बदलने की माँग कर सकता है। उदाहरण के लिए, यदि हम एक उत्पाद खरीदते हैं और उसके खराब होने की अंतिम तिथि के पहले ही वह खराब हो जाता है,

तो हम उसे बदलने के बारे में कह सकते हैं। यदि वस्तु खराब होने की अंतिम समय-सीमा उस पर नहीं छपी है, तब विनिर्माता दुकानदार पर आरोप लगा देगा और अपनी जिम्मेदारी नहीं मानेगा। यदि लोग अंतिम तिथि समाप्त हो गई दवाओं को बेचते हैं, तो उनके खिलाफ कार्यवाही की जा सकती है। इसी तरह से यदि, कोई व्यक्ति मुद्रित मूल्य से अधिक मूल्य पर वस्तु बेचता है तो कोई भी उसका विरोध और शिकायत कर सकता है। यह अधिकतम खुदरा मूल्य (MRP) के द्वारा इंगित किया हुआ होता है। वस्तुतः उपभोक्ता, विक्रेता से अधिकतम खुदरा मूल्य (MRP) से कम दाम पर वस्तु देने के लिए मोल-भाव कर सकते हैं।

आज सरकार प्रदत्त विविध सेवाओं को उपयोगी बनाने के लिए सूचना पाने के अधिकार को बढ़ा दिया गया है। सन् 2005 के अक्टूबर में भारत सरकार ने एक कानून लागू किया जो RTI (राइट टू इनफॉरमेशन) या सूचना पाने का अधिकार के नाम से जाना जाता है और जो अपने नागरिकों को सरकारी विभागों के कार्य-कलापों की सभी सूचनाएँ पाने के अधिकार को सुनिश्चित करता है। आर.टी.आई. एक्ट के प्रभाव को निम्नलिखित केसों के द्वारा समझा जा सकता है-



इंतज़ार ...

अमृता नाम की एक इंजीनियरिंग स्नातक ने नौकरी पाने के लिए अपने सभी प्रमाणपत्रों को जमा करने तथा इंटरव्यू देने के बाद भी एक सरकारी विभाग में कोई रिजल्ट नहीं प्राप्त किया। कर्मचारियों ने भी उसके प्रश्नों का उत्तर देने से इनकार कर दिया। तब उसने एक्ट का प्रयोग करते हुए एक प्रार्थना -पत्र दिया और यह कहा कि एक उचित समय तक परिणाम की जानकारी पाना उसका अधिकार था, जिससे कि वह अपने भविष्य की योजना बना सके। उसको न केवल रिजल्ट की घोषणा में देरी के कारणों के बारे में सूचित किया गया बल्कि उसको नियुक्ति के लिए बुलावे का पत्र मिल गया क्योंकि उसने इंटरव्यू अच्छा दिया था।।।

आओ—इन पर विचार करें

- “जब हम वस्तुएँ खरीदते हैं तो पाते हैं कि कभी-कभी पैकेट पर छपे मूल्य से अधिक या कम मूल्य लिया जाता है।” इसके संभावित कारणों पर बात करें। क्या उपभोक्ता समूह इस मामले में कुछ कर सकते हैं? चर्चा करें।
- कुछ डिब्बाबंद वस्तुओं के पैकेट को लें, जिन्हें आप खरीदना चाहते हैं और उन पर दी गई जानकारियों का परीक्षण करें। देखें, कि वे किस प्रकार उपयोगी हैं। क्या आप सोचते हैं कि उन डिब्बाबंद वस्तुओं पर कुछ ऐसी जानकारियाँ दी जानी चाहिए, जो उन पर नहीं हैं? चर्चा करें।
- लोग नागरिकों की समस्याओं जैसे— खराब सड़कों या दृष्टिपानी और स्वास्थ्य सुविधाओं के बारे में शिकायतें करते हैं, लेकिन कोई नहीं सुनता। अब RTI कानून आपको प्रश्न पूछने का अधिकार देता है। क्या आप इससे सहमत हैं? विचार कीजिये?

चयन के अधिकार का उल्लंघन

अंसारी नगर के अविरामी नामक एक छात्रा ने दिल्ली में व्यावसायिक पाठ्यक्रम में पढ़ने के लिए एक क्षेत्रीय कोचिंग संस्थान के दो वर्षीय पाठ्यक्रम में नामांकन कराया। पाठ्यक्रम में भाग लेने के समय, पूरे दो वर्ष के अध्ययन के लिए करीब 61,020 रुपये जमा किए। लेकिन उसने यह पाया कि पढ़ाई का स्तर वहाँ ठीक नहीं है, इसीलिए उसने साल के अंत में पाठ्यक्रम को छोड़ देने का निश्चय किया। जब उसने एक साल का पैसा लौटाने की बात की, तो उसे मना कर दिया गया।

जब उसने जिला उपभोक्ता विवाद निवारण आयोग में मुकदमा दायर किया, तो आयोग ने संस्था को यह कहते हुए 28,000 रुपया लौटाने का आदेश दिया कि

पैसे लौटाए गए



छात्रा को चुनने का अधिकार है। संस्थान ने पुनः राज्य उपभोक्ता आयोग में अपील की। राज्य उपभोक्ता आयोग ने जिला आयोग के निर्देश को सुरक्षित रखते हुए आगे संस्थान को बेकार की अपील करने के लिए 25,000 का दंड लगाया। उसने संस्थान को 7,000 रुपये मुआवजे और याचिका खच के रूप में छात्रा को देने के लिए कहा।

राज्य आयोग ने सभी शिक्षा संस्थानों और व्यावसायिक संस्थाओं को विद्यार्थियों से पूरे साल की फीस को एडवांस में लेने से भी मना किया। आयोग के अनुसार, इस आदेश का उलंघन करने पर दंड शुल्क भरना पड़ सकता है साथ ही जेल भी हो सकती है।

हम इस घटना से क्या समझते हैं? किसी भी उपभोक्ता को जो कि किसी सेवा को प्राप्त करता है, चाहे वह किसी भी आयु या लिंग का हो और किसी भी तरह की सेवा प्राप्त करता हो, उसको सेवा प्राप्त करते हुए हमेशा चुनने का अधिकार होगा। मान लीजिए, आप एक दंतमंजन खरीदना चाहते हैं और दुकानदार कहता है कि वह केवल दंतमंजन तभी बेचेगा, जब आप दंतमंजन के साथ एक ब्रश भी खरीदेंगे। अगर आप ब्रश खरीदने के

इच्छुक नहीं हैं, तब आपके चुनने के अधिकार का उलंघन हुआ है। ठीक इसी तरह, कभी-कभी जब आप नया गैस कनेक्शन लेते हैं तो गैस डीलर उसके साथ एक चूल्हा भी लेने के लिए दबाव डालता है। इस प्रकार कई बार हमें उन वस्तुओं को खरीदने के लिए भी दबाव डाला जाता है, जिनको खरीदने की हमारी इच्छा बिलकुल नहीं होती और तब आपके पास चुनाव के लिए कोई विकल्प नहीं होता।

उपभोक्ता अधिकार

81

आओ—इन पर विचार करें

यहाँ कुछ ऐसी वस्तुओं के लुभाने वाले विज्ञापन दिए गए हैं, जिन्हें हम बाजार से खरीदते हैं। इनमें वास्तव में क्या कोई ऐसा विज्ञापन है, जो सचमुच में उपभोक्ताओं को लाभ पहुँचाता हो? इस पर विचार विमर्श कीजिए।

- प्रत्येक 500 ग्राम के पैक पर 15 ग्राम की अतिरिक्त छूट।
- अखबार के ग्राहक बनें, साल के अंत में उपहार पायें।
- खुरचिये और 10 लाख तक का इनाम जीतिए।
- 500 ग्राम ग्लूकोज डिब्बे के भीतर एक दूध का चाकलेट।
- पैकेट के भीतर एक सोने का सिक्का।
- 2000 रुपये तक का जूता खरीदें और 500 रुपये तक का एक जोड़ी जूता मुफ्त पाएँ।

इन उपभोक्ताओं को न्याय पाने के लिए कहाँ जाना चाहिए?

रेजी मैथ्यू और अबिरामी के प्रकरणों को पुनः पढ़ें, जो पिछले अध्यायों में दिया जा चुका है।

ये कुछ उदाहरण हैं, जिनमें उपभोक्ताओं के अधिकारों की अवहेलना की गई है। ऐसी घटनाएँ अक्सर हमारे देश में घटित होती रहती हैं। इस स्थिति में, इन उपभोक्ताओं को न्याय पाने के लिए कहाँ जाना चाहिए?

उपभोक्ताओं को अनुचित सौदेबाजी और शोषण के विरुद्ध क्षतिपूर्ति निवारण का अधिकार है। यदि एक उपभोक्ता को कोई क्षति पहुँचाई जाती है, तो क्षति की मात्रा के आधार पर उसे क्षतिपूर्ति पाने का अधिकार होता है। इस कार्य को पूरा करने के लिए एक आसान और प्रभावी जन-प्रणाली बनाने की आवश्यकता है।

उपभोक्ता, उपयुक्त उपभोक्ता केन्द्र के सम्मुख अपनी शिकायत दर्ज करा सकता है, स्वयं किसी वकील के साथ अथवा वकील की सेवा के बिना।

आप यह जानने के लिए इच्छुक होंगे कि कैसे एक पीड़ित व्यक्ति अपनी क्षतिपूर्ति प्राप्त करता है। अब हम श्री प्रकाश के मामले को लेते हैं। इन्होंने अपनी बेटी की शादी के लिए अपने गाँव एक मनीऑर्डर भेजा। उनकी बेटी को जब इन पैसों की ज़रूरत थी, तब पैसे नहीं प्राप्त हुए। यहाँ तक कि महीनों बाद भी नहीं पहुँचे। प्रकाश ने नयी दिल्ली के एक जिला स्तर के उपभोक्ता विवाद निवारण आयोग में मुकदमा दर्ज किया। उन्होंने जो कदम उठाए, वे सभी विस्तार से नीचे दिए जा रहे हैं। आजकल उपभोक्ता, एक व्यक्ति के रूप में या एक समूह के रूप में (जिसे क्लास एक्शन सूट कहा जाता है), शारीरिक रूप में अथवा इंटरनेट के माध्यम से अपनी शिकायत दर्ज करवा सकते हैं और वीडियो कॉन्फ्रेंसिंग के द्वारा अपने मुकदमों की कार्यवाही करवा सकते हैं।

1. अपनी बेटी के लिए प्रकाश मनीऑर्डर भेजने पोस्ट-ऑफिस जाता है।



2. प्रकाश को यह पता चला कि रुपये उसकी बेटी को नहीं मिले हैं।



3. प्रकाश ने पोस्ट-ऑफिस में मनीऑर्डर के बारे में पूछताछ की।



5. प्रकाश क्षेत्रीय उपभोक्ता संरक्षण परिषद में सलाह लेने जाते हैं।

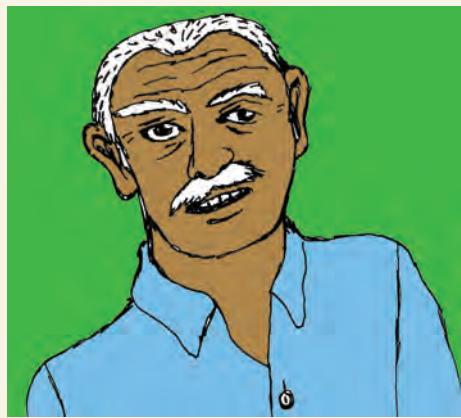


7. वे आयोग कार्यालय में सुकदमें पर स्वयं बहस करते हैं।



8. आयोग कार्यालय के जज दस्तावेजों का सत्यापन करते हैं और पीड़ित पक्ष तथा दूसरे पक्ष, दोनों की दलीलें सुनते हैं।

4. पोस्ट-ऑफिस द्वारा प्रकाश के प्रश्नों का संतोषजनक जवाब नहीं दिया गया।



6. प्रकाश तब एक नजदीकी उपभोक्ता विवाद निवारण आयोग में सुकदमा दर्ज करने जाते हैं और अदालत के ऑफिस से रजिस्ट्रेशन फार्म लेते हैं। अदालत दूसरे पक्ष को नोटिस भेजती है।

CONSUMER DISPUTES REDRESSAL FORUM II	
GOVERNMENT OF DELHI	
Udyog Sadan, C-22 & 23 Institutional Area,	
Behind India Gate Hotel,	
New Delhi-110016	
DATED:- 30.1.2006	
REGISTRATION NO. 53/06	
Name of Complainant	VEN. PRAKASH PANDEY T.GNOV. MAIDAN GRIH NEW DELHI
Name of respondent (1)	POST OFFICE T.GNOV. MAIDAN GRIH NEW DELHI
(2)	
(3)	
Police Station	MEHRBAUL, NEW DELHI
Value	Rs. 4,000/-
Subject	DEFICIENCY IN SERVICE.
(Signature of complainant)	

9. जज आयोग का फैसला सुनाते हैं।



भारत में उपभोक्ता आंदोलन ने विभिन्न संगठनों के निर्माण में पहल की है, जिन्हें सामान्यतया उपभोक्ता अदालत या उपभोक्ता संरक्षण परिषद् के नाम से जाना जाता है। ये उपभोक्ता आयोग विवाद निवारण का मार्गदर्शन करती हैं कि कैसे उपभोक्ता अदालत में मुकदमा दर्ज कराएँ। बहुत से अवसरों पर ये इन आयोगों में व्यक्ति विशेष (उपभोक्ता) का प्रतिनिधि त्व भी करते हैं। ये स्वयंसेवी संगठन जनता में जागरूकता पैदा करने के लिए सरकार से वित्तीय सहयोग भी प्राप्त करते हैं।

यदि आप एक आवासीय कॉलोनी में रहते हैं तो आपने 'निवासी कल्याण संघ' का नामपट्ट अवश्य देखा होगा। यदि उनके किसी सदस्य के साथ कोई अनुचित व्यावसायिक कार्रवाई होती है, तो उनकी तरफ से संस्था मामले को देखती है।

कोपरा के अंतर्गत उपभोक्ता विवादों के निपटारे

के लिए जिला, राज्य और राष्ट्रीय स्तरों पर एक त्रिस्तरीय न्यायिक तंत्र स्थापित किया गया है। जिला स्तर का प्राधिकरण जिसे उपभोक्ता आयोग विवाद निवारण केन्द्र भी कहते हैं। 1 करोड़ तक के दावों से संबंधित मुकदमों पर विचार करता है, राज्य स्तरीय प्राधिकारण जिसे राज्य आयोग कहते हैं। 1 करोड़ से 10 करोड़ तक और राष्ट्रीय स्तर की प्राधिकरण राष्ट्रीय आयोग, 10 करोड़ से उपर की दावेदारी से संबंधित मुकदमों को देखती हैं। यदि कोई मुकदमा जिला स्तर के आयोग में खारिज कर दिया जाता है, तो उपभोक्ता राज्य स्तर के आयोग में भी अपील कर सकता है।

इस प्रकार, अधिनियम ने उपभोक्ता के रूप में उपभोक्ता न्यायालय में प्रतिनिधित्व का अधिकार देकर हमें समर्थ बनाया है।

आओ—इन पर विचार करें

निम्नलिखित को सही क्रम में रखें—

Ensure consumer rights to healthy environment as against air pollution- water pollution- noise pollution

Look for products/brands which satisfy the criteria for Ecomark.

Complain to

- Consumer group
- Pollution Control Board

For all your consumer related information and guidelines, Call toll free number 1800-14-4000 (from BSNL / MTNL Lines, Monday to Saturday 9:30 am to 5:30 pm) or log onto www.core.nic.in or write to: P.O. Box No. 3306, New Delhi-110014 for consumer information

Catch Consumer Awareness programme on every Sunday at 10 am on Doordarshan

Courtesy: Consumer Education Research Center, Ahmedabad

अधिकारों को दृढ़तापूर्वक अपनाएँ, प्रतिकारों का अनुसरण करें

- (क) अस्तिता जिला उपभोक्ता विवाद निवारण आयोग में एक मुकदमा दायर करती है।
- (ख) वह शिकायत के लिए पेशेवर व्यक्ति से मिलती है।
- (ग) वह महसूस करती है कि दुकानदार ने उसे दोषयुक्त सामग्री दी है।
- (घ) वह आयोग की कार्यवाहियों में भाग लेना शुरू कर देती है।
- (ङ.) वह शाखा कार्यालय जाती है और डॉलर के विस्तर शिकायत दर्ज करती है, लेकिन कोई प्रभाव नहीं पड़ता।
- (च) आयोग के समक्ष पहले उससे बिल और वारंटी प्रस्तुत करने को कहा गया।
- (छ) वह एक खुदरा विक्रेता से दीवाल घड़ी खरीदती है।
- (ज) कुछ ही महीनों के भीतर, आयोग ने खुदरा विक्रेता को आदेश दिया कि उसकी पुरानी दीवाल घड़ी की जगह बिना कोई अतिरिक्त मूल्य लिए उसे एक नयी घड़ी दी जाए।

जागरूक उपभोक्ता बनने के लिए आवश्यक बातें

जब हम विभिन्न वस्तुएँ और सेवाएँ खरीदते वक्त, उपभोक्ता के रूप में अपने अधिकारों के प्रति संचेत होंगे, तब हम अच्छे और बुरे में फर्क करने तथा श्रेष्ठ चुनाव करने में सक्षम होंगे। एक जागरूक उपभोक्ता बनने के लिए निपुणता और ज्ञान प्राप्त करने की जरूरत होती है। हम अपने

अधिकारों के प्रति सचेत कैसे हों? निम्नलिखित पृष्ठ और पहले के पृष्ठों के विज्ञापनों को देखें। आप क्या सोचते हैं?

कोपरा (COPRA) अधिनियम ने केंद्र और राज्य सरकारों में उपभोक्ता मामले के अलग विभागों को स्थापित करने में मुख्य भूमिका अदा की है। आप जो विज्ञापन देख चुके हैं, वह एक उदाहरण है, जिसके द्वारा सरकार कानूनी प्रक्रिया के बारे में नागरिकों को अवगत कराती है, जिसका वे प्रयोग कर सकें। आपने टेलीविजन चैनलों पर भी ऐसे विज्ञापन देखे होंगे।



"A customer is the most important visitor on our premises. He is not dependant on us. We are dependant on him. He is not an outsider on our business. He is part of it. We are not doing him a favour by serving him. He is doing us a favour by giving us an opportunity to do so."

-Mahatma Gandhi

Ministry of Consumer Affairs, Food & Public Distribution
Department of Consumer Affairs, Government of India,
Krishi Bhawan, New Delhi-110 001
Log on to Website: www.fca.mic.nic.in

For consumer information, Call toll free National Consumer Helpline No. 1800-11-4000 (From BSNL, MTNL lines) or log on to: www.consumer.nic.in, or write to P.O. Box 3306, New Delhi-110 001

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आई.एस.आई और एगमार्क

विभिन्न वस्तुएँ खरीदते समय आपने आवरण पर लिखे अक्षरों-आई.एस.आई, एगमार्क, हॉलमार्क के शब्दचिन्ह (लोगो) को अवश्य देखा होगा। जब उपभोक्ता कोई वस्तु या सेवाएँ खरीदता है, तो ये शब्दचिन्ह (लोगो) और प्रमाणक चिह्न उन्हें अच्छी गुणवत्ता सुनिश्चित कराने में मदद करते हैं। ऐसे संगठन जो कि अनुवीक्षण तथा प्रमाणपत्रों को जारी करते हैं, उत्पादकों को उनके द्वारा श्रेष्ठ गुणवत्ता पालन करने की स्थिति में शब्दचिन्ह (लोगो को) प्रयोग करने की अनुमति देते हैं।

यद्यपि ये संगठन बहुत से उत्पादों के लिए गुणवत्ता का मानदंड विकसित करते हैं, लेकिन सभी उत्पादकों का इन मानदण्डों का पालन करना जरूरी नहीं होता। फिर भी, कुछ उत्पाद जो उपभोक्ता की सुरक्षा और स्वास्थ्य को प्रभावित करते हैं या जिनका उपयोग बड़े पैमाने पर होता है, जैसे कि, एल.पी.जी. सिलिंडर्स, खाद्य रंग एवं उसमें प्रयुक्त सामग्री, सीमेंट, बोतलबंद पेयजल आदि। इनके उत्पादन के लिए यह अनिवार्य होता है कि उत्पादक इन संगठनों से प्रमाण प्राप्त करें।



स्रोत-<https://ffrc.fssai.gov.in>



आओ—इन पर विचार करें

1. इस अध्याय के पोस्टरों के कार्टूनों को देखें – एक उपभोक्ता के दृष्टिकोण से किसी वस्तु विशेष की उससे संबंधित विभिन्न पहलुओं पर विचार करें। इसके लिए एक पोस्टर बनाएँ।
 2. अपने क्षेत्र के निकटतम उपभोक्ता विवाद निवारण आयोग का पता करें।
 3. उपभोक्ता संरक्षण परिषद् एवं उपभोक्ता विवाद निवारण आयोग क्या अंतर है।
 4. उपभोक्ता सुरक्षा अधिनियम, 1986 एक उपभोक्ता को निम्नलिखित अधिकार प्रदान करता है—

(क) चयन का अधिकार	(घ) प्रतिनिधित्व का अधिकार
(ख) सूचना का अधिकार	(च) सुरक्षा का अधिकार
(ग) निवारण का अधिकार	(छ) उपभोक्ता शिक्षा का अधिकार
- निम्नलिखित मामलों को उनके सामने दिए गए खानों में अलग शीर्षक और चिह्न के साथ श्रेणीबद्ध करें—
- (क) लता को एक नये खरीदे गए आयरन-प्रेस से विद्युत का झटका लगा। उसने तुरन्त दुकानदार से शिकायत की। ()
- (ख) जॉन विगत कुछ महीनों से एम.टी.एन.एल. / बी.एस.एन.एल. / टाटा इंडीकॉम द्वारा दी गई सेवाओं से असंतुष्ट है। उसने जिला स्तरीय उपभोक्ता फोरम में मुकदमा दर्ज किया। ()
- (ग) तुम्हारे मित्र ने एक दबा खरीदी, जो समाप्ति तारीख (एक्सपायरी डेट) पार कर चुकी है और तुम उसे शिकायत दर्ज करने की सलाह दे रहे हो। ()
- (घ) इकबाल कोई भी सामग्री खरीदने से पहले उसके आवरण पर दी गई सारी जानकारियों की जाँच करता है। ()
- (च) आप अपने क्षेत्र के केबल ऑपरेटर द्वारा दी जाने वाली सेवाओं से असंतुष्ट हैं, लेकिन आपके पास कोई विकल्प नहीं है। ()
- (छ) आपने ये महसूस किया कि दुकानदार ने आपको खराब कैमरा दे दिया है। आप मुख्य कार्यालय में दृढ़ता से शिकायत करते हैं। ()
5. यदि मानकीकरण वस्तुओं की गुणवत्ता को सुनिश्चित करता है, तो क्यों बाजार में बहुत सी वस्तुएँ बिना आई.एस.आई. अथवा एग्मार्क प्रमाणन के मौजूद हैं?
 6. हॉलमार्क या आई.एस.ओ. प्रमाणन उपलब्ध कराने वालों के बारे में जानकारी प्राप्त करें।

उपभोक्ता आंदोलन को आगे बढ़ाने के संबंध में

24 दिसंबर को भारत में राष्ट्रीय उपभोक्ता दिवस के रूप में मनाया जाता रहा है। 1986 में इसी दिन भारतीय संसद ने उपभोक्ता संरक्षण अधिनियम पारित किया था। भारत उन देशों में से एक है, जहाँ उपभोक्ता संबंधित समस्याओं के निवारण के लिए विशिष्ट न्यायालय हैं।

भारत में उपभोक्ता आंदोलन ने संगठित समूहों की संख्या और उनकी कार्य विधियों के मामले में कुछ तरक्की की है। आज देश में 2000 से अधिक उपभोक्ता संगठन हैं, जिनमें से केवल

50-60 ही अपने कार्यों के लिए पूर्ण संगठित और मान्यता प्राप्त हैं।

फिर भी, उपभोक्ता निवारण प्रक्रिया जटिल, खर्चीली और समय साध्य साबित हो रही है। कई बार उपभोक्ताओं को वकीलों का सहारा लेना पड़ता है। ये मुकदमें आयोग की कार्यवाहियों में शामिल होने और आगे बढ़ने आदि में काफी समय लेते हैं। अधिकांश खरीददारियों के समय रसीद नहीं दी जाती हैं, ऐसी स्थिति में प्रमाण जुटाना आसान नहीं होता है। इसके अलावा बाजार में अधिकांश खरीददारियाँ छोटे फुटकर दुकानों से होती हैं।



उपभोक्ता के अधिकारों को मज़बूती देने हेतु कोपरा (COPRA) का वर्ष 2019 में संशोधन हुआ था। जिसमें अब इंटरनेट के माध्यम से खरीद भी शामिल है। यदि कोई सेवा में कमी या दोषपूर्ण उत्पाद है, तो सेवा प्रदाता और निर्माता को भी ज़िम्मेदार ठहराया जाएगा और दंडित किया जाएगा। यहां तक कि जेल भी हो सकती है। उपभोक्ता विवाद निवारण आयोग के बाहर तटस्थ मध्यस्थ की सहायता से विवादों के निपटारे को अब उपभोक्ता आयोग के सभी तीन स्तरों पर प्रोत्साहित किया गया है। कोपरा के अधिनियम के 35 वर्ष बाद भी भारत में उपभोक्ता

ज्ञान बहुत धीरे-धीरे फैल रहा है। श्रमिकों के हितों की रक्षा के लिए कानूनों के लागू होने के बावजूद, खास तौर से असंगठित क्षेत्र में ये कमजोर हैं। इस प्रकार, बाजारों के कार्य करने के लिए नियमों और विनियमों का प्रायः पालन नहीं होता।

फिर भी, उपभोक्ताओं को अपनी भूमिका और अपना महत्व समझने की ज़रूरत है। यह अक्सर कहा जाता है कि उपभोक्ताओं की सक्रिय भागीदारी से ही उपभोक्ता आंदोलन प्रभावी हो सकता है। इसके लिए स्वैच्छिक प्रयास और सबकी साझेदारी से युक्त संघर्ष की ज़रूरत है।

अध्यास

1. बाजार में नियमों तथा विनियमों की आवश्यकता क्यों पड़ती है? कुछ उदाहरणों के द्वारा समझाएँ।
2. भारत में उपभोक्ता आंदोलन की शुरुआत किन कारणों से हुई? इसके विकास के बारे में पता लगाएँ।
3. दो उदाहरण देकर उपभोक्ता जागरूकता की ज़रूरत का वर्णन करें।
4. कुछ ऐसे कारकों की चर्चा करें, जिनसे उपभोक्ताओं का शोषण होता है?
5. उपभोक्ता सुरक्षा अधिनियम, 1986 के निर्माण की ज़रूरत क्यों पड़ी?
6. अपने क्षेत्र के बाजार में जाने पर उपभोक्ता के रूप में अपने कुछ कर्तव्यों का वर्णन करें।
7. मान लीजिए, आप शहद की एक बोतल और बिस्किट का एक पैकेट खरीदते हैं। खरीदते समय आप कौन-सा लोगों या शब्द चिह्न देखेंगे और क्यों?
8. भारत में उपभोक्ताओं को समर्थ बनाने के लिए सरकार द्वारा किन कानूनी मानदंडों को लागू करना चाहिए?
9. उपभोक्ताओं के कुछ अधिकारों को बताएँ और प्रत्येक अधिकार पर कुछ पंक्तियाँ लिखें।
10. उपभोक्ता अपनी एकजुटता का प्रदर्शन कैसे कर सकते हैं?
11. भारत में उपभोक्ता आंदोलन की प्रगति की समीक्षा करें।
12. निम्नलिखित को सुमेलित करें—

(1) एक उत्पाद के घटकों का विवरण	(क) सुरक्षा का अधिकार
(2) एगमार्क	(ख) उपभोक्ता मामलों में संबंध
(3) स्कूटर में खराब इंजन के कारण हुई दुर्घटना	(ग) अनाजों और खाद्य तेल का प्रमाण
(4) ज़िला उपभोक्ता आयोग विकसित करने वाली एजेंसी	(घ) उपभोक्ता कल्याण संगठनों की अंतर्राष्ट्रीय संस्था
(5) फूड फोर्टिफिकेशन	(ड) सूचना का अधिकार
(6) उपभोक्ता इंटरनेशनल	(च) वस्तुओं और सेवाओं के लिए मानक
(7) भारतीय मानक ब्यूरो	(छ) खाद्य पदार्थ में मुख्य पोषक तत्वों को मिलाना

13. सही या गलत बताएँ।

- (क) कोपरा केवल सामानों पर लागू होता है।
- (ख) भारत विश्व के उन देशों में से एक है, जिसके पास उपभोक्ताओं की समस्याओं के निवारण के लिए विशिष्ट प्राधिकारण हैं।
- (ग) जब उपभोक्ता को ऐसा लगे कि उसका शोषण हुआ है, तो उसे ज़िला उपभोक्ता आयोग में निश्चित रूप से मुकदमा दायर करना चाहिए।
- (घ) जब अधिक मूल्य का नुकसान हो, तभी उपभोक्ता आयोग में जाना लाभप्रद होता है।
- (ड) हॉलमार्क, आभूषणों की गुणवत्ता बनाए रखनेवाला प्रमाण है।
- (च) उपभोक्ता समस्याओं के निवारण की प्रक्रिया अत्यंत सरल और शीघ्र होती है।
- (छ) उपभोक्ता को मुआवजा पाने का अधिकार है, जो क्षति की मात्रा पर निर्भर करती है।

अतिरिक्त परियोजना/कार्यकलाप

1. आपका विद्यालय 'उपभोक्ता जागरूकता सप्ताह' का आयोजन करता है। उपभोक्ता जागरूकता फोरम के सचिव के रूप में सभी उपभोक्ता अधिकारों बिन्दुओं को शामिल करते हुए एक पोस्टर तैयार करें। इसके लिए आप पृष्ठ 84 एवं 85 पर दिए गए विज्ञापन के विचारों और संकेतों का उपयोग कर सकते हैं। ये कार्य आपके अंग्रेजी शिक्षक के सहयोग से करें।
2. श्रीमती कृष्णा ने 6 महीने की वारंटी वाला रंगीन टेलीविजन खरीदा। तीन महीने बाद टी.वी. ने काम करना बंद कर दिया। जब उन्होंने उस दुकान पर शिकायत की, जहाँ से टी.वी. खरीदा था तो उसने सही करने के लिए एक इंजीनियर भेजा। टी.वी. बार-बार खराब होता रहा और श्रीमती कृष्णा का दुकानदार से शिकायतों का कोई जवाब नहीं मिला। उन्होंने अपने क्षेत्र के उपभोक्ता आयोग से शिकायत करने का निर्णय लिया। आप उनके लिए एक पत्र लिखिए। आप लिखने से पहले अपने सहयोगी/समूह सदस्यों से चर्चा कर सकते हैं।
3. अपने विद्यालय में उपभोक्ता क्लब स्थापित करें। बनावटी उपभोक्ता जागरूकता कार्यशाला आयोजित करें और उसमें अपने विद्यालय क्षेत्र के पुस्तक केंद्रों, भोजनालयों और दुकानों के नियंत्रण जैसे मुद्दों को शामिल करें।
4. आकर्षक नारों वाले विज्ञापन तैयार करें, जैसे—
 - सतर्क उपभोक्ता ही सुरक्षित उपभोक्ता है।
 - ग्राहक, सावधान
 - सचेत उपभोक्ता
 - अपने अधिकारों को पहचानो
 - उपभोक्ता के रूप में, अपने अधिकारों की रक्षा करें।
 - उठो, जागो और तब तक मत रुको (पूरा करें)
5. अपने आसपास के चार-पाँच लोगों का साक्षात्कार लें, कि कैसे वे शोषण का शिकार बने और उनकी प्रतिक्रियाओं एवं विभिन्न अनुभवों को इकट्ठा करें।
6. निम्नलिखित प्रश्नावली को वितरित कर अपने क्षेत्र का एक सर्वेक्षण करें और जानें कि वे उपभोक्ता के रूप में कितने जागरूक हैं।

प्रत्येक प्रश्न के लिए किसी एक पर निशान लगाएँ

हमेशा कभी-कभी कभी नहीं
(क) (ख) (ग)

1. जब आपने कोई सामान खरीदा, तो आपने रसीद की माँग की?
2. क्या आपने रसीद को सुरक्षित रखा?
3. जब आपको ऐसा लगा कि आप दुकानदार द्वारा ठगे गए हैं, तो आपने उसकी शिकायत की?
4. क्या आप उसे यह बताने में सफल हुए कि आप छले गए हैं?
5. क्या आप खुद को यह समझा कर संतुष्ट हो जाते हैं कि यह आपका दुर्भाग्य है कि अक्सर आप ठगे जाते हैं और इसमें नया कुछ भी नहीं है?
6. क्या आप आई.एस.आई. चिह्न, समाप्ति तिथि आदि की जाँच करते हैं?
7. अगर समाप्ति तिथि मात्र एक महीना या उसके आसपास हो तो क्या आप ताजे पैकेट की माँग करते हैं?
8. क्या आप नये गैस सिलोंडर या पुराने अखबारों को खरीदने/बेचने से पहले खुद वजन की जाँच करते हैं?
9. जब सब्जी विक्रेता वास्तविक बाट के स्थान पर पत्थरों का उपयोग करता है, तो क्या आप विरोध करते हैं?
10. क्या अत्यधिक चटकाले रंगों वाली सब्जियाँ आपके संदेह को बढ़ाती हैं?
11. क्या आप ब्रांड की जानकारी रखते हैं?
12. क्या आप अधिक कीमत को उच्च गुणवत्ता का मानक मानते हैं। (इससे आपको लगता है कि अंततः आपने बहुत ज्यादा भुगतान नहीं किया)?
13. क्या आप आकर्षक प्रस्तावों पर बेहिचक प्रतिक्रिया करते हैं?
14. आपने किसी वस्तु के लिए जो मूल्य दिया, उसकी तुलना दूसरों के द्वारा उसके लिए दिए गए मूल्य से करते हैं?
15. क्या आप को पूरा यकीन है कि आपका दुकानदार आप जैसे स्थाई ग्राहकों को कभी नहीं ठगता?
16. क्या आप उचित भार आदि की किसी शंका के बगैर प्रस्तावित सामान की होम डिलिवरी का समर्थन करते हैं?
17. आटो से यात्रा करते समय आप 'मीटर से चलने' की माँग करते हैं?

टिप्पणी -

- (क) यदि प्रश्न 5,12,13,15 और 16 के लिए आपका उत्तर 'ग' और शेष के लिए 'क' है, तो आप उपभोक्ता के रूप में पूरी तरह जागरूक हैं।
- (ख) अगर प्रश्न 5,12,13,15 और 16 के लिए आपका उत्तर 'क' और शेष के लिए 'ग' है, तो आपको उपभोक्ता के रूप में जागरूक होने की ज़रूरत है।
- (ग) यदि सभी प्रश्नों के लिए आपका उत्तर 'ख' है, तो आप आंशिक रूप से जागरूक हैं।

**परिशिष्ट तालिका : व्यस्क लड़कियों (अध्याय 1, क्रिया 3 पृष्ठ संख्या 13 पर) की शरीर
द्रव्यमान सूचक तालिका**

वर्ष	माह	कुपोषित कमज़ोर	सामान्य	कुपोषित मोटापा
14	0	15.4 से कम	15.4 से 27.3	27.3 से अधिक
14	1	15.5 से कम	15.5 से 27.4	27.4 से अधिक
14	2	15.5 से कम	15.5 से 27.5	27.5 से अधिक
14	3	15.6 से कम	15.6 से 27.6	27.6 से अधिक
14	4	15.6 से कम	15.6 से 27.7	27.7 से अधिक
14	5	15.6 से कम	15.6 से 27.7	27.7 से अधिक
14	6	15.7 से कम	15.7 से 27.8	27.8 से अधिक
14	7	15.7 से कम	15.7 से 27.9	27.9 से अधिक
14	8	15.7 से कम	15.7 से 28.0	28.0 से अधिक
14	9	15.8 से कम	15.8 से 28.0	28.0 से अधिक
14	10	15.8 से कम	15.8 से 28.1	28.1 से अधिक
14	11	15.8 से कम	15.8 से 28.2	28.2 से अधिक
15	0	15.9 से कम	15.9 से 28.2	28.2 से अधिक
15	1	15.9 से कम	15.9 से 28.3	28.3 से अधिक
15	2	15.9 से कम	15.9 से 28.4	28.4 से अधिक
15	3	16.0 से कम	16.0 से 28.4	28.4 से अधिक
15	4	16.0 से कम	16.0 से 28.5	28.5 से अधिक
15	5	16.0 से कम	16.0 से 28.5	28.5 से अधिक
15	6	16.0 से कम	16.0 से 28.6	28.6 से अधिक
15	7	16.1 से कम	16.1 से 28.6	28.6 से अधिक
15	8	16.1 से कम	16.1 से 28.7	28.7 से अधिक
15	9	16.1 से कम	16.1 से 28.7	28.7 से अधिक
15	10	16.1 से कम	16.1 से 28.8	28.8 से अधिक
15	11	16.2 से कम	16.2 से 28.8	28.8 से अधिक
16	0	16.2 से कम	16.2 से 28.9	28.9 से अधिक
16	1	16.2 से कम	16.2 से 28.9	28.9 से अधिक
16	2	16.2 से कम	16.2 से 29.0	29.0 से अधिक
16	3	16.2 से कम	16.2 से 29.0	29.0 से अधिक
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18	0	16.4 से कम	16.4 से 29.5	29.5 से अधिक

परिशिष्ट तालिका : व्यस्क लड़कों (अध्याय 1, क्रिया 3 पृष्ठ संख्या 13 पर) की शरीर द्रव्यमान सूचक तालिका

वर्ष	माह	कुपोषित कमज़ोर	सामान्य	कुपोषित मोटापा
14	0	15.5 से कम	15.5 से 25.9	25.9 से अधिक
14	1	15.5 से कम	15.5 से 26.0	26.0 से अधिक
14	2	15.6 से कम	15.6 से 26.1	26.1 से अधिक
14	3	15.6 से कम	15.6 से 26.2	26.2 से अधिक
14	4	15.7 से कम	15.7 से 26.3	26.3 से अधिक
14	5	15.7 से कम	15.7 से 26.4	26.4 से अधिक
14	6	15.7 से कम	15.7 से 26.5	26.5 से अधिक
14	7	15.8 से कम	15.8 से 26.5	26.5 से अधिक
14	8	15.8 से कम	15.8 से 26.6	26.6 से अधिक
14	9	15.9 से कम	15.9 से 26.7	26.7 से अधिक
14	10	15.9 से कम	15.9 से 26.8	26.8 से अधिक
14	11	16.0 से कम	16.0 से 26.9	26.9 से अधिक
15	0	16.0 से कम	16.0 से 27.0	27.0 से अधिक
15	1	16.1 से कम	16.1 से 27.1	27.1 से अधिक
15	2	16.1 से कम	16.1 से 27.1	27.1 से अधिक
15	3	16.1 से कम	16.1 से 27.2	27.2 से अधिक
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उपभोक्ता अधिकार

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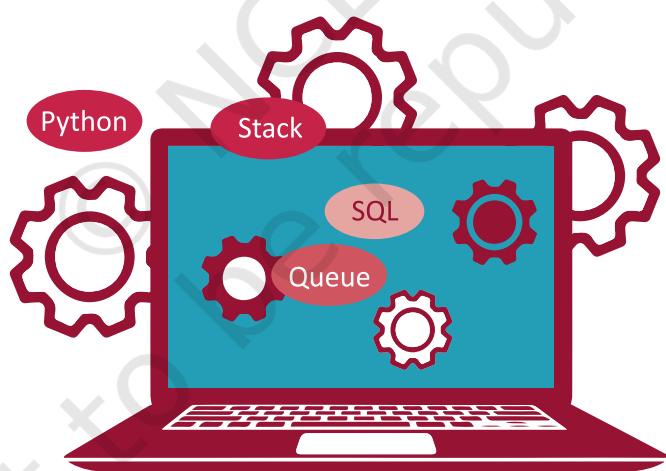
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COMPUTER SCIENCE

TEXTBOOK FOR CLASS XII



12130



राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

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FOREWORD

Computer science as a discipline has evolved over the years and has emerged as a driving force of our socio-economic activities. It has made continuous inroads into diverse areas — be it business, commerce, science, technology, sports, health, transportation or education. With the advent of computer and communication technologies, there has been a paradigm shift in teaching-learning at the school level. The role and relevance of this discipline is in focus because the expectations from the school pass-outs have grown to be able to meet the challenges of the 21st century. Today, we are living in an interconnected world where computer-based applications influence the way we learn, communicate, commute or even socialise!

There is a demand for software engineers in various fields like manufacturing, services, etc. Today, there are a large number of successful startups delivering different services through software applications. All these have resulted in generating interest for this subject among students as well as parents.

Development of logical thinking, reasoning and problem-solving skills are fundamental building blocks for knowledge acquisition at the higher level. Computer plays a key role in problem solving with focus on logical representation or reasoning and analysis.

This textbook focuses on the fundamental concepts and problem-solving skills while opening a window to the emerging and advanced areas of computer science. The newly developed syllabus has dealt with the dual challenge of reducing curricular load as well as introducing this ever evolving discipline. This textbook also provides space to Computational Thinking and Artificial Intelligence, which envisaged in National Education Policy, 2020.

As an organisation committed to systemic reforms and continuous improvement in the quality of its products, NCERT welcomes comments and suggestions which will enable us to revise the content of the textbook.

New Delhi
August 2020

HRUSHIKESH SENAPATY
Director
National Council of Educational
Research and Training

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PREFACE

In the present education system of our country, specialised or discipline based courses are introduced at the higher secondary stage. This stage is crucial as well as challenging because of the transition from general to discipline-based curriculum. The syllabus at this stage needs to have sufficient rigour and depth while remaining mindful of the comprehension level of the learners. Further, the textbook should not be heavily loaded with content.

Computers have permeated in every facet of life. Study of basic concepts of computer science has been desirable in education. There are courses offered in the name of Computer Science, Information and Communication Technology (ICT), Information Technology (IT), etc., by various boards and schools up to secondary stage, as optional. These mainly focus on using computer for word processing, presentation tools and application software.

Computer Science (CS) at the higher secondary stage of school education is also offered as an optional subject. At this stage, students usually opt for CS with an aim of pursuing a career in software development or related areas, after going through professional courses at higher levels. Therefore, at higher secondary stage, the curriculum of CS introduces basics of computing and sufficient conceptual background of Computer Science.

The primary focus is on fostering the development of computational thinking and problem-solving skills. This book has 13 chapters covering the following broader themes:

- Data Structure: understanding of important data structure Stack, Queue; Searching and Sorting techniques.
- Database: basic understanding of data, database concepts, and relational database management system using MySQL. Structured query language—data definition, data manipulation and data querying.
- Programming: handling errors and exceptions in programs written in Python; handling files and performing file operations in Python.
- Network and Communication: fundamentals of Computers networks, devices, topologies, Internet, Web and IoT, DNS. Basics of Data communication—transmission channel, media; basics of protocols, mobile communication generations.
- Security Aspects: introduction to basic concepts related to network and Internet security, threats and prevention.

Each chapter has two additional components—(i) activities and (ii) think and reflect for self assessment while learning as well as to generate further interest in the learner. A number of hands-on examples are given to gradually explain methodology to solve different types of problems across the Chapters. The programming examples as well as the exercises in the

chapters are required to be solved in a computer and verify with the given outputs.

Box items are pinned inside the chapters either to explain related concepts or to describe additional information related to the topic covered in that section. However, these box-items are not to be assessed through examinations.

Project Based Learning given as the end includes exemplar projects related to real-world problems. Teachers are supposed to assign these or similar projects to be developed in groups. Working in such projects may promote peer-learning, team spirit and responsiveness.

The chapters have been written by involving practicing teachers as well as subject experts. Several iterations have resulted into this book. Thanks are due to the authors and reviewers for their valuable contribution. I would like to place on record appreciation for Professor Om Vikas for leading the review activities of the book as well as for his guidance and motivation to the development team throughout. Comments and suggestions are welcome.

New Delhi
20 August 2020

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THE CONSTITUTION OF INDIA

PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a¹**[SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC]** and to secure to all its citizens :

JUSTICE, social, economic and political;

LIBERTY of thought, expression, belief, faith and worship;

EQUALITY of status and of opportunity; and to promote among them all

FRATERNITY assuring the dignity of the individual and the²[unity and integrity of the Nation];

IN OUR CONSTITUENT ASSEMBLY this twenty-sixth day of November, 1949 do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

1. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
2. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Unity of the Nation" (w.e.f. 3.1.1977)

Chapter

I

Exception Handling in Python



12130CH01

In this Chapter

- » *Introduction*
- » *Syntax Errors*
- » *Exceptions*
- » *Built-in Exceptions*
- » *Raising Exceptions*
- » *Handling Exceptions*
- » *Finally Clause*

“I like my code to be elegant and efficient. The logic should be straightforward to make it hard for bugs to hide, the dependencies minimal to ease maintenance, error handling complete according to an articulated strategy, and performance close to optimal so as not to tempt people to make the code messy with unprincipled optimization. Clean code does one thing well.”

— Bjarne Stroustrup

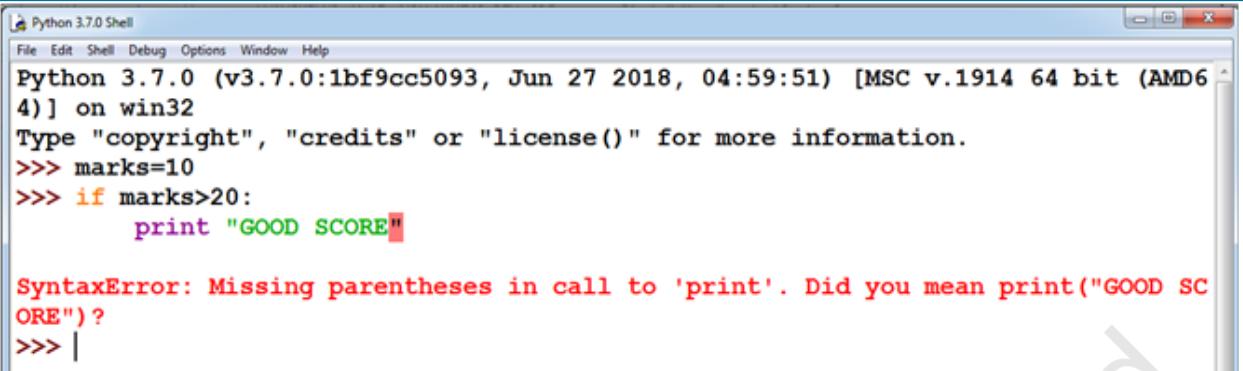
1.1 INTRODUCTION

Sometimes while executing a Python program, the program does not execute at all or the program executes but generates unexpected output or behaves abnormally. These occur when there are syntax errors, runtime errors or logical errors in the code. In Python, exceptions are errors that get triggered automatically. However, exceptions can be forcefully triggered and handled through program code. In this chapter, we will learn about exception handling in Python programs.

1.2 SYNTAX ERRORS

Syntax errors are detected when we have not followed the rules of the particular programming language while writing a program. These errors are also known as *parsing errors*. On encountering a syntax error, the interpreter does not execute the program unless we rectify the errors, save and

rerun the program. When a syntax error is encountered while working in shell mode, Python displays the name of the error and a small description about the error as shown in Figure 1.1.



The screenshot shows the Python 3.7.0 Shell window. The command prompt shows the user entering code. A syntax error occurs at the line 'print "GOOD SCORE"' due to missing parentheses. The error message 'SyntaxError: Missing parentheses in call to 'print''. Did you mean print("GOOD SCORE")?' is displayed in red. The code entered is:

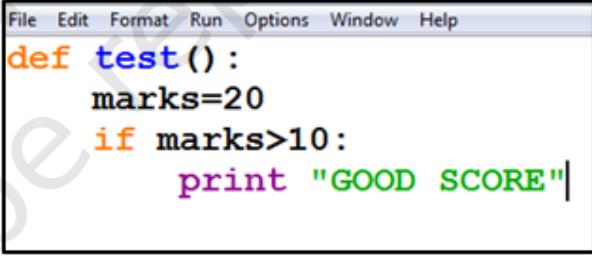
```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> marks=10
>>> if marks>20:
    print "GOOD SCORE"

SyntaxError: Missing parentheses in call to 'print'. Did you mean print("GOOD SCORE")?
>>> |
```

Figure 1.1: A syntax error displayed in Python shell mode

So, a syntax error is reported by the Python interpreter giving a brief explanation about the error and a suggestion to rectify it.

Similarly, when a syntax error is encountered while running a program in script mode as shown in Figure 1.2, a dialog box specifying the name of the error (Figure 1.3) and a small description about the error is displayed.



The screenshot shows a script editor window with the following code:

```
File Edit Format Run Options Window Help
def test():
    marks=20
    if marks>10:
        print "GOOD SCORE"
```

Figure 1.2: An error in the script

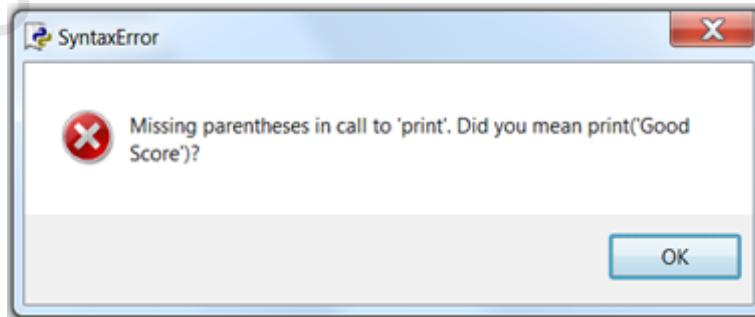


Figure 1.3: Error dialog box

1.3 EXCEPTIONS

Even if a statement or expression is syntactically correct, there might arise an error during its execution. For example, trying to open a file that does not exist, division by zero and so on. Such types of errors might disrupt the normal execution of the program and are called exceptions.

An exception is a Python object that represents an error. When an error occurs during the execution of a program, an exception is said to have been raised. Such an exception needs to be handled by the programmer so that the program does not terminate abnormally. Therefore, while designing a program, a programmer may anticipate such erroneous situations that may arise during its execution and can address them by including appropriate code to handle that exception.

It is to be noted that `SyntaxError` shown at Figures 1.1 and 1.3 is also an exception. But, all other exceptions are generated when a program is syntactically correct.

1.4 BUILT-IN EXCEPTIONS

Commonly occurring exceptions are usually defined in the compiler/interpreter. These are called built-in exceptions.

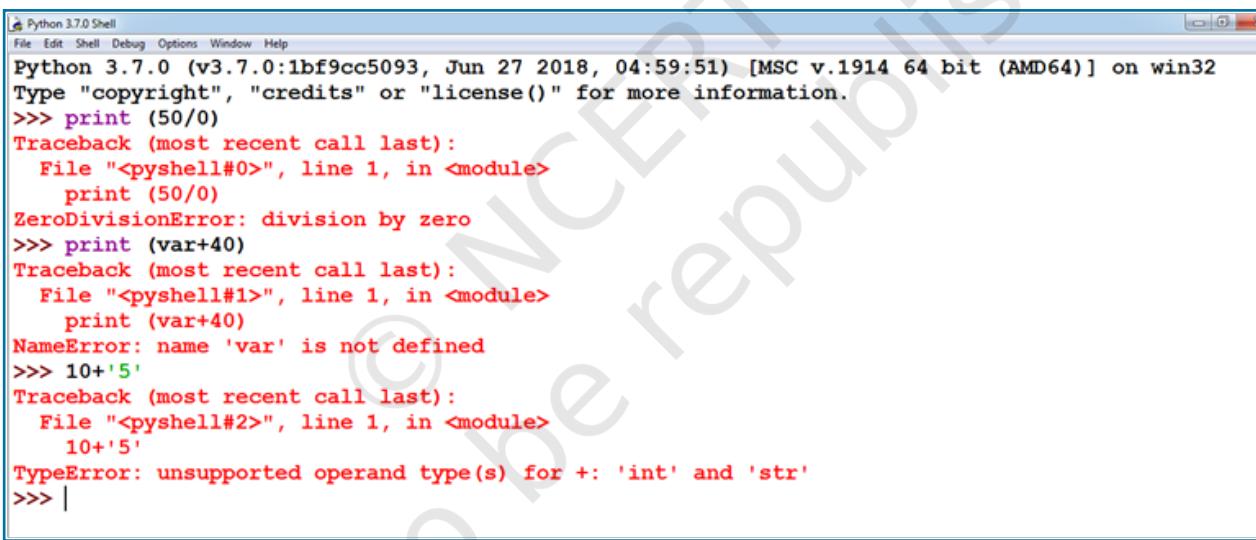
Python's standard library is an extensive collection of built-in exceptions that deals with the commonly occurring errors (exceptions) by providing the standardized solutions for such errors. On the occurrence of any built-in exception, the appropriate exception handler code is executed which displays the reason along with the raised exception name. The programmer then has to take appropriate action to handle it. Some of the commonly occurring built-in exceptions that can be raised in Python are explained in Table 1.1.

Table 1.1 Built-in exceptions in Python

S. No	Name of the Built-in Exception	Explanation
1.	<code>SyntaxError</code>	It is raised when there is an error in the syntax of the Python code.
2.	<code>ValueError</code>	It is raised when a built-in method or operation receives an argument that has the right data type but mismatched or inappropriate values.
3.	<code>IOError</code>	It is raised when the file specified in a program statement cannot be opened.

4	KeyboardInterrupt	It is raised when the user accidentally hits the Delete or Esc key while executing a program due to which the normal flow of the program is interrupted.
5	ImportError	It is raised when the requested module definition is not found.
6	EOFError	It is raised when the end of file condition is reached without reading any data by input().
7	ZeroDivisionError	It is raised when the denominator in a division operation is zero.
8	IndexError	It is raised when the index or subscript in a sequence is out of range.
9	NameError	It is raised when a local or global variable name is not defined.
10	IndentationError	It is raised due to incorrect indentation in the program code.
11	TypeError	It is raised when an operator is supplied with a value of incorrect data type.
12	OverFlowError	It is raised when the result of a calculation exceeds the maximum limit for numeric data type.

Figure 1.4 shows the built-in exceptions viz, ZeroDivisionError, NameError, and TypeError raised by the Python interpreter in different situations.



```

Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> print (50/0)
Traceback (most recent call last):
  File "<pyshell#0>", line 1, in <module>
    print (50/0)
ZeroDivisionError: division by zero
>>> print (var+40)
Traceback (most recent call last):
  File "<pyshell#1>", line 1, in <module>
    print (var+40)
NameError: name 'var' is not defined
>>> 10+'5'
Traceback (most recent call last):
  File "<pyshell#2>", line 1, in <module>
    10+'5'
TypeError: unsupported operand type(s) for +: 'int' and 'str'
>>> |

```

Figure 1.4: Example of built-in exceptions

A programmer can also create custom exceptions to suit one's requirements. These are called user-defined exceptions. We will learn how to handle exceptions in the next section.

1.5 RAISING EXCEPTIONS

Each time an error is detected in a program, the Python interpreter raises (throws) an exception. Exception

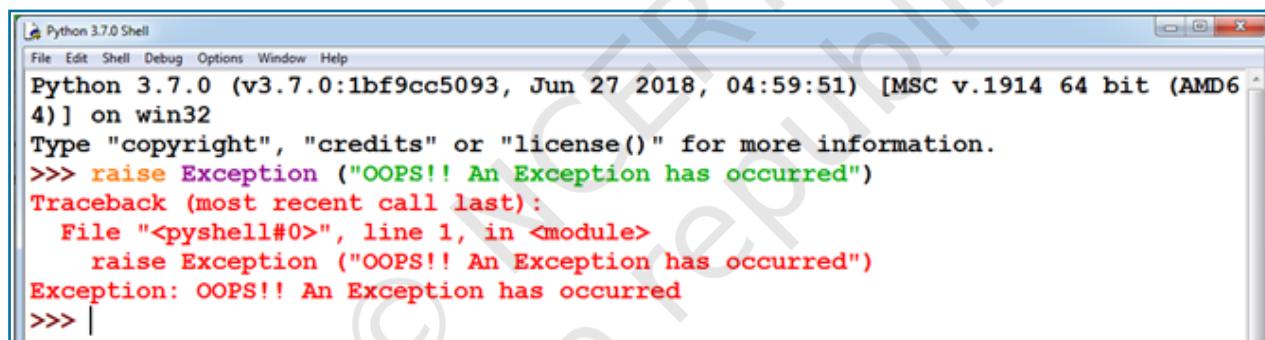
handlers are designed to execute when a specific exception is raised. Programmers can also forcefully raise exceptions in a program using the raise and assert statements. Once an exception is raised, no further statement in the current block of code is executed. So, raising an exception involves interrupting the normal flow execution of program and jumping to that part of the program (exception handler code) which is written to handle such exceptional situations.

1.5.1 The raise Statement

The raise statement can be used to throw an exception. The syntax of raise statement is:

```
raise exception-name [(optional argument)]
```

The argument is generally a string that is displayed when the exception is raised. For example, when an exception is raised as shown in Figure 1.5, the message “OOPS : An Exception has occurred” is displayed along with a brief description of the error.

A screenshot of the Python 3.7.0 Shell window. The title bar says "Python 3.7.0 Shell". The menu bar includes File, Edit, Shell, Debug, Options, Window, Help. The main area shows the following interaction:

```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)]
4] on win32
Type "copyright", "credits" or "license()" for more information.
>>> raise Exception ("OOPS!! An Exception has occurred")
Traceback (most recent call last):
  File "<pyshell#0>", line 1, in <module>
    raise Exception ("OOPS!! An Exception has occurred")
Exception: OOPS!! An Exception has occurred
>>> |
```

The text "OOPS!! An Exception has occurred" is highlighted in green.

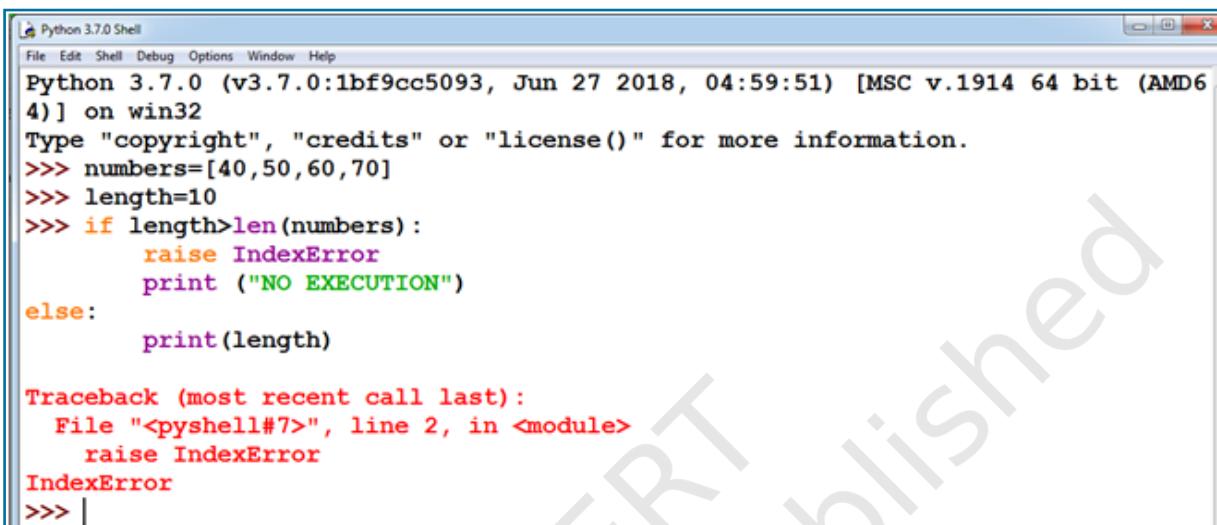
Figure 1.5: Use of the raise statement to throw an exception

The error detected may be a built-in exception or may be a user-defined one. Consider the example given in Figure 1.6 that uses the raise statement to raise a built-in exception called IndexError.

Note: In this case, the user has only raised the exception but has not displayed any error message explicitly.

In Figure 1.6, since the value of variable length is greater than the length of the list *numbers*, an IndexError exception will be raised. The statement following the raise statement will not be executed. So the message “NO EXECUTION” will not be displayed in this case.

As we can see in Figure 1.6, in addition to the error message displayed, Python also displays a stack Traceback. This is a structured block of text that contains information about the sequence of function calls that have been made in the branch of execution of code in which the exception was raised. In Figure 1.6, the error has been encountered in the most recently called function that has been executed.



The screenshot shows the Python 3.7.0 Shell window. The command line shows:

```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> numbers=[40,50,60,70]
>>> length=10
>>> if length>len(numbers):
    raise IndexError
    print ("NO EXECUTION")
else:
    print(length)

Traceback (most recent call last):
  File "<pyshell#7>", line 2, in <module>
    raise IndexError
IndexError
>>> |
```

The output shows the stack trace and the resulting IndexError exception.

Figure 1.6: Use of raise statement with built-in exception

Note: We will learn about Stack in Chapter 3.

1.5.2 The assert Statement

An assert statement in Python is used to test an expression in the program code. If the result after testing comes false, then the exception is raised. This statement is generally used in the beginning of the function or after a function call to check for valid input. The syntax for assert statement is:

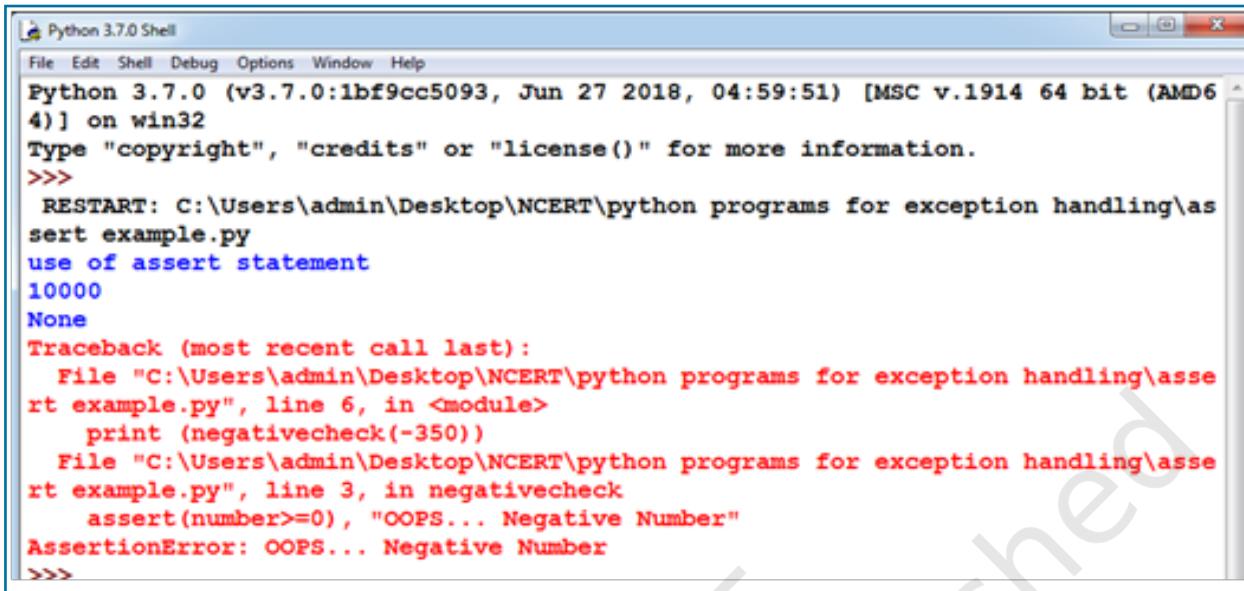
```
assert Expression[, arguments]
```

On encountering an assert statement, Python evaluates the expression given immediately after the assert keyword. If this expression is false, an AssertionError exception is raised which can be handled like any other exception. Consider the code given in Program 1-1.

Program 1-1 Use of assert statement

```
print("use of assert statement")
def negativecheck(number):
    assert(number>=0), "OOPS... Negative Number"
```

```
    print(number*number)
print(negativecheck(100))
print(negativecheck(-350))
```



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\admin\Desktop\NCERT\python programs for exception handling\assert example.py
use of assert statement
10000
None
Traceback (most recent call last):
  File "C:\Users\admin\Desktop\NCERT\python programs for exception handling\assert example.py", line 6, in <module>
    print(negativecheck(-350))
  File "C:\Users\admin\Desktop\NCERT\python programs for exception handling\assert example.py", line 3, in negativecheck
    assert(number>=0), "OOPS... Negative Number"
AssertionError: OOPS... Negative Number
>>>
```

Figure 1.7: Output of Program 1-1.

In the code, the assert statement checks for the value of the variable number. In case the number gets a negative value, `AssertionError` will be thrown, and subsequent statements will not be executed. Hence, on passing a negative value (-350) as an argument, it results in `AssertionError` and displays the message “OOPS.... Negative Number”. The output of the code is shown in Figure 1.7.

1.6 HANDLING EXCEPTIONS

Each and every exception has to be handled by the programmer to avoid the program from crashing abruptly. This is done by writing additional code in a program to give proper messages or instructions to the user on encountering an exception. This process is known as *exception handling*.

1.6.1 Need for Exception Handling

Exception handling is being used not only in Python programming but in most programming languages like C++, Java, Ruby, etc. It is a useful technique that helps in capturing runtime errors and handling them so as to avoid the program getting crashed. Following are some

of the important points regarding exceptions and their handling:

- Python categorises exceptions into distinct types so that specific exception handlers (code to handle that particular exception) can be created for each type.
- Exception handlers separate the main logic of the program from the error detection and correction code. The segment of code where there is any possibility of error or exception, is placed inside one block. The code to be executed in case the exception has occurred, is placed inside another block. These statements for detection and reporting the exception do not affect the main logic of the program.
- The compiler or interpreter keeps track of the exact position where the error has occurred.
- Exception handling can be done for both user-defined and built-in exceptions.

1.6.2 Process of Handling Exception

When an error occurs, Python interpreter creates an object called the *exception object*. This object contains information about the error like its type, file name and position in the program where the error has occurred. The object is handed over to the runtime system so that it can find an appropriate code to handle this particular exception. This process of creating an exception object and handing it over to the runtime system is called *throwing* an exception. It is important to note that when an exception occurs while executing a particular program statement, the control jumps to an exception handler, abandoning execution of the remaining program statements.

The runtime system searches the entire program for a block of code, called the *exception handler* that can handle the raised exception. It first searches for the method in which the error has occurred and the exception has been raised. If not found, then it searches the method from which this method (in which exception was raised) was called. This hierarchical search in reverse order continues till the exception handler is found. This entire list of methods is known as *call stack*. When a suitable handler is found in the call stack, it is executed by the runtime process. This process of



A runtime system refers to the execution of the statements given in the program. It is a complex mechanism consisting of hardware and software that comes into action as soon as the program, written in any programming language, is put for execution.



executing a suitable handler is known as *catching the exception*. If the runtime system is not able to find an appropriate exception after searching all the methods in the call stack, then the program execution stops.

The flowchart in Figure 1.8 describes the exception handling process.

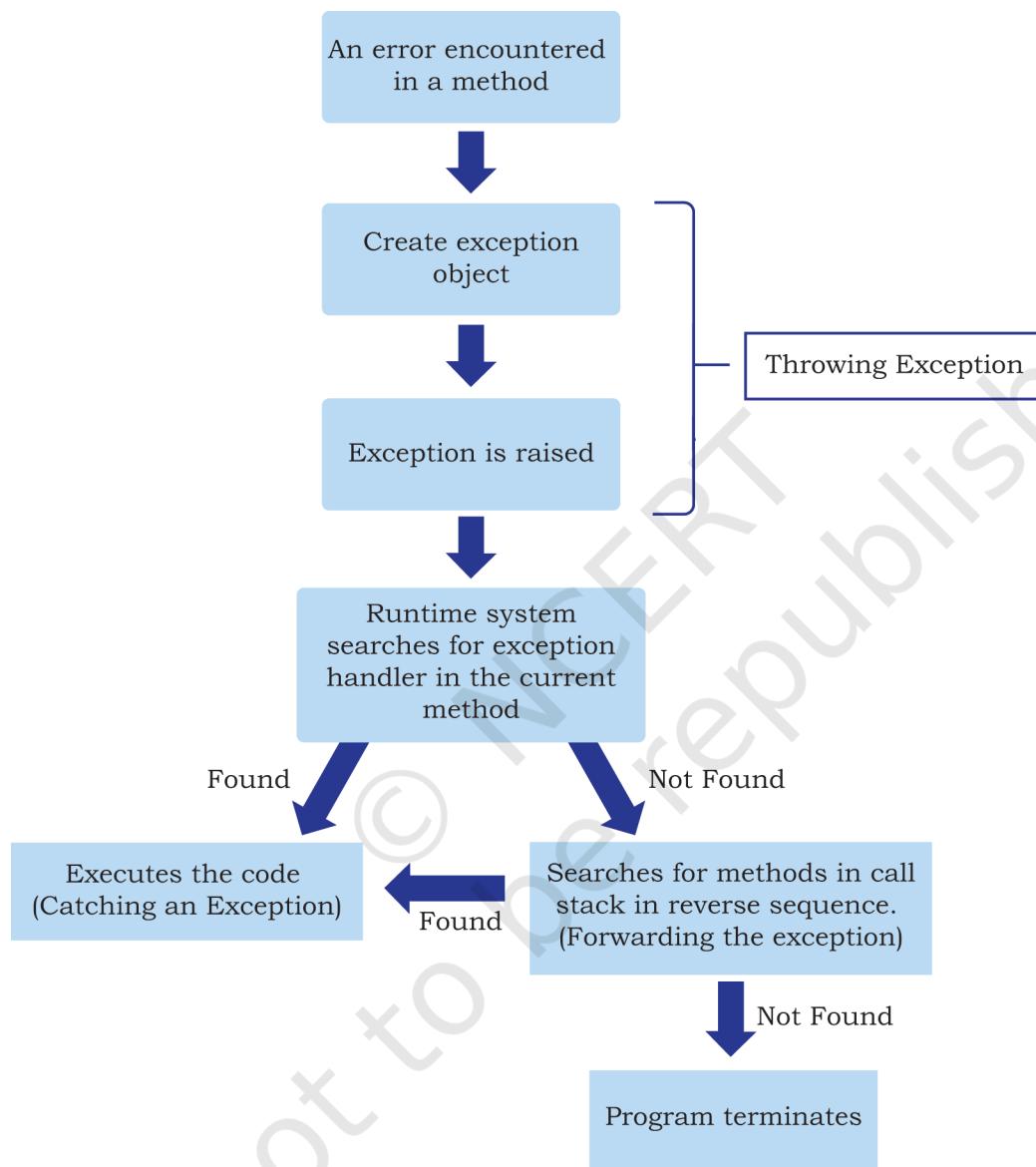


Figure 1.8: Steps of handling exception

1.6.3 Catching Exceptions

An exception is said to be caught when a code that is designed to handle a particular exception is executed. Exceptions, if any, are caught in the `try` block and

handled in the except block. While writing or debugging a program, a user might doubt an exception to occur in a particular part of the code. Such suspicious lines of codes are put inside a try block. Every try block is followed by an except block. The appropriate code to handle each of the possible exceptions (in the code inside the try block) are written inside the except clause.

While executing the program, if an exception is encountered, further execution of the code inside the try block is stopped and the control is transferred to the except block. The syntax of try ... except clause is as follows:

```
try:  
    [ program statements where exceptions might occur]  
except [exception-name]:  
    [ code for exception handling if the exception-name error is  
    encountered]
```

Consider the Program 1-2 given below:

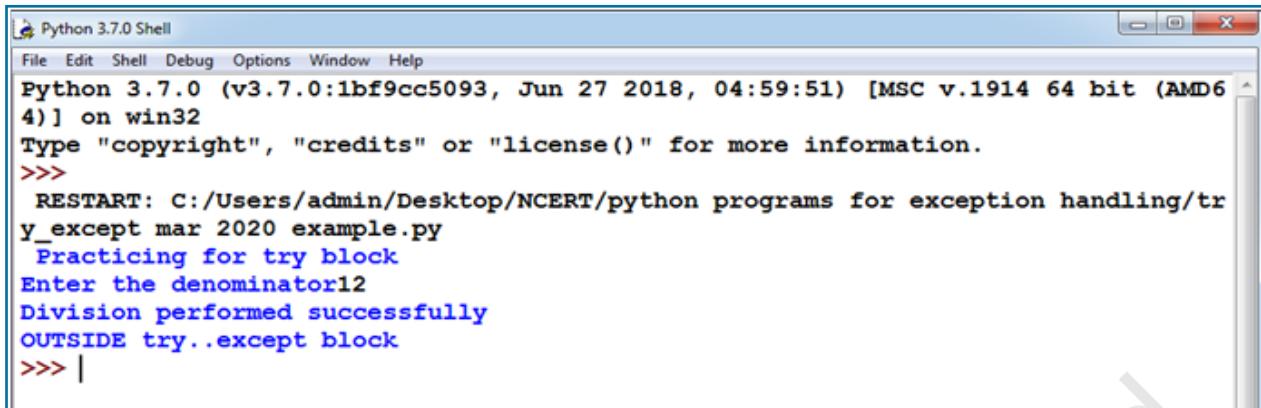
Program 1-2 Using try..except block

```
print ("Practicing for try block")  
try:  
    numerator=50  
    denom=int(input("Enter the denominator"))  
    quotient=(numerator/denom)  
    print(quotient)  
    print ("Division performed successfully")  
except ZeroDivisionError:  
    print ("Denominator as ZERO.... not allowed")  
print("OUTSIDE try..except block")
```

In Program 1-2, the ZeroDivisionError exception is handled. If the user enters any non-zero value as denominator, the quotient will be displayed along with the message “Division performed successfully”, as shown in Figure 1.10. The except clause will be skipped in this case. So, the next statement after the try..except block is executed and the message “OUTSIDE try..except block” is displayed.

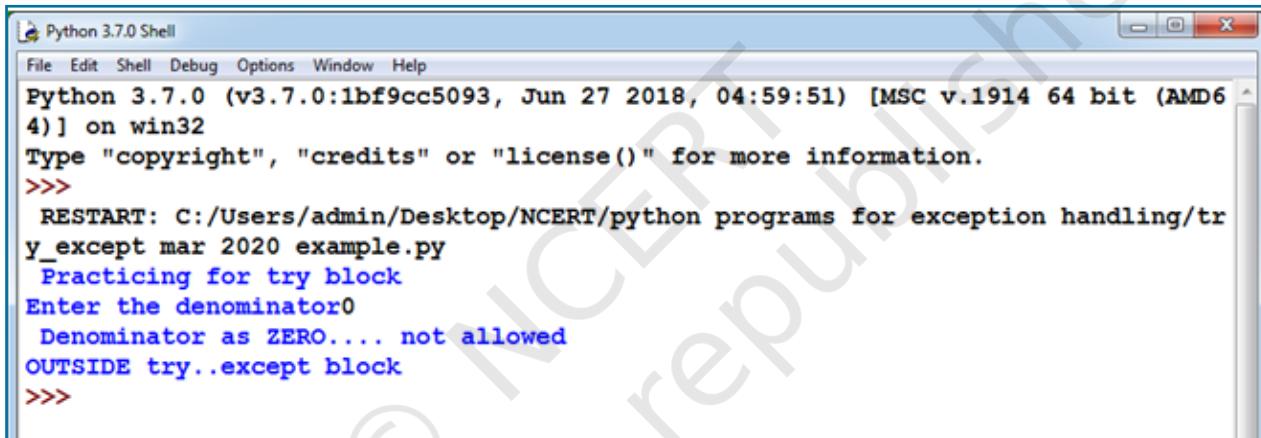
However, if the user enters the value of denom as zero (0), then the execution of the try block will stop. The control will shift to the except block and the message “Denominator as Zero.... not allowed” will be displayed, as shown in Figure 1.11. Thereafter, the

statement following the try..except block is executed and the message “OUTSIDE try..except block” is displayed in this case also.



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/admin/Desktop/NCERT/python programs for exception handling/try_except mar 2020 example.py
Practicing for try block
Enter the denominator12
Division performed successfully
OUTSIDE try..except block
>>> |
```

Figure 1.9: Output without an error



```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/admin/Desktop/NCERT/python programs for exception handling/try_except mar 2020 example.py
Practicing for try block
Enter the denominator0
Denominator as ZERO.... not allowed
OUTSIDE try..except block
>>> |
```

Figure 1.10: Output with exception raised

Sometimes, a single piece of code might be suspected to have more than one type of error. For handling such situations, we can have multiple except blocks for a single try block as shown in the Program 1-3.

Program 1-3 Use of multiple except clauses

```
print ("Handling multiple exceptions")
try:
    numerator=50
    denom=int(input("Enter the denominator: "))
    print (numerator/denom)
    print ("Division performed successfully")
except ZeroDivisionError:
    print ("Denominator as ZERO is not allowed")
except ValueError:
    print ("Only INTEGERS should be entered")
```

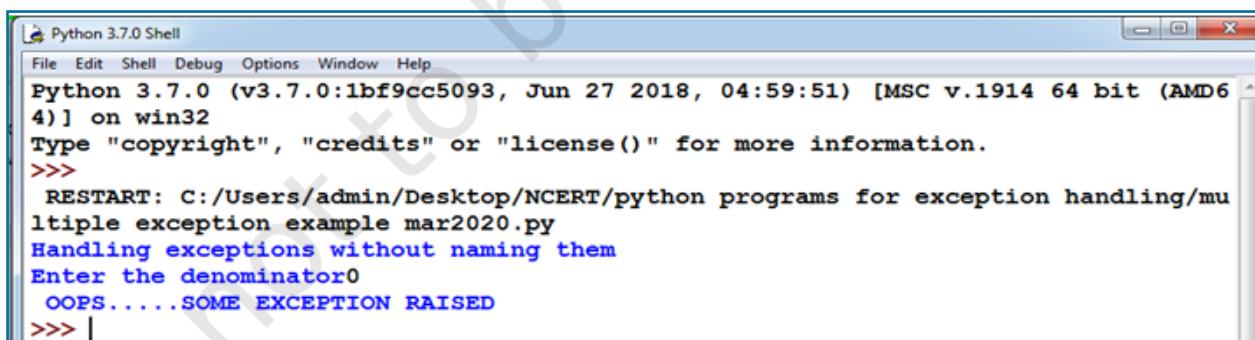
In the code, two types of exceptions (ZeroDivisionError and ValueError) are handled using two except blocks for a single try block. When an exception is raised, a search for the matching except block is made till it is handled. If no match is found, then the program terminates.

However, if an exception is raised for which no handler is created by the programmer, then such an exception can be handled by adding an except clause without specifying any exception. This except clause should be added as the last clause of the try..except block. The Program 1-4 given below along with the output given in Figure 1.11 explains this.

Program 1-4 Use of except without specifying an exception

```
print ("Handling exceptions without naming them")
try:
    numerator=50
    denom=int(input("Enter the denominator"))
    quotient=(numerator/denom)
    print ("Division performed successfully")
except ValueError:
    print ("Only INTEGERS should be entered")
except:
    print(" OOPS.....SOME EXCEPTION RAISED")
```

If the above code is executed, and the denominator entered is 0 (zero), the handler for ZeroDivisionError exception will be searched. Since it is not present, the last except clause (without any specified exception) will be executed , so the message “ OOPS.....SOME EXCEPTION RAISED” will be displayed.



```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/admin/Desktop/NCERT/python programs for exception handling/multiple exception example mar2020.py
Handling exceptions without naming them
Enter the denominator0
OOPS.....SOME EXCEPTION RAISED
>>> |
```

Figure 1.11: Output of Program 1-4

1.6.4 try...except...else clause

We can put an optional else clause along with the try...except clause. An except block will be executed

only if some exception is raised in the try block. But if there is no error then none of the except blocks will be executed. In this case, the statements inside the else clause will be executed. Program 1-5 along with its output explains the use of else block with the try...except block.

Program 1-5 Use of else clause

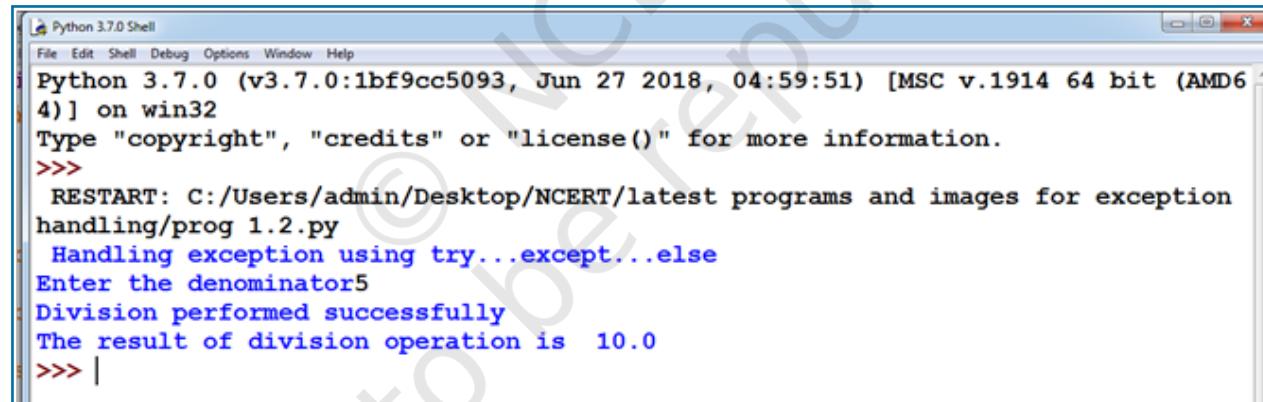
```
print ("Handling exception using try...except...else")
try:
    numerator=50
    denom=int(input("Enter the denominator: "))
    quotient=(numerator/denom)
    print ("Division performed successfully")

except ZeroDivisionError:
    print ("Denominator as ZERO is not allowed")

except ValueError:
    print ("Only INTEGERS should be entered")

else:
    print ("The result of division operation is ", quotient)
```

Output:



The screenshot shows the Python 3.7.0 Shell window. The command prompt shows the path 'C:/Users/admin/Desktop/NCERT/latest programs and images for exception handling/prog 1.2.py'. The user types 'Handling exception using try...except...else' and presses Enter. Then, they type 'Enter the denominator5' and press Enter. The program outputs 'Division performed successfully' and 'The result of division operation is 10.0'. The shell then ends with '>>> |'.

Figure 1.12: Output of Program 1-5.

1.7 FINALLY CLAUSE

The try statement in Python can also have an optional finally clause. The statements inside the finally block are always executed regardless of whether an exception has occurred in the try block or not. It is a common practice to use finally clause while working with files to ensure that the file object is closed. If used, finally should always be placed at the end of try clause, after all except blocks and the else block.

Program 1-6 Use of finally clause

```
print ("Handling exception using try...except...else...finally")
try:
    numerator=50
    denom=int(input("Enter the denominator: "))
    quotient=(numerator/denom)
    print ("Division performed successfully")
except ZeroDivisionError:
    print ("Denominator as ZERO is not allowed")
except ValueError:
    print ("Only INTEGERS should be entered")
else:
    print ("The result of division operation is ", quotient)
finally:
    print ("OVER AND OUT")
```

In the above program, the message “OVER AND OUT” will be displayed irrespective of whether an exception is raised or not.

1.6.1 Recovering and continuing with finally clause

If an error has been detected in the try block and the exception has been thrown, the appropriate except block will be executed to handle the error. But if the exception is not handled by any of the except clauses, then it is re-raised after the execution of the finally block. For example, Program 1.4 contains only the except block for ZeroDivisionError. If any other type of error occurs for which there is no handler code (except clause) defined, then also the finally clause will be executed first. Consider the code given in Program 1-7 to understand these concepts.

Program 1-7 Recovering through finally clause

```
print (" Practicing for try block")
try:
    numerator=50
    denom=int(input("Enter the denominator"))
    quotient=(numerator/denom)
    print ("Division performed successfully")
except ZeroDivisionError:
    print ("Denominator as ZERO is not allowed")
else:
    print ("The result of division operation is ", quotient)
finally:
    print ("OVER AND OUT")
```

While executing the above code, if we enter a non-numeric data as input, the finally block will be executed. So, the message “OVER AND OUT” will be displayed. Thereafter the exception for which handler is not present will be re-raised. The output of Program 1-7 is shown in Figure 1.13.

```
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:/Users/admin/Desktop/NCERT/latest programs and images for exception handling/try finally example fig 1.12.py
Practicing for try block
Enter the denominatorvar
OVER AND OUT
Traceback (most recent call last):
  File "C:/Users/admin/Desktop/NCERT/latest programs and images for exception handling/try finally example fig 1.12.py", line 4, in <module>
    denom=int(input("Enter the denominator"))
ValueError: invalid literal for int() with base 10: 'var'
>>> |
```

Figure 1.13: Output of Program 1-7

After execution of finally block, Python transfers the control to a previously entered try or to the next higher level default exception handler. In such a case, the statements following the finally block is executed. That is, unlike except, execution of the finally clause does not terminate the exception. Rather, the exception continues to be raised after execution of finally.

To summarise, we put a piece of code where there are possibilities of errors or exceptions to occur inside a try block. Inside each except clause we define handler codes to handle the matching exception raised in the try block. The optional else clause contains codes to be executed if no exception occurs. The optional finally block contains codes to be executed irrespective of whether an exception occurs or not.

SUMMARY

- Syntax errors or parsing errors are detected when we have not followed the rules of the particular programming language while writing a program.

NOTES

- When syntax error is encountered, Python displays the name of the error and a small description about the error.
- The execution of the program will start only after the syntax error is rectified.
- An exception is a Python object that represents an error.
- Syntax errors are also handled as exceptions.
- The exception needs to be handled by the programmer so that the program does not terminate abruptly.
- When an exception occurs during execution of a program and there is a built-in exception defined for that, the error message written in that exception is displayed. The programmer then has to take appropriate action and handle it.
- Some of the commonly occurring built-in exceptions are `SyntaxError`, `ValueError`, `IOError`, `KeyboardInterrupt`, `ImportError`, `EOFError`, `ZeroDivisionError`, `IndexError`, `NameError`, `IndentationError`, `TypeError`, and `OverflowError`.
- When an error is encountered in a program, Python interpreter raises or throws an exception.
- Exception Handlers are the codes that are designed to execute when a specific exception is raised.
- Raising an exception involves interrupting the normal flow of the program execution and jumping to the exception handler.
- `Raise` and `assert` statements are used to raise exceptions.
- The process of exception handling involves writing additional code to give proper messages or instructions to the user. This prevents the program from crashing abruptly. The additional code is known as an exception handler.
- An exception is said to be caught when a code that is designed to handle a particular exception is executed.
- An exception is caught in the `try` block and handles in `except` block.

- The statements inside the finally block are always executed regardless of whether an exception occurred in the try block or not.



EXERCISE

- "Every syntax error is an exception but every exception cannot be a syntax error." Justify the statement.
- When are the following built-in exceptions raised? Give examples to support your answers.
 - ImportError
 - IOError
 - NameError
 - ZeroDivisionError
- What is the use of a raise statement? Write a code to accept two numbers and display the quotient. Appropriate exception should be raised if the user enters the second number (denominator) as zero (0).
- Use assert statement in Question No. 3 to test the division expression in the program.
- Define the following:
 - Exception Handling
 - Throwing an exception
 - Catching an exception
- Explain catching exceptions using try and except block.
- Consider the code given below and fill in the blanks.


```
print (" Learning Exceptions...")
try:
    num1= int(input ("Enter the first number"))
    num2=int(input("Enter the second number"))
    quotient=(num1/num2)
    print ("Both the numbers entered were correct")
except _____:           # to enter only integers
    print (" Please enter only numbers")
except _____:           # Denominator should not be zero
    print(" Number 2 should not be zero")
else:
    print(" Great .. you are a good programmer")
_____:
    # to be executed at the end
print(" JOB OVER... GO GET SOME REST")
```

NOTES

8. You have learnt how to use math module in Class XI. Write a code where you use the wrong number of arguments for a method (say sqrt() or pow()). Use the exception handling process to catch the ValueError exception.
9. What is the use of finally clause? Use finally clause in the problem given in Question No. 7.

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Chapter

2

File Handling in Python



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In this Chapter

- » *Introduction to Files*
- » *Types of Files*
- » *Opening and Closing a Text File*
- » *Writing to a Text File*
- » *Reading from a Text File*
- » *Setting Offsets in a File*
- » *Creating and Traversing a Text File*
- » *The Pickle Module*

There are many ways of trying to understand programs. People often rely too much on one way, which is called "debugging" and consists of running a partly-understood program to see if it does what you expected. Another way, which ML advocates, is to install some means of understanding in the very programs themselves.

— Robin Milner

2.1 INTRODUCTION TO FILES

We have so far created programs in Python that accept the input, manipulate it and display the output. But that output is available only during execution of the program and input is to be entered through the keyboard. This is because the variables used in a program have a lifetime that lasts till the time the program is under execution. What if we want to store the data that were input as well as the generated output permanently so that we can reuse it later? Usually, organisations would want to permanently store information about employees, inventory, sales, etc. to avoid repetitive tasks of entering the same data. Hence, data are stored permanently on secondary storage devices for reusability. We store Python programs written in script mode with a .py extension. Each program is stored on the secondary device as a file. Likewise, the data entered, and the output can be stored permanently into a file.



Text files contain only the ASCII equivalent of the contents of the file whereas a .docx file contains many additional information like the author's name, page settings, font type and size, date of creation and modification, etc.



Activity 2.1

Create a text file using notepad and write your name and save it. Now, create a .docx file using Microsoft Word and write your name and save it as well. Check and compare the file size of both the files. You will find that the size of .txt file is in bytes whereas that of .docx is in KBs.



So, what is a file? A file is a named location on a secondary storage media where data are permanently stored for later access.

2.2. TYPES OF FILES

Computers store every file as a collection of 0s and 1s i.e., in binary form. Therefore, every file is basically just a series of bytes stored one after the other. There are mainly two types of data files — text file and binary file. A text file consists of human readable characters, which can be opened by any text editor. On the other hand, binary files are made up of non-human readable characters and symbols, which require specific programs to access its contents.

2.2.1 Text file

A text file can be understood as a sequence of characters consisting of alphabets, numbers and other special symbols. Files with extensions like .txt, .py, .csv, etc. are some examples of text files. When we open a text file using a text editor (e.g., Notepad), we see several lines of text. However, the file contents are not stored in such a way internally. Rather, they are stored in sequence of bytes consisting of 0s and 1s. In ASCII, UNICODE or any other encoding scheme, the value of each character of the text file is stored as bytes. So, while opening a text file, the text editor translates each ASCII value and shows us the equivalent character that is readable by the human being. For example, the ASCII value 65 (binary equivalent 1000001) will be displayed by a text editor as the letter 'A' since the number 65 in ASCII character set represents 'A'.

Each line of a text file is terminated by a special character, called the End of Line (EOL). For example, the default EOL character in Python is the newline (\n). However, other characters can be used to indicate EOL. When a text editor or a program interpreter encounters the ASCII equivalent of the EOL character, it displays the remaining file contents starting from a new line. Contents in a text file are usually separated by whitespace, but comma (,) and tab (\t) are also commonly used to separate values in a text file.

2.2.2 Binary Files

Binary files are also stored in terms of bytes (0s and 1s), but unlike text files, these bytes do not represent the ASCII values of characters. Rather, they represent the actual content such as image, audio, video, compressed versions of other files, executable files, etc. These files are not human readable. Thus, trying to open a binary file using a text editor will show some garbage values. We need specific software to read or write the contents of a binary file.

Binary files are stored in a computer in a sequence of bytes. Even a single bit change can corrupt the file and make it unreadable to the supporting application. Also, it is difficult to remove any error which may occur in the binary file as the stored contents are not human readable. We can read and write both text and binary files through Python programs.

2.3 OPENING AND CLOSING A TEXT FILE

In real world applications, computer programs deal with data coming from different sources like databases, CSV files, HTML, XML, JSON, etc. We broadly access files either to write or read data from it. But operations on files include creating and opening a file, writing data in a file, traversing a file, reading data from a file and so on. Python has the `io` module that contains different functions for handling files.

2.3.1 Opening a file

To open a file in Python, we use the `open()` function. The syntax of `open()` is as follows:

```
file_object= open(file_name, access_mode)
```

This function returns a file object called file handle which is stored in the variable `file_object`. We can use this variable to transfer data to and from the file (read and write) by calling the functions defined in the Python's `io` module. If the file does not exist, the above statement creates a new empty file and assigns it the name we specify in the statement.

The `file_object` has certain attributes that tells us basic information about the file, such as:

- `<file.closed>` returns true if the file is closed and false otherwise.



The `file_object` establishes a link between the program and the data file stored in the permanent storage.



- <file.mode> returns the access mode in which the file was opened.
- <file.name> returns the name of the file.

Activity 2.2

Some of the other file access modes are <rb+>, <wb>, <w+>, <ab>, <ab+>. Find out for what purpose each of these are used. Also, find the file offset positions in each case.



The file_name should be the name of the file that has to be opened. If the file is not in the current working directory, then we need to specify the complete path of the file along with its name.

The access_mode is an optional argument that represents the mode in which the file has to be accessed by the program. It is also referred to as processing mode. Here mode means the operation for which the file has to be opened like <r> for reading, <w> for writing, <+> for both reading and writing, <a> for appending at the end of an existing file. The default is the read mode. In addition, we can specify whether the file will be handled as binary () or text mode. By default, files are opened in text mode that means strings can be read or written. Files containing non-textual data are opened in binary mode that means read/write are performed in terms of bytes. Table 2.1 lists various file access modes that can be used with the open() method. The file offset position in the table refers to the position of the file object when the file is opened in a particular mode.

Table 2.1 File Open Modes

File Mode	Description	File Offset position
<r>	Opens the file in read-only mode.	Beginning of the file
<rb>	Opens the file in binary and read-only mode.	Beginning of the file
<r+> or <+r>	Opens the file in both read and write mode.	Beginning of the file
<w>	Opens the file in write mode. If the file already exists, all the contents will be overwritten. If the file doesn't exist, then a new file will be created.	Beginning of the file
<wb+> or <+wb>	Opens the file in read,write and binary mode. If the file already exists, the contents will be overwritten. If the file doesn't exist, then a new file will be created.	Beginning of the file
<a>	Opens the file in append mode. If the file doesn't exist, then a new file will be created.	End of the file
<a+> or <+a>	Opens the file in append and read mode. If the file doesn't exist, then it will create a new file.	End of the file

Consider the following example.

```
myObject=open("myfile.txt", "a+")
```

In the above statement, the file *myfile.txt* is opened in append and read modes. The file object will be at the end of the file. That means we can write data at the end of the file and at the same time we can also read data from the file using the file object named *myObject*.

2.3.2 Closing a file

Once we are done with the read/write operations on a file, it is a good practice to close the file. Python provides a `close()` method to do so. While closing a file, the system frees the memory allocated to it. The syntax of `close()` is:

```
file_object.close()
```

Here, `file_object` is the object that was returned while opening the file.

Python makes sure that any unwritten or unsaved data is flushed off (written) to the file before it is closed. Hence, it is always advised to close the file once our work is done. Also, if the file object is re-assigned to some other file, the previous file is automatically closed.

2.3.3 Opening a file using with clause

In Python, we can also open a file using with clause. The syntax of with clause is:

```
with open (file_name, access_mode) as file_
object:
```

The advantage of using with clause is that any file that is opened using this clause is closed automatically, once the control comes outside the with clause. In case the user forgets to close the file explicitly or if an exception occurs, the file is closed automatically. Also, it provides a simpler syntax.

```
with open("myfile.txt","r+") as myObject:
    content = myObject.read()
```

Here, we don't have to close the file explicitly using `close()` statement. Python will automatically close the file.

2.4 WRITING TO A TEXT FILE

For writing to a file, we first need to open it in write or append mode. If we open an existing file in write mode, the previous data will be erased, and the file object will be positioned at the beginning of the file. On the other

Think and Reflect

For a newly created file, is there any difference between write() and append() methods?



hand, in append mode, new data will be added at the end of the previous data as the file object is at the end of the file. After opening the file, we can use the following methods to write data in the file.

- write() - for writing a single string
- writelines() - for writing a sequence of strings

2.4.1 The write() method

write() method takes a string as an argument and writes it to the text file. It returns the number of characters being written on single execution of the write() method. Also, we need to add a newline character (\n) at the end of every sentence to mark the end of line.

Consider the following piece of code:

```
>>> myobject=open("myfile.txt", 'w')
>>> myobject.write("Hey I have started
#using files in Python\n")
41
>>> myobject.close()
```

On execution, write() returns the number of characters written on to the file. Hence, 41, which is the length of the string passed as an argument, is displayed.

Note: '\n' is treated as a single character

If numeric data are to be written to a text file, the data need to be converted into string before writing to the file. For example:

```
>>>myobject=open("myfile.txt", 'w')
>>> marks=58
#number 58 is converted to a string using
#str()
>>> myobject.write(str(marks))
2
>>>myobject.close()
```

The write() actually writes data onto a buffer. When the close() method is executed, the contents from this buffer are moved to the file located on the permanent storage.

2.4.2 The writelines() method

This method is used to write multiple strings to a file. We need to pass an iterable object like lists, tuple, etc. containing strings to the writelines() method. Unlike



We can also use the flush() method to clear the buffer and write contents in buffer to the file. This is how programmers can forcefully write to the file as and when required.



`write()`, the `writelines()` method does not return the number of characters written in the file. The following code explains the use of `writelines()`.

```
>>> myobject=open("myfile.txt", 'w')
>>> lines = ["Hello everyone\n", "Writing
#multiline strings\n", "This is the
#third line"]
>>> myobject.writelines(lines)
>>>myobject.close()
```

On opening `myfile.txt`, using notepad, its content will appear as shown in Figure 2.1.

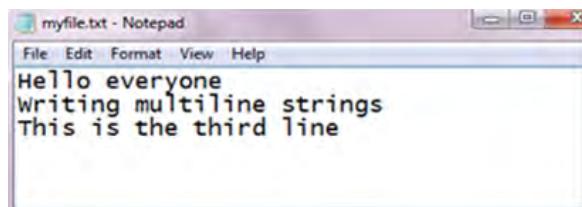


Figure 2.1: Contents of `myfile.txt`

Activity 2.3

Run the above code by replacing `writelines()` with `write()` and see what happens.



Think and Reflect

Can we pass a tuple of numbers as an argument to `writelines()`? Will it be written to the file or an error will be generated?



2.5 READING FROM A TEXT FILE

We can write a program to read the contents of a file. Before reading a file, we must make sure that the file is opened in “r”, “r+”, “w+” or “a+” mode. There are three ways to read the contents of a file:

2.5.1 The `read()` method

This method is used to read a specified number of bytes of data from a data file. The syntax of `read()` method is:

```
file_object.read(n)
```

Consider the following set of statements to understand the usage of `read()` method:

```
>>>myobject=open("myfile.txt", 'r')
>>> myobject.read(10)
'Hello ever'
>>> myobject.close()
```

If no argument or a negative number is specified in `read()`, the entire file content is read. For example,

```
>>> myobject=open("myfile.txt", 'r')
>>> print(myobject.read())
Hello everyone
Writing multiline strings
This is the third line
>>> myobject.close()
```

2.5.2 The `readline([n])` method

This method reads one complete line from a file where each line terminates with a newline (\n) character. It can also be used to read a specified number (n) of bytes of data from a file but maximum up to the newline character (\n). In the following example, the second statement reads the first ten characters of the first line of the text file and displays them on the screen.

```
>>> myobject=open("myfile.txt", 'r')
>>> myobject.readline(10)
'Hello ever'
>>> myobject.close()
```

If no argument or a negative number is specified, it reads a complete line and returns string.

```
>>>myobject=open ("myfile.txt", 'r')  
>>> print (myobject.readline())  
'Hello everyone\n'
```

To read the entire file line by line using the readline(), we can use a loop. This process is known as looping/iterating over a file object. It returns an empty string when EOF is reached.

2.5.3 The `readlines()` method

The method reads all the lines and returns the lines along with newline as a list of strings. The following example uses `readlines()` to read data from the text file `myfile.txt`.

```
>>> myobject=open("myfile.txt", 'r')
>>> print(myobject.readlines())
['Hello everyone\n', 'Writing multiline
strings\n', 'This is the third line']
>>> myobject.close()
```

As shown in the above output, when we read a file using `readlines()` function, lines in the file become members of a list, where each list element ends with a newline character ('\n').

In case we want to display each word of a line separately as an element of a list, then we can use `split()` function. The following code demonstrates the use of `split()` function.

```
>>> myobject=open ("myfile.txt", 'r')  
>>> d=myobject.readlines()
```



Activity 2.4

Create a file having multiline data and use readline() with a iterator to read the contents of the file line by line

```
>>> for line in d:  
    words=line.split()  
    print(words)  
  
['Hello', 'everyone']  
['Writing', 'multiline', 'strings']  
['This', 'is', 'the', 'third', 'line']
```

In the output, each string is returned as elements of a list. However, if *splitlines()* is used instead of *split()*, then each line is returned as element of a list, as shown in the output below:

```
>>> for line in d:  
    words=line.splitlines()  
    print(words)  
  
['Hello everyone']  
['Writing multiline strings']  
['This is the third line']
```

Let us now write a program that accepts a string from the user and writes it to a text file. Thereafter, the same program reads the text file and displays it on the screen.

Program 2-1 Writing and reading to a text file

```
fobject=open("testfile.txt","w")      # creating a data file  
sentence=input("Enter the contents to be written in the file: ")  
fobject.write(sentence)                # Writing data to the file  
fobject.close()                      # Closing a file  
  
print("Now reading the contents of the file: ")  
fobject=open("testfile.txt","r")  
#looping over the file object to read the file  
for str in fobject:  
    print(str)  
fobject.close()
```

In Program 2.1, the file named *testfile.txt* is opened in write mode and the file handle named *fobject* is returned. The string is accepted from the user and written in the file using *write()*. Then the file is closed and again opened in read mode. Data is read from the file and displayed till the end of file is reached.

Output of Program 2-1:

```
>>>
      RESTART: Path_to_file\Program2-1.py
Enter the contents to be written in the file:
roll_numbers = [1, 2, 3, 4, 5, 6]
Now reading the contents of the file:
roll_numbers = [1, 2, 3, 4, 5, 6]
>>>
```

2.6 SETTING OFFSETS IN A FILE

The functions that we have learnt till now are used to access the data sequentially from a file. But if we want to access data in a random fashion, then Python gives us seek() and tell() functions to do so.

2.6.1 The tell() method

This function returns an integer that specifies the current position of the file object in the file. The position so specified is the byte position from the beginning of the file till the current position of the file object. The syntax of using tell() is:

```
file_object.tell()
```

2.6.2 The seek() method

This method is used to position the file object at a particular position in a file. The syntax of seek() is:

```
file_object.seek(offset [, reference_point])
```

In the above syntax, offset is the number of bytes by which the file object is to be moved. reference_point indicates the starting position of the file object. That is, with reference to which position, the offset has to be counted. It can have any of the following values:

- 0 - beginning of the file
- 1 - current position of the file
- 2 - end of file

By default, the value of reference_point is 0, i.e. the offset is counted from the beginning of the file. For example, the statement `fileObject.seek(5,0)` will position the file object at 5th byte position from the beginning of the file. The code in Program 2-2 below demonstrates the usage of seek() and tell().

Think and Reflect

Does the seek() function work in the same manner for text and binary files?



Program 2-2 Application of seek() and tell()

```
print("Learning to move the file object")
fileobject=open("testfile.txt","r+")
str=fileobject.read()
print(str)
print("Initially, the position of the file object is: ",fileobject.tell())
fileobject.seek(0)
print("Now the file object is at the beginning of the file:
",fileobject.tell())
fileobject.seek(10)
print("We are moving to 10th byte position from the beginning of
file")
print("The position of the file object is at", fileobject.tell())
str=fileobject.read()
print(str)
```

Output of Program 2-2:

```
>>>
RESTART: Path_to_file\Program2-2.py
Learning to move the file object
roll_numbers = [1, 2, 3, 4, 5, 6]
Initially, the position of the file object is: 33
Now the file object is at the beginning of the file: 0
We are moving to 10th byte position from the beginning of file

The position of the file object is at 10
rs = [1, 2, 3, 4, 5, 6]
>>>
```

2.7 CREATING AND TRAVERSING A TEXT FILE

Having learnt various methods that help us to open and close a file, read and write data in a text file, find the position of the file object and move the file object at a desired location, let us now perform some basic operations on a text file. To perform these operations, let us assume that we will be working with practice.txt.

2.7.1 Creating a file and writing data

To create a text file, we use the `open()` method and provide the filename and the mode. If the file already exists with the same name, the `open()` function will behave differently depending on the mode (write or append) used. If it is in write mode (`w`), then all the existing contents of file will be lost, and an empty file will be created with the same name. But, if the file is

created in append mode (a), then the new data will be written after the existing data. In both cases, if the file does not exist, then a new empty file will be created. In Program 2-3, a file, *practice.txt* is opened in write (w) mode and three sentences are stored in it as shown in the output screen that follows it

Program 2-3 To create a text file and write data in it

```
# program to create a text file and add data
fileobject=open("practice.txt", "w+")
while True:
    data= input("Enter data to save in the text file: ")
    fileobject.write(data)
    ans=input("Do you wish to enter more data?(y/n): ")
    if ans=='n': break
fileobject.close()
```

Output of Program 2-3:

```
>>>
RESTART: Path_to_file\Program2-3.py
Enter data to save in the text file: I am interested to learn about
Computer Science
Do you wish to enter more data?(y/n): y
Enter data to save in the text file: Python is easy to learn
Do you wish to enter more data?(y/n): n
>>>
```

2.7.2 Traversing a file and displaying data

To read and display data that is stored in a text file, we will refer to the previous example where we have created the file *practice.txt*. The file will be opened in read mode and reading will begin from the beginning of the file.

Program 2-4 To display data from a text file

```
fileobject=open("practice.txt", "r")
str = fileobject.readline()
while str:
    print(str)
    str=fileobject.readline()
fileobject.close()
```

In Program 2-4, the `readline()` is used in the while loop to read the data line by line from the text file. The lines are displayed using the `print()`. As the end of file is reached, the `readline()` will return an empty string. Finally, the file is closed using the `close()`.

Output of Program 2-4:

```
>>>  
I am interested to learn about Computer SciencePython is easy to learn
```

Till now, we have been creating separate programs for writing data to a file and for reading the file. Now let us create one single program to read and write data using a single file object. Since both the operations have to be performed using a single file object, the file will be opened in w+ mode.

Program 2-5 To perform reading and writing operation in a text file

```
fileobject=open("report.txt", "w+")
print ("WRITING DATA IN THE FILE")
print() # to display a blank line
while True:
    line= input("Enter a sentence ")
    fileobject.write(line)
    fileobject.write('\n')
    choice=input("Do you wish to enter more data? (y/n): ")
    if choice in ('n','N'): break
print("The byte position of file object is ",fileobject.tell())
fileobject.seek(0) #places file object at beginning of file
print()
print("READING DATA FROM THE FILE")
str=fileobject.read()
print(str)
fileobject.close()
```

In Program 2-5, the file will be read till the time end of file is not reached and the output as shown in below is displayed.

Output of Program 2-5:

```
>>>  
RESTART: Path_to_file\Program2-5.py
WRITING DATA IN THE FILE

Enter a sentence I am a student of class XII
Do you wish to enter more data? (y/n): y
Enter a sentence my school contact number is 4390xxxx8
Do you wish to enter more data? (y/n): n
The byte position of file object is 67

READING DATA FROM THE FILE
I am a student of class XII
my school contact number is 4390xxxx8
>>>
```

2.8 THE PICKLE MODULE

We know that Python considers everything as an object. So, all data types including list, tuple, dictionary, etc. are also considered as objects. During execution of a program, we may require to store current state of variables so that we can retrieve them later to its present state. Suppose you are playing a video game, and after some time, you want to close it. So, the program should be able to store the current state of the game, including current level/stage, your score, etc. as a Python object. Likewise, you may like to store a Python dictionary as an object, to be able to retrieve later. To save any object structure along with data, Python provides a module called Pickle. The module Pickle is used for serializing and de-serializing any Python object structure. Pickling is a method of preserving food items by placing them in some solution, which increases the shelf life. In other words, it is a method to store food items for later consumption.

Serialization is the process of transforming data or an object in memory (RAM) to a stream of bytes called byte streams. These byte streams in a binary file can then be stored in a disk or in a database or sent through a network. Serialization process is also called pickling.

De-serialization or unpickling is the inverse of pickling process where a byte stream is converted back to Python object.

The pickle module deals with binary files. Here, data are not written but dumped and similarly, data are not read but loaded. The Pickle Module must be imported to load and dump data. The pickle module provides two methods - `dump()` and `load()` to work with binary files for pickling and unpickling, respectively.

2.8.1 The `dump()` method

This method is used to convert (pickling) Python objects for writing data in a binary file. The file in which data are to be dumped, needs to be opened in binary write mode (`wb`).

Syntax of `dump()` is as follows:

```
dump(data_object, file_object)
```

where `data_object` is the object that has to be dumped to the file with the file handle named `file_`

object. For example, Program 2-6 writes the record of a student (roll_no, name, gender and marks) in the binary file named *mybinary.dat* using the *dump()*. We need to close the file after pickling.

Program 2-6 Pickling data in Python

```
import pickle
listvalues=[1,"Geetika",'F', 26]
fileobject=open("mybinary.dat", "wb")
pickle.dump(listvalues,fileobject)
fileobject.close()
```

2.8.2 The *load()* method

This method is used to load (unpickling) data from a binary file. The file to be loaded is opened in binary read (rb) mode. Syntax of *load()* is as follows:

```
Store_object = load(file_object)
```

Here, the pickled Python object is loaded from the file having a file handle named *file_object* and is stored in a new file handle called *store_object*. The program 2-7 demonstrates how to read data from the file *mybinary.dat* using the *load()*.

Program 2-7 Unpickling data in Python

```
import pickle
print("The data that were stored in file are: ")
fileobject=open("mybinary.dat","rb")
objectvar=pickle.load(fileobject)
fileobject.close()
print(objectvar)
```

Output of Program 2-7:

```
>>>
RESTART: Path_to_file\Program2-7.py
The data that were stored in file are:
[1, 'Geetika', 'F', 26]
>>>
```

2.8.3 File handling using pickle module

As we read and write data in a text file, similarly we will be adding and displaying data for a binary file. Program 2-8 accepts a record of an employee from the user and appends it in the binary file *tv*. Thereafter, the records are read from the binary file and displayed on the screen using the same object. The user may enter

as many records as they wish to. The program also displays the size of binary files before starting with the reading process.

Program 2-8 To perform basic operations on a binary file using pickle module

```
# Program to write and read employee records in a binary file
import pickle
print("WORKING WITH BINARY FILES")
bfile=open("empfile.dat","ab")
recno=1
print ("Enter Records of Employees")
print()
#taking data from user and dumping in the file as list object
while True:
    print("RECORD No.", recno)
    eno=int(input("\tEmployee number : "))
    ename=input("\tEmployee Name : ")
    ebasic=int(input("\tBasic Salary : "))
    allow=int(input("\tAllowances : "))
    totsal=ebasic+allow
    print("\tTOTAL SALARY : ", totsal)
    edata=[eno,ename,ebasic,allow,totsal]
    pickle.dump(edata,bfile)
    ans=input("Do you wish to enter more records (y/n) ? ")
    recno=recno+1
    if ans.lower()=='n':
        print("Record entry OVER ")
        print()
        break
# retrieving the size of file
print("Size of binary file (in bytes):",bfile.tell())
bfile.close()
# Reading the employee records from the file using load() module
print("Now reading the employee records from the file")
print()
readrec=1
try:
    with open("empfile.dat","rb") as bfile:
        while True:
            edata=pickle.load(bfile)
            print("Record Number : ",readrec)
            print(edata)
            readrec=readrec+1
except EOFError:
    pass
bfile.close()
```

Output of Program 2-8:

```
>>>
RESTART: Path_to_file\Program2-8.py
WORKING WITH BINARY FILES
Enter Records of Employees

RECORD No. 1
Employee number : 11
Employee Name : D N Ravi
Basic Salary : 32600
Allowances : 4400
TOTAL SALARY : 37000
Do you wish to enter more records (y/n)? y
RECORD No. 2
Employee number : 12
Employee Name : Farida Ahmed
Basic Salary : 38250
Allowances : 5300
TOTAL SALARY : 43550
Do you wish to enter more records (y/n)? n
Record entry OVER

Size of binary file (in bytes): 216
Now reading the employee records from the file

Record Number : 1
[11, 'D N Ravi', 32600, 4400, 37000]
Record Number : 2
[12, 'Farida Ahmed', 38250, 5300, 43550]
>>>
```

As each employee record is stored as a list in the file empfile.dat, hence while reading the file, a list is displayed showing record of each employee. Notice that in Program 2-8, we have also used try.. except block to handle the end-of-file exception.

SUMMARY

- A file is a named location on a secondary storage media where data are permanently stored for later access.
- A text file contains only textual information consisting of alphabets, numbers and other

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special symbols. Such files are stored with extensions like `.txt`, `.py`, `.c`, `.csv`, `.html`, etc. Each byte of a text file represents a character.

- Each line of a text file is stored as a sequence of ASCII equivalent of the characters and is terminated by a special character, called the End of Line (EOL).
- Binary file consists of data stored as a stream of bytes.
- `open()` method is used to open a file in Python and it returns a file object called file handle. The file handle is used to transfer data to and from the file by calling the functions defined in the Python's `io` module.
- `close()` method is used to close the file. While closing a file, the system frees up all the resources like processor and memory allocated to it.
- `write()` method takes a string as an argument and writes it to the text file.
- `writelines()` method is used to write multiple strings to a file. We need to pass an iterable object like lists, tuple etc. containing strings to `writelines()` method.
- `read([n])` method is used to read a specified number of bytes (`n`) of data from a data file.
- `readline([n])` method reads one complete line from a file where lines are ending with a newline (`\n`). It can also be used to read a specified number (`n`) of bytes of data from a file but maximum up to the newline character (`\n`).
- `readlines()` method reads all the lines and returns the lines along with newline character, as a list of strings.
- `tell()` method returns an integer that specifies the current position of the file object. The position so specified is the byte position from the beginning of the file till the current position of the file object.
- `seek()` method is used to position the file object at a particular position in a file.

- Pickling is the process by which a Python object is converted to a byte stream.
- `dump()` method is used to write the objects in a binary file.
- `load()` method is used to read data from a binary file.



EXERCISE

1. Differentiate between:
 - a) text file and binary file
 - b) `readline()` and `readlines()`
 - c) `write()` and `writelines()`
2. Write the use and syntax for the following methods:
 - a) `open()`
 - b) `read()`
 - c) `seek()`
 - d) `dump()`
3. Write the file mode that will be used for opening the following files. Also, write the Python statements to open the following files:
 - a) a text file “example.txt” in both read and write mode
 - b) a binary file “bfile.dat” in write mode
 - c) a text file “try.txt” in append and read mode
 - d) a binary file “btry.dat” in read only mode.
4. Why is it advised to close a file after we are done with the read and write operations? What will happen if we do not close it? Will some error message be flashed?
5. What is the difference between the following set of statements (a) and (b):
 - a) `P = open("practice.txt", "r")`
`P.read(10)`
 - b) with `open("practice.txt", "r") as P:`
`x = P.read()`
6. Write a command(s) to write the following lines to the text file named `hello.txt`. Assume that the file is opened in append mode.

“Welcome my class”
 “It is a fun place”
 “You will learn and play”

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7. Write a Python program to open the file *hello.txt* used in question no 6 in read mode to display its contents. What will be the difference if the file was opened in write mode instead of append mode?
8. Write a program to accept string/sentences from the user till the user enters “END” to. Save the data in a text file and then display only those sentences which begin with an uppercase alphabet.
9. Define pickling in Python. Explain serialization and deserialization of Python object.
10. Write a program to enter the following records in a binary file:

Item No	integer
Item_Name	string
Qty	integer
Price	float

Number of records to be entered should be accepted from the user. Read the file to display the records in the following format:

Item No:
Item Name :
Quantity:
Price per item:
Amount: (to be calculated as Price * Qty)