

# **The Nepalese economy inspite of an abundance of natural resources has not been able to pull itself out of poverty.....problems and solutions.**

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**Abstract:** The paper discusses in depth the efficient use of natural resources, which the Nepalese economy has in abundance. This would help the economy in achieving higher Gross Domestic Product growth. A critical analysis has been undertaken in how these natural resources could be used effectively. Cost benefit analysis must be undertaken before the mining of these resources. The strength of the economy presently is in tourism. This must be protected in a manner, that it increases the revenue as well as safeguards the environment. Newer avenues of revenue generations for the government have also been explored. The emphasis on health and education would help the government in achieving its macro- economic goals. Political stability is an extremely important factor for the growth of the economy.

Research question: The research paper attempts to list the natural resources and their importance in the growth process of the Nepalese economy. It would analyze the reasons for continuous poverty and what should be the policy measures that the government should follow to pull its citizens out of abject poverty and move on the path of sustainable growth?

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## **I. Introduction**

Nepal lies in the central part of the 2500 km long Himalayan belt. 83% of the Nepalese territory is mountainous. It is an underdeveloped, landlocked country situated between China in the north and India in the south. An underdeveloped economy is one in which the per capita income and standard of living of the people are very very low. These economies have a high population growth and the contribution of agriculture to gross domestic product is very large and it is also because the agriculture sector supports majority of the workforce. As and when the economy develops the contribution of the other two sectors namely the secondary and tertiary sectors increases and a larger number of people earn their livelihood from these two sectors. These types of economies are characterized as having a low standard of living for its citizens.

Nepal in particular has an abundance of natural resources which have not been tapped properly due to political issues and difficult terrains. This might be one of the reasons why the economy has not been able to lift itself out of low GDP growth rates. An attempt will be made to study atleast five to six important resources and how they can be harnessed to improve the growth prospects of the economy. The special emphasis would be in exploiting these scarce resources for the betterment of the citizens of Nepal. It is only when the GDP of an economy increases in a fairly equitable manner, then the fruits of growth can be passed on to the citizens. Thus, besides just increasing GDP growth what is important is fairly equitable distribution.

## II. Rich Natural resources prevalent in Nepal and their contribution to GDP

Figure1 Location map Mineral resources in Nepal



Source <https://ngs.org.np/mineral-resources-of-nepal-and-their-present-status/>

Nepal has immense deposits of coal (lignite), high in iron ore, magnisite, copper, cobalt, pyrite (this is used to make sulphuric acid), limestone, mica and gold. The above are some of the rich mineral resources that are found in different parts of Nepal. Besides the above mineral resources, the other natural resources are in the form of forest reserves, water and soil. We see that Nepal is rich in natural resources and this is a boon for any economy. The main issues ahead are in systematically harnessing these resources such that they work towards the benefit of the society and at the same time does not lead to ecological degradation. Care has to be taken in the systematic use of these scarce resources. The word resources is normally interpreted in a narrow format but what is important is that whether the resources are renewable or nonrenewable. Renewable resources are those which can restock or renew themselves if they are not overexploited, nonrenewable on the other hand cannot restock themselves and thus are finite. Nonrenewable natural resources are commonly listed as fossil fuels, oil, coal, copper, minerals, gold to name a few. Nonrenewable resources once removed cannot be replaced. In the case of renewable resources the replacement rate will depend upon whether the rate at which it is being consumed is equal to the rate at which it is being replenished. If the rate of the consumption is greater than the rate of replenishment then in this case too, there would be a decline in renewable resources. This would lead to overexploitation. Natural resource management, therefore entails the management of natural resources so as to ensure sustainability. In the following subsections these resources will be divided in the following format:

- Natural resources (deposits of coal (lignite), iron ore, magnisite, copper, cobalt, pyrite, limestone, mica and gold.
- Forest reserves
- Water resource

## 2.1 Iron Ore

Figure 2 Exhibit of Iron ore from Thoshe, Nepal



Source <https://ngs.org.np/mineral-resources-of-nepal-and-their-present-status/>

Nepal is rich in iron ore deposits and geologists are constantly discovering newer and newer mines. High grades of iron ore resources could be spread over 10 kms. These deposits are unevenly distributed over the geographical region of Nepal and this is one of the reasons why Nepal has been unable to mobilize its resources. What is important is that these resources have to be commercially viable which essentially means that the cost of mining them should be much less than the selling price. As the technology continues to improve the underground mining of mineral resources will become more cost effective and thus viable.

## 2.2 Gold

Figure 3 Placer gold from Kaligandaki



Source <https://ngs.org.np/mineral-resources-of-nepal-and-their-present-status/>

The type of gold reserves that Nepal holds are quite cost effective. The estimates of gold reserves in Nepal are expected to go up to 6.49 tons in the year 2023, according to trading economics global macro model and analysts' expectations. Gold reserves are the assets which are held or controlled by the Central bank of the country. It is based on these assets that the country can attempt various monetary measures. Gold reserves acts as an asset on the basis on which loans are disbursed which acts as a legitimate enhancer of money supply in the economy. For an underdeveloped economy like Nepal the main bottleneck is lack of adequate and cheap credit for the growth of various industries. Gold as sediments is deposited at the banks of rivers by Mahakali, Chamalia, Karnali, Sethi, Rapti, Kaligandaki to name a few. Primary gold occurrences are known from Lungirikhola area (Rolpa), Bangabagar, Gorang. But for most of them the cost benefit analysis is yet to be evaluated.

### 2.3 Pyrite

Figure 4 Pyrite from Mustang district, Gandaki Pradesh, Nepal



Source <https://www.mindat.org/locentries.php?m=3314&p=20766>

Pyrite is a non-metal and is mainly used to extract sulphur and sulphur compounds, sulphuric acid, ferrous sulphate. It is found in Bering Khola, Chhirilingkhola (Bhojpur), Meddi and Bhamangaun (Dadeldhura). The issue with this raw material is the same as with others with respect to the cost effectiveness of mining. As and when technology becomes cheaper and accessible and the price of the mineral becomes attractive, it is only then will mining of such minerals be an attractive proposition.

### 2.4 Copper

Figure 5 Copper deposit at Bhutkhola, Nepal



Source <https://ngs.org.np/mineral-resources-of-nepal-and-their-present-status/>

Copper is being mined at Gyazi (Gorkha), Okharbot (Myagdi) and Wapsa (Solukhumbu). The demand for copper has increased in recent years. The type of common copper ores found in Nepal include Chalcopyrite, Malachite, Azurite, Covellite, Cuprite, Bornite and Chalcocite. This mineral is so also being progressively mined in the country.

### 2.5 Mica

Figure 6 Mica group from Taplejung District, Province 1, Nepal



Source <https://www.mindat.org/locentry-617547.html>

Mica is found in Dhankuta, Langtang (Rasuwa), Bhumibanda, Chaukibhanjyang (Kathmandu), Bhasukan (Doti) and Fical (Llam). Mica is an important element in the making of electric appliances. It is also used in paint, lipstick and other makeup stuff. The fact that it is used in so many modern products makes it a valuable commodity.

### III. Impact of these resources on Nepal's GDP over time.

Nepal has been suffering from poverty and unemployment but it has worsened during the covid 19 pandemic. The main areas that contribute to Nepal's GDP is services sector, which include transport and financial services and tourism related activities which have also recovered to close to pre pandemic levels. Besides this the industrial sector has contributed due to the higher installed capacity of electricity. A continuous supply of electricity to the manufacturing sector ensures a regular supply of manufacturing output. The agriculture sector has been a drag on the economy. For the GDP to grow all three sectors must grow simultaneously. To ensure a sustainable growth, the fiscal deficit must continue to reduce. Fiscal deficit is defined as that condition when the expenditure of the government exceeds its revenue. It is calculated in both absolute and percentage terms with respect to the country's GDP. Mathematically fiscal deficit is represented in the following manner:

$$\text{Fiscal deficit} = \text{total expenditure} - \text{total revenue (excluding the borrowings)}$$

In certain countries mineral resources act as a huge source of income and wealth. The mining sector provides employment to those regions where the extraction occurs. At times having an abundance of scarce resources can have an effect which is also known as "resource curse." What this means is that those countries that rely on mineral wealth often have weaker institutions, leading to inadequate expenditure on education and greater corruption. Certain countries limit the export restrictions

- To control the export of illegally mined products.
- To enhance environmental protection.
- Offset exchange rate impact caused by export of several commodities.

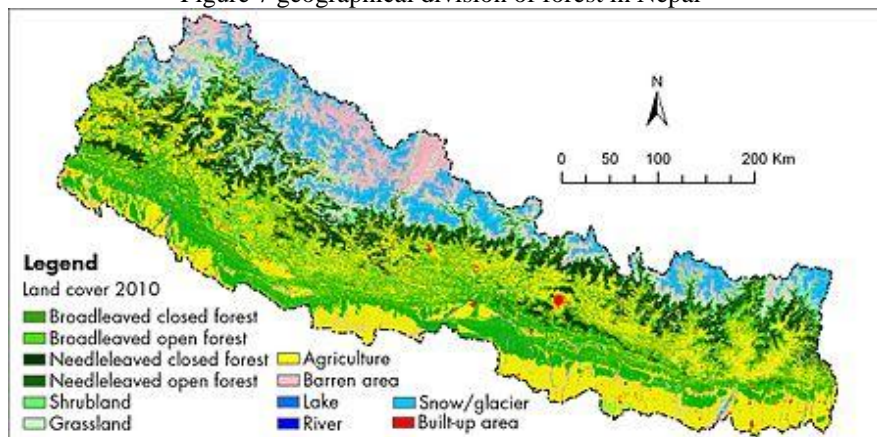
Evidence suggest that export restrictions are not an appropriate policy instrument to respond to the challenges of trying to regulate the extractive industrial sector.

The overuse of the extractive sector (the raw material mining sector) means that there is a depletion of natural resources. As the value of these resources increase worldwide the profitability of extraction increases. Many of these resources are limited and nonrenewable. Even in the case of renewable resources if the rate of extraction is higher than the rate of it being renewed, it leads to depletion. Thus, the countries must safeguard themselves from overexploitation. Mining of these resources increases the GDP potential of the economy. The problem arises on the efficient use of these scarce resources.

Nepal's main source of income is its tourism. The access to the Mount Everest and other mountaineering exotic extravaganza has led to overexploitation. Here the government had to step in with the aid of outside agencies to keep the environment clean and friendly and ensure that the most beautiful wonder of the world is kept intact. The government would have to do the same with all its natural resources which it has at its disposal. A judicious use of them will go a long way in increasing the GDP of the economy as well as safeguarding its inheritance.

### 3.1 Forest

Figure 7 geographical division of forest in Nepal



Source innepal.com (google images)

Forests play a central role in the economic social life of the rural people of Nepal. The share of agriculture forestry and fishery in Nepal's GDP is about 60% and forestry contributes about 15%. Forestry contributes towards growth and employment of the economy. They provide several goods which serve as a raw material for several industries. The linkage effect of the forestry with the rest of the economy is quite strong. Nepal's planned development over the last 50 years has viewed forest resources as an important vehicle for economic growth and meeting basic needs. 39.06% of Nepal is a forest and this has a huge economic potential. It has been documented that Nepal has 7000 species of flowering plant which are important as they are commercially viable and would enhance rural incomes. Besides this the forest gives to the local people fuelwood, timber, fodder, wild food, medicine, fibers, and non-timber forest products (NTFPs). It provides an eco-system which prevents the overuse of water, restricts the adverse effect of climate change, and controls the carbon content.

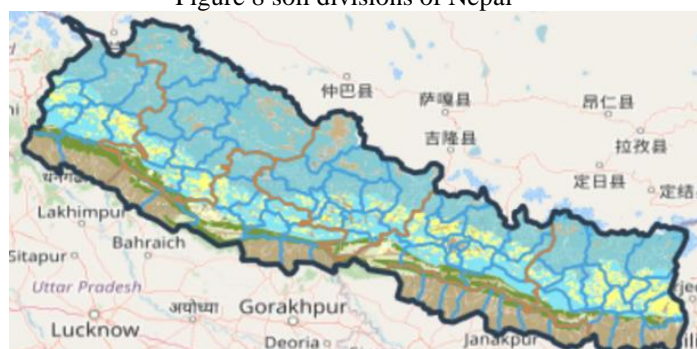
Timber and fuelwood trade are the most important forest products that generate income and are extremely important as livelihood for the rural people. But over the period 2003-2006 this contribution has decreased. The main reason could be the increase in the illegal level of logging as well as increased corruption intrade and transport of timber and fuelwood. It is necessary to streamline this occupation as it could be an important source of revenue for the government. Taxes could be imposed on logging of timber, as well as its transportation. The revenue earned could be used for developmental purposes.

Non-timber forest products are harvested primarily for commercial purposes. These are grown for medical and aromatic purposes. They are exported to India, United States as well as Europe. This is an area which should be developed as a source of foreign exchange.

Environmental protection should be observed. Any service which is in danger of degradation, the cost of utilizing them should be increased. The money from this source in the form of fees charged to tourist visiting protected areas could be increased and this same should be diverted towards protection of these areas. Harnessing the potential of the forest requires concerted effort from all stakeholders namely the government, doners and the rest of the people. Concerted efforts should be made in helping and supporting the local community to establish small and medium forest enterprise.

### 3.1.1 Soil

Figure 8 soil divisions of Nepal



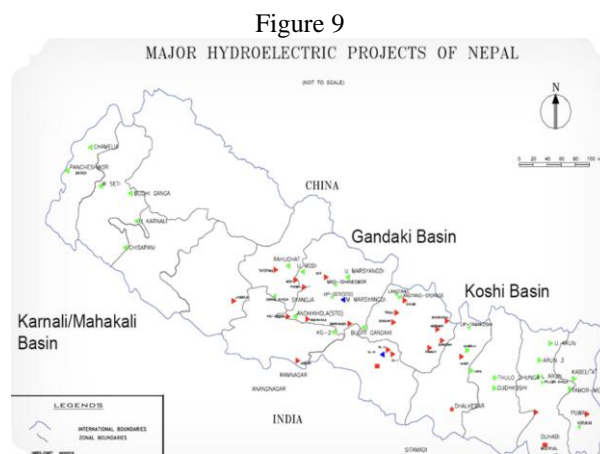
Source - <https://soil.narc.gov.np/soil/soilmap/>

Soil is an important mineral source. The knowledge of the distribution of the soil along with its type is critical for survival and well-being of the human race. Cropping patterns can be planned according to the type and distribution of the soil keeping in mind soil conservation. Soil erosion can be prevented by using geographic information and remote sensing technique. Most of Nepal is mountainous terrain. The types of soil that are found in Nepal are:

- Alluvial Soil
- Sandy Soil
- Gravelly Soil
- Residual Soil
- Glacial Soil

The above segregation of soil helps in determining the areas where crops could be grown. Glacial soil is not conducive for growing all types of crops. The option for such areas, could be the growth of exotic flowers. This again could be an important source of exports and foreign exchange.

### 3.2 Hydro



Source- [NEPAL DRP Overview 2019](#)

The development of hydropower is extremely important for Nepal as it can ensure energy security, food security, health security and in addition preserve environment, reduce greenhouse gas emission, and create recreational facilities. Hydropower significantly improves the GDP growth in Nepal. Studies have indicated that Nepal has the potential to contribute to the environment in the South Asian region by delivering clean renewable energy and at the same time mitigating the adverse impact of climate change. Nepal has been endorsed with huge hydropower potential. It has not been able to tap this enormous source for economic development. Studies that have indicated that Nepal is suffering from insufficient electricity. This could be a negating factor on Nepal's GDP. Studies have indicated that the electric power sector can become a dramatic growth catalyst and can lead to increasing real GDP by 87% base line value by 2030 (<https://www.adb.org/sites/default/files/publication/612641/hydropower-development-economic-growth-nepal.pdf>). This would also counter the impact of exogenous increase in oil prices and would allow the economy to remove its dependency on external factors, generating higher income for its citizens and at the same time reducing the impact of climate change. One of the important benefits that arise from the construction of hydropower generation is flood control. Along with generation of hydropower, it saves the terrain and lives from the vagaries of nature. As many people are dependent on agriculture, controlling the rivers could ensure adequate irrigation and subsequently higher rates of agriculture productivity leading to reduction in poverty. Clean drinking water would help in controlling diseases and improving health of its citizens. In a small economy like Nepal, the pressure of imported petroleum is substantial. The importance of hydropower generation will reduce this dependency and save precious foreign exchange. If Nepal develops a transport system which is run on electricity generated from hydropower, it can further substantially reduce its petroleum bill. It should develop cable cars, inter and intra city tramways and trolley buses. This type of transportation will derive maximum benefit from hydropower and would also change the face of the nation.

#### **IV. Political and Economic challenges that have prevented GDP growth.**

Nepal is primarily a Hindu country very similar to India. Thousands of Nepalese have married in India and vice versa. Several Nepal citizens are enrolled in the Indian army and are part of the Gurkha regiment. Nepal and India share an open border where citizens of both the countries live and work in harmony. Visas and passports are not necessary. The new generation of Nepalese opt for USA, Australia, and Europe instead of India to pursue higher studies. The open border has been used for crime, smuggling, human trafficking, arms trafficking as well as the growth of terrorism. In 2008, the Hindu monarchy ended, and secularism came into place. This change of 2008 as introduced unprecedented challenges for Nepal as well as India. Democracy in Nepal is still being consolidated. This interim period has given many opportunities to the monarch and the foreigners to intervene in the political system of Nepal. The Maoist insurgency was a very disturbing period in the history of Nepal. The earthquake of 2015 resulted in an additional blow to the struggling economy. The constitution that has been envisaged indicates a federal structure whereby the states will be in a better position to address their issues rather than a centralized policy being run from Kathmandu. More than half of the population live in the Terai region.

These political factors have resulted in GDP hovering around 3 - 4% per annum, when the target is 7.5%. Nepal is still considered an agricultural economy, supporting most of the workforce. The massive unemployment has resulted in men and women seeking employment in the other countries. This has resulted in increased inward remittance. This source of foreign exchange faced a hurdle due to the pandemic.

The political power struggle has led to foreign investors staying away due to political uncertainty. It has negatively impacted the nation in terms of inequality, inflation, and slow pace of growth. The country is suffering from lack of skilled manpower, as the skilled workforce, is employed outside the country. It is continuously battling the ill effects of natural disasters. The economy has managed to move ahead in the sphere of universal education and health. The tourism, which is the main stake of the country, must be resurrected and be made priority. This requires political stability. China has attempted to reach out to the Nepalese government in the form of investment and development. India has woken up to this fear in recent times. Attempts are being made by the Indian government to resurrect the older faith and trust with the Nepalese government.

## V. Conclusion and Solutions

The primary effort of the Nepalese government should be to have a stable political setup at its helm. This stability would enhance the economic potential of the country leading to higher GDP growth. Continuous emphasis on health and education would result in a healthy skilled workforce which is an asset for any economy. The dilemma here is to use them in an efficient manner. The requirement would be to allow investment into the economy but not at the cost of its sovereignty. Judicious care should be taken on the type of investment that is being undertaken, whether from China or from India. Primary concern should be the Nepalese citizens and their well-being. Adequate and economic use of precious raw materials which are abundant in supply in Nepal should be harnessed for the betterment of the society at large. Solutions lie in efficient and fully utilizing a country's capacity for its citizens.

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