

***Pakistan Studies
Assignment***

Resources of Pakistan

Resources are defined as a means of meeting a need, particularly an economic or social need, of the people. The term usually refers to natural resources like land, water, air. Natural resources are largely unchanged materials of the land that are valuable to people and used in variety of ways.

Pakistan is rich in natural resources. It has mountains, plains, deserts, fertile soils, rivers and oceans. Natural Resources are very important for the development and prosperity of a country. The important thing is to utilize them for the welfare of the human beings and development of the country economically because the progress of a country totally depends upon the utilization of the available resources.

Important Natural Resources Of Pakistan

The important natural resources of Pakistan are described as under :-

- *Soil*
- *Water*
- *Air/Winds*
- *Forests*
- *Minerals and Power/Energy Resources*
- *Oil & Gas*
- *Coal*

Soil

The Soil of Pakistan belongs to dry group having high calcium carbonate and content and deficient in organic matter. These vary in colour from reddish brown in the north to red or gray in the south. These soils are generally fertile due to process of formation. The newly deposited alluvium near the river is called Khaddar and mostly consists of sand. The old alluvium of the bar uplands, called Bangar, consists of finer particles – loams. At the foot of the mountains the soil is sandy and generally becomes finer towards the plains where Khankah, limestone concentration, is occasionally found. The soils of the Thal and the Thar deserts and of Balochistan are wind-blown. In southern Potwar a thin layer of residual soil covering is found.

Soil is defined as that part of the unconsolidated material covering the surface of the earth which supports plant growth.

Constituents Of Soil

Soil has three major constituents.

- *Solid Particles (Salts, mineral and organic matter),*
- *Air*
- *Water*

The type of soil formed is a function of topography, climate vegetation and the parent rocks from which the soil material is derived. Soil material transported and deposited by running water is known as alluvium which that transported and deposited by winds form aeolian soil. Soils formed in silt are termed residual. Soil forming process is complex and continuous. As a result, soils vary in their chemical composition colour, texture and organic content place to place.

Water

Water is basic need of life. Human beings, animals and plants cannot live without water. Water is essential for sustaining quality of life on earth. This finite commodity has a direct bearing on almost all sectors of economy. In Pakistan its importance is more than ordinary due to the agrarian nature of the economy. The share of agricultural sector in the Gross Domestic Product (GDP) of Pakistan is about 25%. Since agriculture is the major user of water, therefore sustainability of agriculture depends on the timely and adequate availability of water. The increasing pressures of population and industrialization have already placed greater demands on water, with an ever increasing number and intensity of local and regional conflicts over its availability and use. Historically, the high aridity index of the country is adding further to the significance of water in development activities in Pakistan.

Though, once a water-surplus country with huge water-resources of the Indus River System, Pakistan is now a water-deficit country. Surface water-resources of Pakistan are mainly based on the flows of the Indus River and its tributaries. The Indus River has a total length of 2900 kilometres (Km) and the drainage-area is about 9,66,000 sq.km. Five major tributaries joining its eastern side are Jhelum, Chenab, Ravi, Beas and Sutlej; besides, three minor tributaries are the Soan, Harow, and Siran, which drain in mountainous areas. The famous lakes of Pakistan are Haleji Lake, Hana Lake, Keenjhar Lake, Manchhar Lake, Saiful Muluk Lake.

Air/Winds

Air is very important for the existence of life because all living beings respire through air. The air is composed of nitrogen, oxygen and carbon dioxide etc. These are the base of existence of ever form of life on earth. The oxygen in the air is essential for our life whereas other gases are necessary for animal and plant life.

Forest

Forests are extensive, continuous areas of land dominated by trees. The forests of Pakistan reflect great physiographic, climate and edaphic contrasts in the country. The desired level of forests is 20-30 percent of the total land of a country. In Pakistan only about 4.8 percent of the total area is forested which is very low.

Forests are important in many different ways. From an ecological point of view, they help to maintain a balance in the environment by checking pollution and protecting the soil from erosion by wind or water and intercepting rainfall, particularly on sloping ground. By preventing soil erosion, the trees on the slopes of hills also regulate the supply of water to the reservoirs thereby reducing floods.

Decomposition of leaves helps in humus formation, which maintains the fertility of the soil. This ensures food supply to millions of people.

From a commercial and industrial point of view, forests provide raw materials to various industries e.g. timber, pharmaceutical paper. They also have recreational value, promote tourism and provide employment in the forest department. There are many employment opportunities that depend on the forests.

The type and distribution of forests are closely linked to altitude. In areas above the snow line, there is hardly any vegetation. Alpine forests grow just below the snow line. From 1000 to 4000 meters, coniferous forests are found. Below 1000 meters, only irrigated plantations have good species of wood.

Minerals and Power/Energy Resources

Minerals and power resources are the foundation of economic development. They help in giving an initial push to the raising of production in all sectors of the economy. Pakistan has a large variety of minerals some of which have substantial reserves and quite a few are of high quality. Besides rock salt, coal, iron, ore, limestone, chromite, gypsum, marble, copper, magnetite and uranium useful deposits of magnesite, sulphur, barites, china clay, bauxite, antimony ore, bentonite, dolomite, fire clay, fluorite, fuller's earth, phosphate rock, silica sand, soap stone and molybdenum are found in the country development. Semi-autonomous corporations under the Ministry of Petroleum and natural resources have been set up for the purpose. These are the Pakistan Mineral Development Corporation (PMDC), the Resource Development Corporation (RDC) and the Geological Survey of Pakistan (GSP).

Pakistan has extensive energy resources, including fairly sizable natural gas reserves, some proven oil reserves, coal and a large hydropower potential.

However, the exploitation of energy resources has been slow due to a shortage of capital and domestic political constraints. Domestic petroleum production totals only about half the country's oil needs, and the need to import oil has contributed to Pakistan's trade deficits and past shortages of foreign exchange.

The current government has announced that privatization in the oil and gas sector is a priority, as is the substitution of indigenous gas for imported oil, especially in the production of power. Pakistan is a world leader in the use of Compressed Natural Gas (CNG) for personal automobiles.

Coal

Coal is used in thermal power station and in furnaces for making bricks. About 80 percent of cement industry has now switched over to indigenous coal from furnace oil that has saved considerable foreign exchange being spent on the import of furnace oil.

Quality of coal is not very good. It is available at Dandot, Makerwal, Harnai, Lakhra (Sindh). The coalfield in the Sindh province has huge coal resources of about 175 billion tones. In view of the anticipated shortfall of electricity and other energy resources during the next 10 years, the maximum utilization of coal would be required in power generation and gasification. To ascertain commercial viability of mining coal from Thar (Sindh), German consultants have completed a mining feasibility on a specific block in Thar Coalfield.

The coalfields in the Sindh province have coal resources estimated at 175 billion tones. Due to high cost of imported energy, government has decided to enhance the share of coal in the overall energy mix from 5 percent to 19 percent by 2030. Over 80 percent of coal was consumed by the brick kiln industry thus reducing the supply available for power generation. Approximately 80 percent of cement industry has also

switched over to indigenous coal from furnace oil that has saved considerable foreign exchange being spent on the import of furnace oil. The conversion of cement industry from furnace oil to coal has generated a demand for 2.5 to 3.0 million tons coal per annum.

Oil & Gas

Natural gas production is at a high level in Pakistan. Estimated reserves are 885.3 billion cubic meters. Gas fields are expected to last for another 20 years. The Sui gas field is the largest, accounting for 26% of Pakistan's gas production. Daily production is 19 million cubic meters a day. Under the barren mountains of Balochistan and the sands of Sindh, there are untouched oil and gas reserves.