

Q.1: What do you know about the natural resources of Pakistan Explain the types of mineral resources in different regions of Pakistan and importance of enhancing the opportunities of commercial activities ?

ANS: It is a known fact that Pakistan is one of the richest countries of the world in terms of natural resources. It has been endowed with gigantic reserves of coal, gas, gemstones, copper and gold. Other resources include oil, iron, titanium and aluminium, which are a pre-requisite for any growing economy. What, however, is very unfortunate is that these resources have never been fully exploited to the benefit of this nation.

This extremely disappointing state of affairs is caused due to innumerable critical flaws leading to the poor governance of the country. No one can contest the fact that except for some very brief spells of economic successes, the country's development graph has mostly remained dipped. Continuing political rivalry and instability, the constantly deteriorating law and order situation and rampant corruption have created a roadblock in the way of exploitation of the country's natural resources. Despite its massive natural resources, Pakistan continues to confront a significant trade deficit and its reliance on foreign assistance continues to grow by leaps and bounds. The acute energy crisis and rapidly declining foreign investment further add to its burgeoning economic predicaments. Under the present, very disappointing scheme of things, attainment of developmental goals of the country would, as always, remain a far cry.

In order to attain its development goals successfully and bring prosperity to the downtrodden people of the country, massive overhauling of the existing system of poor governance will have to be done. Sincere and honest endeavours will have to be made to fully exploit the country's phenomenal natural resources in order to build a strong economic edifice and to drastically reduce dependence on foreign assistance. Those at the helm of affairs must clearly understand that there can be no compromise at all on these issues of immense importance. If the desired level of progress is to be achieved, if the country is to be steered out of its current gigantic economic predicaments, and if the destiny of the people of Pakistan is to be changed, there can be no escape from the facts spelled out above. It is true that the challenges confronting the country today are daunting, and the predicaments are plentiful, but things definitely will have to change if Pakistan is to prosper and stand out conspicuously among the international community

Pakistan is a sovereign state in South Asia and spans an area of 340,509 square miles, making Pakistan the 33rd largest country in the world. Pakistan has a population of more than two 212 million people making the country the 6th most populous country in the world. In 2016, it had a nominal GDP of \$271 billion and GDP based on purchasing power parity \$946, 667 million. In the same year, the per capita GDP was \$1,561. According to economic complexity index the country was ranked the 67th largest country in export items. The fiscal year of 2015-2016 the country's exports were valued at \$20.8 1 billion, and import stood at \$44.76 billion. According to the World Bank, the country is endowed with resources and has the potential of developing. Pakistan has numerous natural resources that are found across the country ranging from arable land to minerals.

Arable Land

One of the main natural resources in Pakistan include arable land and the size of the arable land in the country has been fluctuating for several years, and in 2015 it was approximately 39.5% of the total land area. Agriculture in Pakistani plays a significant role and account for 20.9% of GDP as of 2014-2015. The principal crops cultivated and Pakistan includes rice sugar cane, cotton, and wheat, and all of them account for over 75% of the total crop output value. According to FAO, wheat is the most significant food crop produced in Pakistan and in 2005 the country produced an average of 21.6 million metric tons which was more than what was produced in the whole of African continent which was 20 million metric tons and almost as much as what was produced in South America which was 24.5 million metric tons.

Livestock

The livestock sector in Pakistan plays a critical role and contributes almost half of the value added in the agricultural sector, which is equivalent to almost 11% of the country's GDP and it slightly higher than the crop sector. It is believed that Pakistan has about 56.7 million goats, 26.3 million buffaloes, 24.1 million cattle, 24.9 million sheep, and 0.8 million camels. All these animals produced about 29.4 72 million tons of milk, ranking the country the world's fourth largest producer of milk.

Fishing

Fishing in Pakistan play a significant role in the country's economy, and the country has a coastline with stretches for a distance of about 650 miles. Fish is a major export item in the country, but fishing is still underdeveloped and still has the potential to develop and even more

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money to the country. The maritime zone in Pakistan is approximately 30% of the land area. Besides, the marine fisheries resources, Pakistan also has inland fishery resources, and it is estimated that the country has a potential of harvesting more than 1 million tons of fish every year from the marine sources alone, which include about 250 demersal fish and 85 pelagic fish species.

Forests

Forests in Pakistan cover approximately 4% of the total land area in the country, and they serve as the main source of paper, lumber, food, firewood, medicine, latex as well as serving as places of conservation for wildlife and ecotourism. The different types of forest spread out across Pakistan include the coniferous forests which are found in regions of altitude between 3,200 feet and 13,100 feet above sea level and subtropical dry forests which are found in areas of altitude of up to 3,200 feet above sea level and they are found mainly in Islamabad, Gujarat, Rawalpindi, Jhelum, and Attock districts of Punjab. Other forests in the country include the tropical rainforests, the riverine forests, and the mangrove wetland forests.

Environmental Challenges In Pakistan

In Pakistan environmental issues has been a major concern for a long time and the government has made some efforts to create a balance between economic development and environmental destruction. The country is a major importer of renewable and nonrenewable natural resources, and it is one of the biggest consumers of fossil fuels. In Pakistan, the Ministry of Environment is responsible for the conservation and protection of the environment. The major challenges facing Pakistan include pollution of water particularly from raw sewage, industrial wastes, and agricultural chemicals. Most of the population in the country has no access to potable water. Other major problems facing the country include desertification, soil erosion, and deforestation.

Pakistan, officially the Islamic Republic of Pakistan, located in South Asia has 650 miles of coastline on the Arabian Sea and Gulf of Oman. The west is bordered by Afghanistan and Iran. India is to the east and China in the far northeast. The country is strategically located between South Asia, Central Asia, and the Middle East. Land is a valuable natural resource. Other natural resources include an extensive natural gas supply, some oil, hydro power potential, coal (although not high quality), iron ore, copper, salt, and limestone. Agricultural products are wheat, cotton, rice, sugarcane, eggs, fruit, vegetables, milk, beef, and mutton. Primary industry includes textiles, food processing, pharmaceuticals, construction materials, shrimp, fertilizer, and paper products. Major exports are textiles, rice, leather goods, sports goods, carpets, rugs,

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and chemicals. Pakistan imports petroleum, machinery, plastic, edible oil, iron, steel, tea, and paper.

Coal

Pakistan recently discovered one low and four low-to-medium quality coal seams in the Punjab. Low sulfur coal was recently reported at the Baluchistan and near Islamabad. Bituminous, sub-bituminous, and lignite coal have been found in Pakistan. Coal reserves are estimated at 175 billion tons. This would equate to 618 billion barrels of crude oil. When compared to oil reserves his is more than twice the amount of the top four countries. If At KSA's current usage, the reserves would last more than 200 years.

Oil and Gas

Natural gas production is at a high level in Pakistan. Estimated reserves are 885.3 billion cubic meters (as of January 2009). 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.

Forestry

Forests are limited to 4% of Pakistan's land; nonetheless the forests are a main source of food, lumber, paper, fuel wood, latex, and medicine. The forests are also used for wildlife conversation and ecotourism.

Mining

Pakistan has large gold/copper ore deposits at Saindak. There are large deposits of rock salt in the Pothohar Plateau. Pakistan's mineral resources include reserves of gypsum, limestone, chromites, iron ore, rock salt, silver, precious stones, gems, marbles, tiles, sulfur, fire clay, and silica sand.

Land

About 28% of Pakistan's total land areas under cultivation. Pakistan boasts one of the largest irrigation systems in the world. According to Wikipedia, "the most important crops are cotton, wheat, rice, sugarcane, maize, sorghum, millets, pulses, oil seeds, barley, fruits and vegetables, which together account for more than 75% of the value of total crop output." The fertile lands of Punjab are ready to feed a population twice that of current Pakistan.

Uranium

Pakistan has a long history of exporting small amounts of uranium. In 2006 Pakistan produced about 45 tons of uranium.

Water

The fishing industry plays a role in the national economy of Pakistan. The coastline is 814km and fishery resources still have room to grow. Fishing in Pakistan is a major source of export earnings. The fishing industry plays a role in the national economy of Pakistan. The coastline is 814km and fishery resources still have room to grow. Fishing in Pakistan is a major source of export earnings. Pakistan has plenty of water resources but cannot avert the water crisis. Pakistan has many untapped mineral resources but cannot make use of them. Pakistan has huge gas and oil reserves but cannot do away with gas and oil shortages. The current crisis shows a gloomy picture of poor or inefficient management. There are numerous causes of poor management. These include corruption, lack of technical expertise and political will, and interprovincial conflicts. There is a dire need to revisit the policies made by our previous leaders and there should be an across-the-board accountability in the country. It should critically evaluate all those grey areas which ultimately indicate poor management of natural resources. If the government takes effective measures to root out these evils from its machinery, it would ultimately lead to a prosperous and crisis-free Pakistan.

Q.2: What are the causes of electricity shortage in Pakistan? Explain government measures to cope with problems?

ANS: Load shedding is one of the serious problems of Pakistan. The PML-N had claimed in the 2013 elections that it will solve this problem only in a year. In spite of all claims and their rule of five years, they failed completely in generating sufficient electricity. The former CM of Punjab Shahbaz Sharif said, "Loadshedding is your problem now." The long duration of loadshedding in the sacred month of Ramadan exposed the performance of the ruling party. The circular debt of Rs400 billion is a clear proof of the mismanagement in the energy sector. The auditor general of Pakistan severely objected to the payment of 80 billion rupees in this regard previously. The reasons for the fake energy crisis and its solution are given below.

According to estimation 22,000-24,000 megawatt electricity is needed in Pakistan. This demand increases up to 5% each year. It means 1,000 or 1,200 megawatt is added. Unfortunately, we

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have never been able to produce more than 18,000 megawatt energy. The government claimed to produce 24,000MW electricity. But even NTDC, which is an institution of the government, does not confirm it.

Because this institution does not have the capacity for transmission and distribution of more than 18,000MW, several new institutions, including the wind power generating institutions, are not being allowed to produce the electricity more than a certain level.

The difference between power generation and capacity for transmission is also the inability of our governments. It means that there is a difference of 6,000MW between the production and the transmission of power. It is expressed in the form of loadshedding in the whole country. Definitely, the government has completed many power projects in its five years. But the difference between demand and supply which was 5,000MW in 2013, has reached up to the level of 6,000MW in 2018. The government of PML-N had started the energy projects that are based on LNG and coal.

This government has completed only two hydro and atomic power projects that were inaugurated by the previous governments and were on the stage of completion in 2013. Same is the case of other wind and solar projects.

It shows that the projects that can be started without foreign help (LNG, imported coal) are not the priority of the present govt. Consequently, the circular debts have increased up to the level of Rs400 billion. The government could complete the wind, hydro and solar projects of 2,000MW with this amount. 4,500MW electricity and 6.4 million acre feet water could be generated with the completion of Bhasha Dam. Dasu Hydropower Project, which is in the lower stream, can also add 30% to the total production of electricity. This important project was absolutely ready before 2013. But the government did not pay attention to it. Shahid Khaqan Abbasi announced Rs474 billion for Ecnec in the last month of his government.

The government focused on non-development projects like the division of laptop. If it had invested Rs100 billion yearly on energy projects, the dam and water reservoir could be made

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ready. We could be able to borrow equipment for the production of energy from the relevant institutions instead of begging from international financial institutions. But the government was interested only in those projects that could be started and completed in five years.

This is the reason that this important project which was inaugurated by Yusuf Raza Gillani and Pervez Musharraf many years before could not be carried on. Hydropower is the most inexpensive source of producing the electricity in Pakistan. But the present government ignored it completely. LNG and coal have remained its greatest priority. Such projects are useful for short term only. These projects are not durable and dependable for long term due to their heavy cost of production. According to Wapda, Pakistan has the capacity for producing 1000,00MW electricity through hydropower projects. Almost 65,000MW projects have been designed and studied. Same is the matter of solar and wind projects. The sources of fossil energy are reducing all over the world. The environmental pollution is also a serious issue. All these factors have changed the dynamics of the energy industry in the whole world. All developed countries, including China, America and Germany (even our neighbour, India) are increasing the production of hydroelectricity. China has the capacity of 114,000MW of wind energy. The capacity of its solar energy plants is 28,000MW.

Germany has less than 50% of total area in comparison with Pakistan's. It is producing 39,000MW wind energy. It has 50% sunshine hours than Pakistan but still producing 38,000MW solar energy. Can we fulfill our needs of electricity by establishing the wind, solar and hydropower plants? These projects are cheap, durable and environment friendly. According to an American research institution, NREL, Pakistan has immense capacity for producing wind and solar energy. The estimation of solar energy is almost 29,000MW. It is 100% more than our needs. The capacity for generating wind energy in Pakistan is 346,000MW. Aren't we thankless to Allah Almighty and depending on foreign investment, loan and interest? It is the need of the hour that we should learn to secure our interests as a nation.

We should stress the governments to change their priorities. They should establish cheap and durable power projects instead of expensive projects. If we want to get rid of loadshedding and

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provide electricity to industry and trade, we have to depend on hydro, solar and wind energy. We should set our priorities honestly and sincerely. We should save money and produce investment opportunities for foreign countries. We should attract the foreign investors to our energy projects so that we can be able to produce energy according to our needs.

Q.3:Do you agree that in Pakistan land is ploughed by wooden ploughs drawn by cattle's ,thrusing is done by animals, winnowing is done by hands and farm products are consumed the family ?

ANS: Despite the long hours, he makes between Rs200 and Rs300 a day. In the face of modern technology, there is little demand for his products: handmade farming and household tools.

Mr Khan, who is from the Ranjha village, looks a lot older than his 65 years. Continuous labour that began during his childhood has drained much of his health. He is now one of seven or eight local artisans who make such tools, coming from various villages to work in Chakwal city.



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Mohammad Din sharpens a sickle used for cutting crops.

Mr Khan was left alone as a child after his parents separated. He recalls that he was raised “in deprivation and mistreated” by his relatives. He has eight daughters, five of whom hold masters degrees while the sixth holds a bachelors and the last two are still studying.

“We eat very simple food. Many days we eat bread and onions, but I always met my daughters’ education expenses.” There was a time when artisans like Mr Khan had steady work, but now many of their handcrafted tools have been replaced by modern machinery.



Handmade balling guns, also called nullahs, on display at an artisan's shop in Chakwal. These balling guns are used to administer medicines to cattle.

For instance, where a plough pulled by animals was once a basic farming tool, the tractor has replaced handmade ploughs. The extinction of the handmade plough means there is little use for a yoke, or a punjali, that was used to couple the cattle together. Now, the yoke is used mainly in bull racing.

Another such tool is the winnower, used to separate husk from grain. Two kinds of handmade winnowers are used in Punjab: the traingal and the karai, and while the need for both has fallen as farmers turn to modern threshers, they are still used.



saddles (kathi) used in bull races.

“We used to make every kind of farming tool, but now most have been replaced by modern tools made in industries. But there are some tools that are still made by hand,” said Mohammad Din, 64.

“A cattle owner still needs a balling gun – a nullah – to administer medicine to his cattle. A farmer still needs a saddle for his donkey and a sickle to cut fodder and harvest his crop.”



Gulsher Khan (65) makes a wooden winnower called a traingal. — Photos by the writer

Handcrafting farming tools may survive as a profession for a decade or so, but it is waning. Mr Din learned the art from his father 40 years ago, and his grandfather was also an artisan. “But my two sons have not joined the profession.

The younger generation is not joining the profession because it offers a bleak future.

FAISALABAD: Food security and self-sufficiency are a worldwide issue and the same would probably remain a “mission impossible” for Pakistan unless it trains, supports and encourages farmers to utilise modern tools in the agriculture sector.

Agriculture is the dominant sector of the economy and contributes about 21% to the GDP

(Gross Domestic Product).

It is also one of the major sources of employment for about 45% of the country's workforce. However, the country has not achieved the required targets of self-reliance in wheat production primarily due to the failure to adopt modern techniques. Farmers are usually reluctant to go for a change in adopting new techniques to increase agri-productivity.

Agricultural development is only possible through the adoption of modern agricultural practices. Agriculture now is more knowledge-based in which modern education has an important role to play.

The spread of modern technology has considerably increased the growth of all crops including wheat. The new wheat varieties, recommended seed ratio, irrigation, fertilizer, pesticide and regional factors are positively contributing to increase wheat production.

Likewise, educated farmers can easily be trained to respond to the latest opportunities and adjust to sociocultural changes. Education also provides an opportunity to adapt modern technology to increase production and income.

Adoption of modern education has extensively been accepted as a leading element in agricultural development, while the literacy status of farmers is an important variable which affects the farmers' receptivity to innovations and resource allocating efficiency.

Faisalabad Agriculture (Extension) Department Director Chaudary Abdul Hameed, while explaining the reason for the failure to adopt modern technology, said that the majority of farmers were small landholders. Therefore, it was one of the major obstacles.

Abdul Hameed said the income of farmers was associated with the adoption level of modern

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agricultural practices. He said a small proportion of farmers had got information about farming from extension workers. However, majority of the peasants were hesitant to adopt modern technologies for cultivation of crops due to several reasons. These included high rates of agriculture appliances as well as the non-availability of quality seeds, fertilisers and pesticides in the market at affordable rates, he added. The director agriculture said farmers always rent tractors for cultivation and harvesting of wheat crops. Therefore, he said, they have to bear heavy input cost against getting low yield.

"We are educating farmers to use the latest technology like combine harvesters which will save precious time and increase per-acre yield with low labour cost," he added.

Research Information Unit Agriculture Department Deputy Director Mudassar Abbas said farmers, through manual methods, used to get 10-15 mounds per acre wheat production.

I agreed to some extent.



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