Pakistan is Very Rich in Natural Resources but Very Poor in Their Management

NOVA
CSS ACADEMY

House No 308, Main Sawan Road, Sector G-10/1, Islamabad
Contact: 03335210535, 03315066290, 0512354368

Outline

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5. The worst energy crisis in Pakistan is a proof of very poor management of energy resources, especially coal in Thar district
6. We could not properly utilise our wind energy resources to generate electricity
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Natural resources refer to such naturally occurring substances or things as can be used by man for economic gains. Soil, sand, mountains and land, all are natural resources. Crude oil, natural gas, minerals, air, wind, water and sunlight are also natural resources. Farms, forests, fields, honeybees and their yields are also natural resources. Some natural resources are renewable, and some are non-renewable. Renewable resources are the ones which do not deplete noticeably due to human consumption, while non-renewable natural resources are those resources which, once consumed by human use, are not replenished by nature. Pakistan is undoubtedly most richly blessed by natural resources. This wonderful country has marvellous landscapes varying from even plains and deserts to lush green forests, snow-clad mountains, and varying plateaus. Not only the landscapes and scenery but very precious natural resources have also been gifted to this land in bounteous proportions. However, the inhabitants of this blessed country have mostly not been able to manage its abundant natural resources to get the maximum benefit from them. The accusation of poor management of resources is not limited to their destruction and squandering but not utilising a particular resource at the time when it is most needed also accounts for its poor management. This essay will analyse how Pakistan is mismanaging its natural resources. (220 words)

Among the land resources of Pakistan, arable land and water hold prime importance as Pakistan is basically an agrarian country with around 64 percent of its population living in rural areas. Above 40 percent of Pakistan's workforce is associated with agriculture. Pakistan has one of the world's largest irrigation systems founded some 5000 years ago during the age of Indus Valley Civilisation and expanded from time to time. Yet, Pakistan is very low in agricultural produce. According to Pakistan Bureau of Statistics, the Country's trade deficit during the fiscal year from 2020-21 stood at $31.076 billion. The food group constitutes only 17.36 percent of overall exports during FY2021. Pakistan lost a large part of its international market for rice export, which was taken over by India because of the price difference. In the last 20 years, the share of agriculture in the GDP has fallen from around 25.6 percent to 17.36 percent. There has been a slowdown in the pace of technological change in yields per acre during the last 30 years compared to the 1960s and the 1970s. A comparison with the wheat production in the Indian Punjab shows that Pakistan can increase the production of wheat by 40 percent. The cropping pattern in Pakistan has not changed much during the last 70 years of its existence. The same four major crops, wheat, sugarcane, cotton, and rice run the wheel of the economy, and no attention is being paid to high-value products such as fruits, vegetables, oil seeds, pulses, etc. Though it is an agricultural country, 10 percent of its imports comprise vegetable oils and animal fats and 7 percent of its imports consist of food and livestock. Pakistan did not utilise its arable lands to plant high-value crops and has not been able to achieve any special advantage from its agricultural land.

Besides production of crops, the potential in the livestock sub-sector has not been fully exploited because of a number of constraints. The yield gap in milk between progressive farmers and the national average is estimated at almost 60 per cent. Only 3-4 percent of the milk is processed due to the absence of an integrated and coordinated system of milk collection, chilling plants, refrigerated vans and retail outlets for distribution. The country produced at least 4.9 million tonnes of meat in 2020-21 as per the Economic Survey of Pakistan. Of it, only 95,991 tonnes, which is 2 percent of the total production could be exported. Pakistan may capture a huge halal meat market as there are more than 50 Muslim states in the world, but foot and mouth disease (FMD) and lumpy skin disease are not letting Pakistani meat to be accepted in the international market. Pakistan has a very meagre share of less than 0.3 percent in the global halal meat market which stood at $1.2 trillion in 2020 and is expected to expand to around $3 trillion by 2026. Poor policy

making, government oversight, smuggling of living animals, slaughtering of female animals, destruction of animals at the hands of devastating diseases, substandard preservation and packing of meat products and loopholes in the management of this sector have made Pakistan incapacitated to accrue billions of dollars from the export of livestock products. How we are wasting lands and livestock because of poor management is a disappointing ground reality.

Water is undoubtedly the greatest of all natural resources for all life on the planet earth. Some experts believe that with three snowcapped mountain ranges — the Himalayas, Hindu Kush and Karakoram — surrounding Pakistan, spanning 11,780 square kilometres with 7,259 glaciers (containing 2,066 cubic kilometres of ice), the country's water source is infinite. However, the Pakistan Meteorological Department (PMD) has predicted that the country will become water scarce by 2025. With a per capita annual availability of water at a little above 1,000 cubic meters, Pakistan is fast closing in at around 860 cubic meters, which indicates that the country is water-scarce. The water consumed by metropolitan households in a country of above 220 million population is majorly coming from underground aquifers. Pakistan has also mismanaged this precious natural resource. Anyone can install a tube well of any capacity, at any depth, and extract any amount of water. We use fresh water for washing automobiles, pavements, floors and horticulture. Overground water is also being wasted rampantly. 45 percent of the water withdrawn for use in the agricultural sector is lost through leakage and seepage in the unlined canals. Only a limited amount of the remaining water is actually absorbed and used by the crops. The highly wasteful irrigation method is also a great cause of wastage of water. Our poor management has turned a water-affluent country into a water-scarce place.

Though Pakistan is not an energy-deficient country, we have been suffering from the worst energy crisis for decades. This is because of the poor management of energy resources. In a report "In the Dark: How Much Do Power Sector Distortions Cost South Asia" the World Bank has estimated that Pakistan is losing a mammoth sum of money to the tune of $18b annually, while around 50 million people still do not have access to grid-electricity. Furnace oil and diesel account for 70 percent of imported petroleum products. We burn furnace oil to generate electricity, which is the costliest electricity generation method. Pakistan could have saved billions of dollars every year if it had exploited its indigenous energy resources. District Tharparkar in Thar desert of Sindh contains 175 billion tons of coal which can be used to produce 100,000 MW of electricity for more than 200 years. The poor management of this sector is evident from the fact that the Thar coal project has been managed so naively that instead of giving benefits it has caused us a loss of billions of rupees. The Supreme Court of Pakistan was informed in October 2018 that the coal gasification was likely to result in underground changes that might adversely impact the environment. We learnt this after spending more than 4 billion rupees. Pakistan did not develop cheap hydroelectricity by constructing dams at the right time and let the huge gifts of water coming from the Karakoram and Himalaya ranges drain into the sea without gaining substantial benefits in terms of electricity generation. China added 38000 MW of electricity generated from wind power from 2008 to 2014. We did not even capitalise on this renewable and extremely cheap source of power generation and squandered billions of dollars on furnace oil.

Pakistan is lucky to have a substantial amount of wind. Data based on preliminary site surveys carried out by Alternative Energy Development Board (AEDB) and Pakistan Meteorological Department have indicated that coastal areas of Sindh and Balochistan provinces, some areas in Punjab and some northern areas possess adequate wind

resources. In Sindh, district Thatta, Karachi, Hyderabad and Badin; and in Balochistan, district Gwadar and Makran Coastal Belt possess prospective sites for the development, installation and commissioning of wind power projects. Thatta corridor presents a good wind resource, and theoretically, over 48,000 MW can be generated there. While China continued increasing its wind power capacities, adding over 6,000 MW in 2008, 12,000 MW in 2009 and 20,000 MW in 2014, Pakistan could not add even 1000 MW in all these years starting from 2009 when its first wind power plant started working in the Gharo-Keti Bander wind corridor. Management of natural resources means you are able to harness a particular resource for your benefit when you need it most, but Pakistan is still not harnessing this resource to get timely benefits and is wasting billions of dollars every year by generating electricity from diesel and furnace oil.

Like the wind, sunlight is also the cheapest natural resource which Pakistan has in copious amounts. The renewables of solar photovoltaics (PV) and wind are local resources ideally suited to meet our large energy deficit. Solar PV is the direct conversion of light into electricity by semiconductor materials, with silicon being the most commonly used semiconductor for this purpose. Silicon is the second-most abundant element in the Earth's crust. We, who boast of making the nuclear bomb, should have manufactured solar panels inside the country to meet the energy needs on time. However, this technology is not being developed at the right time and billions of dollars are being wasted on outdated, hazardous and burdensome thermal power plants which supply 64 percent of electricity to the national grid along with 30 percent of electricity coming from hydropower plants and 6 percent from nuclear power plants. At present, the electricity being produced from solar power plants is negligible, which is another proof that we are not managing our energy resources properly.

Pakistan's province of Balochistan has abundant mineral resources including copper, silver and gold. However, owing to the nonavailability of technical expertise, machinery and funds, Pakistan is not in a position to explore, mine and extract these minerals on its own. In the absence of any monitoring mechanism owing to the lack of base-metal analysing technology in the country, foreign mining companies exploit the situation in their own favour. At one time, the Chinese contractor of Saindik copper-gold-mine project started extracting far more than the agreed amounts of copper, silver and gold, endangering a decrease in the life of the mine from 19 years to 10 years. However, the matter was noticed by the Pakistani government later on. But the case of Reko Diq gold mine did not go well for Pakistan. When the Supreme Court of Pakistan invalidated the agreement between Balochistan Government and the Tethyan Copper Company Ptv Ltd (TCC), the latter went to the arbitration tribunal of the World Bank's International Center for Settlement of Investment Disputes (ICSID) which ruled against Pakistan. The company claimed a recompense of $400 million, though the matter was resolved on a give-and-take-basis between the parties later on. Neither the provincial government nor the federal government of that time had any idea of what the terms of the agreement should have been. We don't know, even today, the actual estimates of the minerals promised by Reko Diq. Our poor policy-making and management have caused us heavy losses in such projects.

The ruthless erasing of our forests depicts a sad story of how mercilessly we destroyed such assets. At the time of the partition, the country's forest cover stood at 33 percent. By 1990, Pakistan's forest cover had declined to only 3.3 percent which further receded to 2 percent by 2015. With only 0.05 ha of forest per capita against a world average of 1.0 ha, Pakistan is comparatively forest-poor. Illegal logging is widespread in the country, and the smuggling of timber across the border to Afghanistan has been a

perennial headache. In 2016, Pakistan Tehreek-e-Insaaf (PTI) chairman Imran Khan, who became the prime minister in 2018, claimed that illegal logging by the timber mafia was responsible for over Rs.200 billion in losses to KPK. This great loss of forests is resulting in soil erosion, flooding, loss of habitat and an increased amount of greenhouse gases in the atmosphere. While PTI claims that its Billion Tree Tsunami initiative has added 150,000 hectares of new afforested land in the province, doubts about these statistics have not been assuaged by PTI. The reduction of forests from 33 percent at the time of independence to 3 percent today is a clear proof that we are very wasteful of our natural resources.

No doubt, Pakistan has been endowed with abundant renewable natural resources and vast reserves of non-renewable natural resources, but our bad management has caused irreparable damage to our economic security, jeopardised our food safety and threatened our survival. A realistic comparison of the current data on our natural resources like forests, agriculture, livestock and water with their data at the time of partition of the sub-continent gives us a mind-numbing picture of how ruthlessly we have destroyed our country's natural resources. Lack of vision and commitment on the part of various governments, poor planning and adhocracy at provincial and national administrative systems, lack of comprehensive policies, the backwardness of general masses and vested interests of the business persons, and feudal lords have caused our country to suffer great economic crises which could have been averted had we managed our natural resources in the right way. Pakistani people either squandered their natural resources mindlessly or exploited them at the wrong time or used them in the wrong way. Hence, it is a bitter reality that Pakistan is very rich in natural resources but very poor in their management.

(2280 words)