

**Note****7**

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GEO-STRATEGY

In previous lessons you have learnt about the evolution of military studies and its relevance to all of us. You must have also understood the structure and role played by Indian armed forces. In fact, the need for strong armed forces is an historical phenomenon when empires during ancient to medieval and modern times were compelled to maintain strong armed forces to achieve their goal of expanding their empires by capturing territories.

Today this is achieved through various strategies by increasing economic power and strengthening defence. Countries also enter into treaties and alliances with other countries as part of their strategy to achieve their national goals. The question here is how was this possible, then and now? What factors help to maintain such strong forces? These cannot be answered without understanding the importance of national power and strategies. What are India's natural resources and economic potential? And how do these help to strengthen the military?

It is important now to turn to understanding the meaning of geo-strategy and how India's geo-political objectives are realized.



Objectives

After studying this lesson, you will be able to:

- explain the meaning of geo-strategy;
- identify India's national power potential and
- describe the various economic activities of the country.

7.1 What is Geo-strategy?

As you can see, the term geo-strategy is combination of the words geography and strategy. The subject matter of geography deals with describing earth in terms of its physical features, distribution of population, land use, economic resource of the country etc. Strategy on the other hand is a calculated plan of action to achieve goals of the state.



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Geography: description of earth in terms of physical features, population distribution, land use and resource availability

Strategy: Calculated plan of action to achieve goals of the state.

This means that geographical factors are essential determinants of strategy. In this section you will learn how the combination of both geography and strategy has played a role in the development of defence strategies for India.

To understand, answering the question, what geographical factors are responsible in determining strategy is important. But before doing so it is important that you should know that there are many sub-fields of geography such as human geography, which deals with people and their community, economic geography dealing with location and distribution of economic activities and others. However, what we are concerned here is the strategic aspect of geography which is called geo-strategy.

This sub-field of geography deals with controlling and accessing geographical areas or territories that affect security and well-being of a state. There are several geographical factors that impact strategy such as Land, Demography and Natural Resources. Let us discuss some of them below.

7.1.1 Land

Land is defined in terms of physical geography or physiography. Possession of vast land or territory determines the power of a country. Every country has different land size, which are not uniformly distributed. Each country may have various land features such as hills, mountains, plains, deserts, rivers and forests. As far as India is concerned its physiography is divided into at least four aspects as follows:

- a) Mountains in the North particularly the Great Himalayan range and other lesser mountains such as Aravalli mountains in Rajasthan, the Vindhya mountains, Western Ghats and the Eastern Ghats, the Nilgiris or Blue mountains and others.
- b) Plains in the Northern India often called Indo-Gangetic plains.
- c) The Plateau region of the South spreading from the Indo-Gangetic plain and covered by the Western Ghats and Eastern Ghats on both sides. The Deccan plateau is the largest plateau in the whole country; and finally,
- d) The islands of India - the total coastline of India comprises of 7516 km. The coast of Gujarat in the Western part of India is the longest and the second longest is the coast line of Andhra Pradesh in the East. The Indian territorial limits include more than 200 islands including that of Andaman and Nicobar islands in the East of India and Lakshwadeep islands to the West of the country.

7.1.2 Demography & Culture

India is one of the most densely populated countries in the world. With more than 1.2 billion people it is the second largest populated country in the world, the first being China. Its total population is more than that of USA and Russia put together and more than the total population of the entire African continent. What are the advantages of population from a military perspective?

- Firstly, they provide the manpower requirement of all three services of Indian military - the army, navy and air force along with the paramilitary forces. During emergency situations such manpower potential acts as strong reserves for the country.
- Secondly, they are also a source of economic activity of country for agricultural, manufacturing and industrial production.
- Thirdly, India has a large concentration of very young population. Nearly 42 percent of India's population is below the age of 15 years and only 12 percent of the population is aged 50 years and over. This is significant because young population adds to the work force of the country and contributes to the increase in economic development of the country.

The diversity of the country is another advantage for India because no other country in the world exhibits such variety of speech, written language, religious and social customs as India. The major religions of India are: Hinduism, Islam and Christianity. Besides Hindus, Muslims and Christians, we have in our population Sikhs, Jains and Buddhists. India is also home to large number of languages spoken with as many as 845 languages and dialects.

However 22 major languages are recognized by the constitution of India. These differences in religions, customs, languages and castes are because our people belong to different racial groups. These variations in land and demographic resources are used by humans in variety of ways to their advantage. Let us see what natural resources does the country possess? The next few sections will explain them.



Intext Questions

7.1

1. What is meant by geo-strategy?
2. Name any two sub-fields of geography.
3. Name the physiographical divisions of India.
4. State the length of India's coastline.
5. Describe any two advantages of demographic resources.



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7.2 Energy Resources and Natural Resources are major contributor to the economy

Energy and natural resources are vital for the economy of any country. India has several such energy resources like coal, petroleum, hydro-electricity and atomic power. Similarly, India is gifted with various natural resources like vast river systems for generating hydro-electricity, natural vegetation, forests and a wide variety of mineral resources all of which potentially contribute for the economic power of the country. A country which has the gift of natural resources can be a powerful country and capable of maintaining strong defence forces. Let us now learn about the major energy resources and potential of India.

7.2.1 Energy Resources

The major power resources of the country can be categorized into four: 1) coal 2) petroleum 3) hydro-electricity and 4) atomic power.

- 1) Coal is still the principle source of power in India. India is the ninth largest coal producing country in the world. The main coal deposits are in Bihar, West Bengal, Madhya Pradesh and Andhra Pradesh. Do you know the use of coal? It is used in power generation for the country and also in other industrial productions like steel industry, cement industry etc.
- 2) Petroleum is a very valuable source of energy which has no waste and each one of its by-products have other use i.e. petrol, fuel oil, diesel, lubricating oil, grease etc. Without the by-products of petroleum land, sea and air forces would be immobilized and no modern war can be fought. Presently, India produces 14.3 million tons of oil. Important oil producing areas in India are Assam (Digboi, Sibsagar, Bappapung, Hansapung, Naharkatia & Moran), Gujrat (Cambay, Ankleshwar, Kobar), Punjab (Adampur, Janauri), UP (Ujhani), Besides this, the off-shore oil is produced in Bombay High, Basin strictures in the Arabian Sea and North Bay of Bengal. New oil explorations are going on in the deltas of Krishna, Cauvery and Mahanadi. We are dependent on oil and are forced to import about 70% of our need from oil producing countries such as USA, Iran and UAE. This affects our economy.
- 3) Hydro-Electric Power. This power is continuous and cannot be exhausted. Hydro-electric dams and power stations are vulnerable to air attack which may initiate disasters like sudden sheet floods. If hydro-power is important then it is also important to conserve and protect our water resources. An important aspect of strategy is 'Environment Security'.
- 4) Atomic Power is both destructive and constructive power in the world, capable of bringing doom and progress in the most isolated port. India has the raw

material (Uranium, Thorium and Monozite) as well as the ability to develop atomic energy. Atomic energy plants are set up at Tarapore, Rana Pratap Sagar, Kota and Kalpakkam in Madras.



Fig 7.1



Fig 7.2

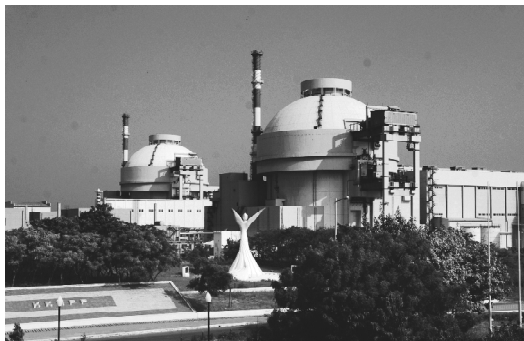


Fig 7.3

Source : Commons wikimedia.org

7.2.2 Natural Resources

- River systems: As you know water is the main source of life and India is bestowed with several perennial rivers. There are three major river systems in India and the Himalayan mountains are a good source of one of the greatest river systems called the Himalayan rivers. They are: the Indus river systems, the Ganges and the Brahmaputra river systems all of which run to more than 2000 km. Besides this there are other major rivers like Mahanadi, Godavari, Krishna, Cauvery and Narmada rivers. As you will see, the river systems provide good source of power generation for the country.



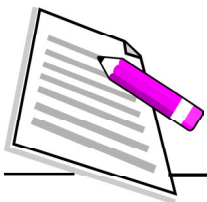
ACTIVITY 7.1

Find out the difference between perennial and seasonal rivers. Write the names of at least two perennial and one seasonal river in your state.

- **Natural Vegetation:** The character of vegetation of a place depends on its temperature, rainfall, interference by man and soil. The vegetation is tropical



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monsoon in character throughout India below a height of 900 meters. Owing to unequal amount of rainfall in various regions and varied conditions, India is rich in a number of species of plants which range from drought resisting thorny scrub to tropical wet evergreen forests.

The lofty Himalayas grow a large variety of vegetation, the zonal distribution of which varies from tropical to alpine types. India also has a variety of climatic regions. It has tropical rain forests found in the coastal plains and western Ghats and parts of North East India, tropical Savanna, Semi-arid, Tropical desert, humid sub-tropical climate with dry winters and mountainous climate in mountains above the range of 6,000 m such as the Himalayas and the Karakoram range of mountains.

- **Forests** are important resource of a country and play an important role in the country's economy. India has a very valuable asset in this varied wealth. It is considered that in a tropical climate, one third of the total area should be under forests for maintaining suitable climate conditions. The distribution of forests in our country is very uneven. This is largely because of irregular distribution of precipitation or rainfall. India's forest covers about 19% of the total geographical area. The distribution of forests in India is as follows:
 - (a) Tropical Moist forest - 23.30%
 - (b) Dry deciduous forest - 29.15%
 - (c) Tropical Thorn forest - 5.25%
 - (d) Tropical Wet Evergreen - 4.50%
 - (e) Sub Tropical (Pune) - 3.75%
 - (f) Moist Temp (Himalayan) - 2.70%
 - (g) Wet Temperate - 1.60%
 - (h) Others - 29.75%

7.2.3 Mineral Resources

Minerals form the basis of the industrial development of a country. India is fortunate to have rich deposits of some essential minerals. There are large reserves of coal, iron ore, mica, manganese ore, magnesite, bauxite and thorium. Coal is found in West Bengal, Orissa, Tamil Nadu, Madhya Pradesh and Chattisgarh. While these minerals are adequate and distributed throughout the country, some are inadequate.

Petroleum, phosphates, sulphur and potash fall considerably short of the requirement of the country. Hence, India is forced to depend on other countries for the supply of these minerals. The distribution of important mineral resources in India is as under:

- (a) Iron ore is located in Bihar, Orissa, A.P, M.P, Mysore and Tamil Nadu.
- (b) Manganese is located in Orissa, Karnataka, used for smelting process and India is the largest producer in the world next to Russia and Ghana.
- (c) Chromite is used for defence purposes and is located mainly in Mysore and Orissa
- (d) Mica is mainly located in Bihar, Rajasthan & AP. India is the largest producer of mica in the world.
- (e) Bauxite. Rich deposits of its ore found in Bihar, Gujarat, MP, Tamil Nadu & Orissa.
- (f) Gypsum is used in Cement and fertilizer industries and it is mainly found in Rajasthan and Tamil Nadu.
- (g) Uranium resources are also found in places like Jharkhand, Rajasthan, Andhra Pradesh and Karnataka. These are also used for military purposes particularly in the production of nuclear weapons.
- (h) Thorium is also used for weapon production and is found in the coast of Kerala and in the rocks of Aravalli hills in Rajasthan.
- (i) Gold is another major resource found in Karnataka and Andhra Pradesh



ACTIVITY 7.2

Take an outline political map of India. Using the information given in section 7.2.3, points (a) to (i), mark the places on the map where different minerals are found. You can use different colours or symbols for different minerals.



Intext Questions

7.2

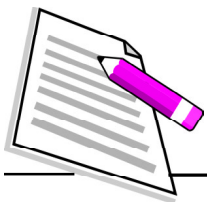
1. Describe the major energy resources of India.
2. Highlight the three major river systems of Himalayas.
3. Name the various mineral resources of India.

7.3 Geo Economic and Economic Power

The economic power is the capacity of a country to use its economic resources and assets in order to achieve self-sufficiency. 'Geo Economics is a combination of Geography and Economic activities of a nation that determines how it conducts trade with other nations.' This is achieved through a set of activities that can be broadly divided into three categories: agriculture, manufacturing and industrial development, and services. In fact, economic growth is very important for a nation as the capacity of a nation to fight a war depends upon its economic potential and technological superiority.



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Today, the nature of war is very different from that of ancient wars. Modern war is a total war in which the accepted rules of warfare, as fought during ancient times called 'Dharmayudh' are disregarded.

In modern wars the entire resources of a nation are devoted for the successful conduct. For example, one of the main reasons for the victory of allied powers during the last two World Wars was their superiority in resources, which ultimately determined war waging capability and resulted in victory. What does this mean to us? It means that resources should be utilized properly to make the country powerful. Here, in this section, we will study how the various natural resource potential of the country discussed above is utilized through the three major economic activities.

7.3.1 Agriculture

A nation that is self-sufficient in food and agriculture need not depend on other countries as it can support itself and feed the entire population. As far as India is concerned agriculture is the chief occupation of seventy percent of the population and forms the backbone of the country. Large number of people derive their livelihood by cultivating the soil. Agricultural activities in India are numerous and help feed the entire population of the country. India is self sufficient in rice and wheat production.

Besides rice and wheat several other important food crops are also produced such as jowar, pulses and maize. Other crops are also produced for commercial purposes such as sugarcane, cotton, groundnuts, tobacco, tea, jute etc. All of these earn considerable amount of foreign exchange for the country. It means that when these agricultural products are exported it brings foreign currency to the country, which can be used for enhancing defence capabilities of the country.

7.3.2 Industrial Resources

In recent years, India has made significant progress in industrial development. A variety of manufactured items are now produced in the country. Modern factories turning out all kinds of goods have been set up. Foreign collaborations have been made in establishing, particularly, metallurgical, engineering, electrical, chemical and pharmaceutical industries. This has laid the foundation of modern manufacturing industry in India.

Indian industries are manufacturing railways equipments, ship building, automobiles, aircraft, industrial machinery, electrical machinery and equipments. Chemical and paper industries have also made considerable progress after independence. As far as military is concerned, India is indigenously manufacturing missiles, tanks, helicopters, ships and other related weapon systems for use in defence. These are principally produced by several industries located throughout the country.

Some of the other major industries of India are: cotton textiles, woolen textiles, jute industry, sugar industry, leather industry, iron & steel, handicrafts and engineering industries.

7.3.3 Services

Services can be understood as those that provide support services to the economic activities of the country. These include services such as tourism, education, health care, engineering, communications, transportation, information technology, finance and management. The services sector in India, today, occupies a predominant share of India's economic activity.

These different activities promote economic growth, which in turn help increase the economic and military power of the country by way of increasing the manufacturing of defence equipments for the country.



Intext Questions

7.3

1. Explain the term 'economic power'.
2. Name two major food crops and two cash crops produced in India.
3. How can economic activities be categorised? Explain.
4. Write some example of Industrial resources.
5. How can industrial resources help in defence? Explain.
6. Name the various energy resources of India.
7. Give four examples of service industries in India.

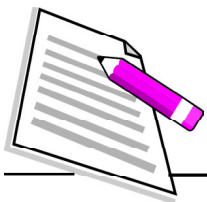


What You Have Learnt

- Learning about geo-strategy is to learn about the link between geographical factors and strategy.
- With the help of geographical resources appropriate strategies are devised to achieve countries objectives and goals.
- Geographical resources do help in realizing the strategic needs of the country.
- The resources of India are plenty and varied. They help in the economic growth of the country and increase its military power potential in a big way.
- The maintenance of strong defence forces require strong economy and hence it is important to know the linkages between geographical factors and defence.
- Treaties and alliances are other dimensions of geo-strategy that countries enter into with other countries in order to maintain good relations and achieve peace



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and development. The good examples of this being India's role of in SAARC and ASEAN.

In the next lesson you will learn how geo-strategy helps in political decision making.



Terminal Exercises

1. How does studying geography help in understanding strategy? Explain.
2. Describe the various natural resources of India.
3. Explain how does industrial production help in defence of a country.



Answers to Intext Questions

7.1

1. Geo-strategy deals with the strategy to use the physical features and natural resources of earth in a calculated plan of action in order to achieve national goals of the state.
2. Human Geography and Economic Geography
3. Mountains, Plains, Plateau regions and Islands of the South
4. 7516 km
5. Firstly, these provide manpower requirement of all three services of Indian Military - Army, Navy and Air force Secondly, these are a good source of economic activity

7.2

1. Coal, Petroleum, Hydro-electricity and Atomic Power
2. The Indus, Ganges and Brahmaputra
3. Iron ore, Chromium, Bauxite, Coal, Uranium, Thorium, Mica, Gypsum

7.3

1. Economic power is the capacity of a country to use its economic resources and assets in order to achieve self-sufficiency
2. Food Crops - Rice, Jowar, Pulses and Maize; Cash Crops - Cotton, Tea, Coffee, Sugar Cane, Tobacco
3. Agriculture, Industrial Resources and Services

4. Manufacturing railway equipments, ship building, automobiles, aircraft, industrial machinery, electrical machinery and equipments, chemical and paper industries
5. It helps in the manufacturing of defence equipments such as missiles, tanks, ships, aircrafts and other defence related equipments
6. Hydro electricity, Atomic Power and Coal, Sunlight
7. Tourism, education, health care, engineering, communications, transportation, information technology, finance and management



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