

The Future Perspective of Afghanistan's Mineral Resources

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Abstract

Afghanistan is going through a nationwide reconstruction process. Geological Surveys are conducting to establish and assess minerals and hydrocarbon resources in the means to provide proof essential to encourage investment and foster exploitation. The aim of this study is to investigate and analyze the minerals existing in Afghanistan and its contribution to the afghan economy. Minerals consider as the back boon of a country economy, it plays precise supportive role in developing countries. As forty decade of successive wars in Afghanistan virtually destroyed infrastructures, the existing minerals will play the role of an engine in restorations process. Afghanistan is among the richest countries with its existing resources. By many means researches conducted have establish minerals existing which are however mentioned to be over 1400 types. The methodology in this study is mainly descriptive in strategic; data was collected through-secondary sources and analyzed by influential analysis. The outcomes of this study specify that the properly extraction and management of existing minerals resources can lead Afghanistan toward self-sustaining country and be positively influenced the economic growth. Strategies used to solidify policies within the mineral sector and the end results in a manner that ensures less or minimal warfare and thus fostering a self-sustaining nation. The more favorable measures have to combine in ensuring easier access to the investment opportunities, modern equipment's and facilities in order to

adequately un-tap the resources and a sustainable and reasonable vision on the mining sector's is an urgent need.

Key words: Minerals, Economics, Energy Resources, Afghanistan

1. INTRODUCTION

Natural resources exist naturally in a particular area. They are characterized by certain elemental basics such as gravitation forces and magnetism and have no connection with humankind actions. They are much diverse to which may exist as a single entity, or otherwise as an alternative form and thus requires processes in the means to obtain different forms within its elements. Natural resources are greatly debatable when it comes to Afghanistan. To every country, natural resources are much important and thus should be protected with whatsoever means. In general, the economic activity of Afghanistan is agriculture and 80 percent of the afghan people depend on it. Afghanistan produces a variety of grocery products such as vegetables and as well a variety of fruits. There is also abundance of natural resources in Afghanistan. To this account there are potential hydrocarbon sites. Metals particularly ferrous and non-ferrous, as well as other minerals may prove to be advantageous to the country since a lot of investors are attracted. The exploitation of these resources has a potential to enlarge and improve the economy of Afghanistan (Lakhani, 2013).

Afghanistan's mineral resources are estimated as roughly \$1 trillion (Noorani J., 2015). To be precise, Afghanistan has more than 20 mining areas requiring development to dully increase efficiency and effectiveness of these sites. However, if actors, state or non-state, are not embracing to the future government setup, then the minerals are no good to the country. Moreover, development of a

country's economy will digress and more so miss a chance to advance. More to this argument, if development is done, the economy will ultimately reap big thus ensuring the overall accounts contains no or less deficits, or else continuous improvement throughout the coming years. Therefore, the Afghanistan geological Survey department has been conducting surveys in the means to establish and assess minerals and hydrocarbon resources in the means to provide proof essential to encourage investment and foster exploitation of these resources (Afghanistan, 1973). To this account, mineral exploitation is undoubtedly encouraged due to favorable regulatory and legal regimes that provide blueprints for development of such arrears. With such government fostering interventions, investors are ensured of complete and safe grounds for investments as well as favorable terms on repatriation of revenue and capital. I believe that the government is committed fully to the mining sector and is critically fostering the self-sustainability of the country.

The main objective of this study is to evaluate, investigate and analyze the availability of existing minerals in Afghanistan and its correlation and contribution to the afghan economy. In addition, it measures and recommends the opportunities to the investors and recommends strategies to effective extraction of available minerals.

2. THE PAST

The country's located in central Asia and to the western end of Himalayas and has been the last frontiers subject to exploration and resource discovery. The Islamic republic of Afghanistan is as the name states populated by the Islamic religion with the capital city being Kabul. The country is much Islamic which seems to be the connecting link but there are other religions slight though such as Hindu, Sikh, and small Jewish communities. War on being a major issue, the Afghans prove to have combative methods that may often classified as

empirical in combination to their spirit combat approaches enhance their sophistication to the faces of Russians (Amstutz, 1986). According to 2013 statistics, Afghanistan's population was around 39.5 million which however has maintained a number of traditions and cultures in spite of the country being a central influence from great powers. The country has more than thirty languages with the afghan Pashto and Persian having the greatest percent's. The Pashtun is the largest ethnic group in Afghanistan, The Pashto code called Pashtunwali , the code of honour , three duties; First is hospitality (melmastia), Is key part of Pashtunwali, the meaning of melma is guest. Melmastia means giving hospitality to an individual or a guest, this will include religion, race and the economic situation. It also means, culturally, if a person houses a guest, he/she shouldn't suffer harm from any kind of enemy. Second vengeance (Badal), Badal means to find justice or seek revenge against a criminal. And third one is (Nanawatai), the obligation to give sanctuary to all those who asks. Pashtuns are considered to be the most hospitable people in the world.

Afghanistan passes through a history that proves to be troublesome. After the Anglo-Afghan wars (3 precisely), the country gained their freedom from the British dominance that they advocated for. The Russia states by 1955 provided help to Afghanistan in a financial and technical essence. Soviet forces occupied the country in 1979, but failed to defeat a determined insurgency by Mujaheddin fighters and eventually withdrew in 1989. The soviet invasion was a failure, costing millions of lives and having a serious consequences still felt today .In the long run, soviet invasion established a divided society that even after deprivation; the society was left in an in-depth ethic-religious civil wars that caused human casualties. Afterward, the Taliban regime brutally wounded the country and left a disastrous political, social, and economic state within the country. After the overthrowing of Taliban in late 2001, beginning for a new administrative panel; considerable

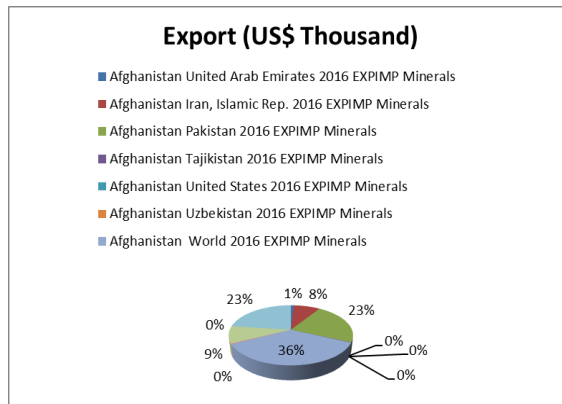
international aid received to Karzai administration to reform and rebuild the infrastructures (UN Security Council, 2001). Since the toppling of the Taliban regime in November 2001, the country has been ruled by Hamid Karzai, as chief of interim governing Authority and the transitional Authority. Since 2004, he was elected as afghan president and also he won the second round of presidential elections. The presidential elections in 2014 was declared by the World Bank economist and professor of John Hopkins University Dr. Ashraf Ghani as the new Afghan president. Since taking office in 2014, Afghanistan made significant progress to combat corruption and brings reforms in the afghan government. Implementation of such economic projects can lead Afghanistan to self-sufficiency and restore stability and peace to the country. By fall of 2014, a “resolution support mission” was established with main focuses directed to the ministries and institutions within the afghan nation in the means to offer support and enhance superior command on the security forces.

In spite of setbacks, Afghanistan is going through a nationwide reconstruction process; institutions are established all across the country. It's subjected too much of a history with regards to mineral deposits owed to the complex and diverse geology incorporated but still indicated by investigators that roughly 36% of the populations live below the poverty line which seems to be an obvious disaster.

With country registering the longest military conflict, the invasions had extensive surveys during their military occupation. In a more general sense, to some extent the war was a profit driven war. Afghanistan is acknowledged as a strategic hub and as well as a crossroad for pipeline routes as well as major oil and gas reserves. In this case, the soviet invasions opened up exportation channels to which were used to transport the gases to the USSR by then. For example, natural gas was transmitted through pipeline from the Amu Daryan to the USSR. Significant information has been collected

indicating the existence of many near-surface, small, large and much easier to explore deposits of numerous metallic and none metallic ores. Moreover, hydrocarbons have been registered its existence in the country.

Afghanistan holds a couple of hydrocarbons basins that are well known including the Afghani-Tajik, Amu Daryan, as well as the Tirpul among others of which has still numerous amounts that are of existence due to under exploration (Fig. 2). Data collected indicate that there are more significant resources in this area.



Sources: data from world integrated trade solution made by the author.

3. LITERATURE REVIEW

Afghanistan is a home to investors considering the world-class minerals. A cause preferably indicated as a contributor to the precious wealth in minerals within the country. Joint statistics indicate over 1400 types of mineral deposits as subsoil wealth in Afghanistan. The highest percentages for these minerals however prove to be gold, copper, uranium, lithium, iron ore, petroleum and as well the natural gas (Fig. 1). The discovery of these minerals has the potential to transform the country to great dimensions in an economic perspective.

The U.S. Geological Survey (USGS) of the Department of the Interior and the Task Force for Business and Stability Operations (TFBSO) of the Department of Defense entered into an agreement to study and assess the fuel and nonfuel mineral

resources of Afghanistan from October 2009 through September 2011. The work resulted in a report that summarizes new results and interpretations on 24 important Areas of Interest (AOIs) of nonfuel mineral resources that were identified for mineral investment and production opportunities in Afghanistan (Peters and others, 2011). The report is supported by digital data in the form of geographic information system (GIS) databases and by archival and non-USGS reports on each AOI. The data packages contain from 20 to 50 digital layers of data, such as geology, geophysics, and hyper spectral and remotely sensed imagery. Existing reports and maps are mainly from the Afghanistan Geological Survey (AGS) archive and are Soviet-era (1960s and 1970s) reports. These data are available from the AGS Data Center in Kabul.

Afghanistan has its mines location at Haji-Gak containing iron in abundance. According to survey, deposits of iron have geologically been identified along several kilometers extending from the border of Afghanistan-Iran to that of Afghanistan-Tajikistan. To this notion, the deposits of iron in Afghanistan's ore quantify to be roughly billions of tons. The ore occurs in primary state and as well oxidized state where the primary accounts for roughly 80% while the remaining is in oxidized state and consists of several hematite ore types. To this account, the iron deposits provide ground for the development of an Afghanistan steel industry. To the west central of Afghanistan, copper occurs in Duser-Shaida. The identification of copper has proven successful to which archeologist subject tin as an artifact associated to alloying in the means to obtain metals. To this rare association tin deposits have quantities lower in ores though high content of tin are however found in ores of Misgaran. To this argument, there is an understanding, though not as precise that stronger metals may be subject to the addition of tin in copper ores. The tin-bearing copper ores, and tin bearing sands are therefore potential sources that are however reasonable to invest in and

is partly a source of tin that is used in southwest Asia (Cleuziou, 1982). Copper ores has been documented to contain million tons of copper worth roughly \$3 billion.

According to Cleuziou (1982); the gold deposits occur hugely associated with reduced organic belts, oxidized intrusive, volcanic as well as shear-hosted in a variety of terrains. The southern region is surveyed to contain gold deposits. Moreover, the Badakhshan is a location to which mining of gold takes place together with minerals such as iron, silver, copper, mercury, among other rare earth metals. Badakhshan Gold area of interest is much regarded as best with reference to gold reserves in the area and contains a significant amount of ore with about 50% containing iron. Gold may be utilized in medicine, dentistry, jewelry, among others and the estimated amount yield for gold is roughly \$25 billion. Afghanistan is by far embedded in underneath minerals. The Afghanistan's Daykundi mines have a considerable amount of lithium and a number of other rare elements. These elements are hosted in pegmatite within Taghawlor. The Ghazni Province may hold the world's largest lithium reserves. Lithium is much useful in civil and military application and could much foster development of the country in general. However, to this account, not much survey has been done thus further investigations may be necessary in the means un-tap these resources.

To the north of Afghanistan, between Balkh and Jawzjan is surveyed to contain roughly 3.8 billion barrels of untapped oil. Moreover, undiscovered oil occurs in the Tajik basin whereas most undiscovered gas is based in the Amu Darya basin. Roughly 16 trillion cf of gas as well as about 0.5 billion barrels of liquid condensate gas has indicated by analyses. It is believe that oil and gas sector within Afghanistan is changing. Projects undertaken, if successfully completed; can fulfill the country's energy needs.

In essence of contributing towards an economic sound state, china is involved in development within the mineral ministry of Afghanistan. Arguably discussed by many, Chinese firms in this case provided infrastructural packages that however were in line with the fast and consistent growing economy and much generous that other states couldn't keep up with (Moran and Theodore, 2010). The firms offered a bid to extract the mineral resources in Afghanistan at which according to the United States geological survey (2008) was worth \$1 trillion and to the Afghanistan's Ministry of Mines, the value was \$3 trillion. Metallurgical Corporate of China (MCC) together with the Jiangxi Copper Corporate (JCCL) made their call to make a foreign investment worth \$4.4 billion after winning a tender in the means to develop and un-tap resources in the Aynak region. Meanwhile, the China National Petroleum Corporate (CNPC) partnered with Watan Oil & Gas and secured three blocks having rights to invest roughly \$400 million in that particular sector.

The Afghanistan governments has however attempted to attract US investor, unluckily the US Geological Survey was much concerned with the seismic activities that could probably tamper with the accomplishment of mining arrears. However, the US has had troops into Afghanistan that contributed to the removal of the Taliban regime offering a new stage and history ensuring continuity of exploitation and assessment projects.

Afghanistan has gone a mile by building the first railway providing more efficiency in the exploitation of mineral resources. In 2014, the government adopted a legislative framework preferably in the means to evaluate mineral resource exploitation. It is thus the rights of the government to supervise, promote and ensure efficient development within the mineral resource sector. Afghanistan has great opportunities in unleashing and enhancing different sectors within their economy. The mineral resources existing can be a breakthrough towards a sustaining future. The value of gold, copper, iron, and

other rare elements is far much high and this could increase the economic state tremendously through trade, exportation and as a means to improve in a domestic essence (Fig.1 and Tab.1). To this account, I believe that elements such as lithium and some of the metals can be applicable to civil and military sectors and thus would make a positive effect within these dully important sections. Some elements are on great demand to which if exported to the international market can foster positive account balances.

WHERE THE RICHES ARE HIDDEN			
Iron:	£285.4bn	Aluminum:	£3bn
Copper:	£185bn	Graphite:	£0.4bn
Niobium:	£55bn	Lapus Lazuli:	£0.4bn
Cobalt:	£34bn	Flourite:	£0.4bn
Gold:	£17bn	Phosphorous:	£0.4bn
Molybdenum:	£16.2bn	Lead and Zinc:	£0.3bn
Rare earth elements:	£5bn	Mercury:	£0.3bn
Asbestos:	£4.2bn	Strontium:	£0.2bn
Silver:	£3.6bn	Sulphur:	£0.1bn
Potash:	£3.4bn	Talc:	£0.1bn
Magnesium:	£0.1bn	Kaolin:	£670m
Lithium:	Large deposits found		

Table 1: The value of gold, copper, iron, and other rare elements.

Source: <http://arrestwarrantsatanicritual.blogspot.com/2017/04/where-riches-are-hidden-from-afganistan.html>

The mineral wealth can be much essential in infrastructural development within Afghanistan. Investors have great advantages to these numerous mineral. Legal and regulatory regimes favoring investor has been established ensuring complete and safeness within the mineral sector. Moreover, there has been government strategies facilitating the mining activities and improving the whole sector. The ministry of mines has established a process by which qualified investors can gain access to energy and mineral projects. The government has further tried to improve the legal framework within the ministry of mines in the means to establish business standards as well as simplicity within the quarry-licensing regime.

However, the level of corruption may be a potential threat to Afghanistan's economy. With the notion provided by geological survey that Afghanistan sits on billions worth of natural resources, it is by chance that the richest areas are governed within corruption and revenue stream divergence. Therefore, to the aid of this paradox to plenty of Afghanistan, a coalition is formed well known as Extractive Industries Transparency Initiative to improve and enhance the accountability and openness of management of different sections within what natural resources entails (Ostrowski, 2018). Moreover, the government has taken the role of supervision on mineral resources to ensure efficacy within which can lead to an optimal output whereas ensuring less pollution to the environment. The economic coverage that can emanate from such interventions will ensure provision of jobs to the Afghan's population, more stable economic and political coexistence, as well as a social future. However, while the resources on Afghanistan can be a possible source of conflict, the resources can offer a potential and promising future to the country of Afghanistan (United States Institute of Peace, 2013).

4. RESULTS AND CONCLUSION

Afghanistan is undoubtedly one of the world's richest nations with regards to minerals. The existence of precious mineral resources can dully turn the fate of Afghanistan's economy. Surveys indicated variable amounts in existing minerals worth. According to the United States geological survey in 2008, the minerals worth was \$1 trillion and to the Afghanistan's Ministry of Mines, the value was \$3 trillion having more than 1400 types. An accurate survey is an urgent need in this regards. Afghanistan has great opportunities in unleashing and enhancing different sectors within their economy. The mineral resources existing can be a breakthrough a sustaining future. In the extraction of mineral resources, at the side of other countries; China has had a prominent role and is involved in

development within the mineral ministry of Afghanistan and provides infrastructural packages. A very prominent example is the Metallurgical Corporate of China (MCC) together with the Jiangxi Copper Corporate (JCCL) made their call to make a foreign investment worth \$4.4 billion after winning a tender in the means to develop and un-tap resources in the Aynak region. Meanwhile, the China National Petroleum Corporate (CNPC) partnered with Watan Oil & Gas and secured three blocks having rights to invest roughly \$400 million in that particular sector. However, corruption and insecurity is certainly great threats to the realization of Afghanistan's fate. Though, the government's interventions have facilitated fewer risks thus safeguarding investment opportunities. If the available mineral resources managed properly; it could lead the Afghans towards self-sustaining generation, Afghanistan would ensure improved and breakthrough towards sustaining future.

5. RECOMMENDATIONS:

The precise and accurate survey and their identification in regarding mines location however has not been done thus further investigations may be necessary in the means to un-tap these resources. Earlier, there has been government strategies facilitating the mining activities and improving the whole sectors, in addition the government has tried to improve the legal framework within the ministry of mines in the means to establish business standards, the more favorable measures have to combine in ensuring easier access to the investment opportunities, modern equipment's and facilities in order to adequately un-tap the resources and a sustainable and reasonable vision. Corruption and insecurity certainly could hurt the economy if not critically looked at. In addition, the transport sector should be duly developed in an essence that ensures efficiency in transportation. I believe that what can be reaped from the resources is vast and that these resources can

establish a continuous development within numerous sectors in Afghanistan and as well to the international market.

Appendix

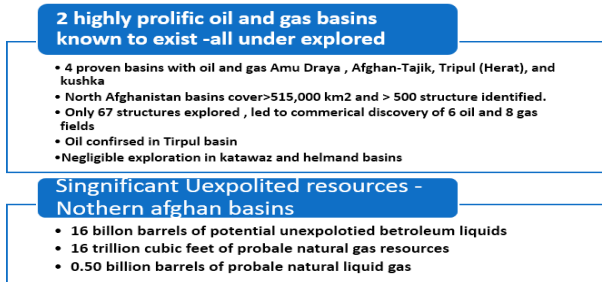


Figure 2: well-known hydrocarbons basins existing in Afghanistan

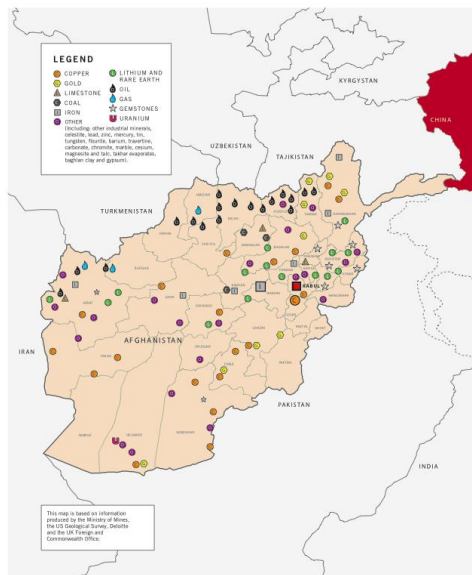


Figure 3: Mineral Percentage of gold, copper, uranium, lithium, iron ore, petroleum and as well the natural gas.

Sources:

<https://www.globalwitness.org/documents/11537/copper%20bottomed.pdf>

REFERENCES:

1. Amstutz, J. B. (1986). *Afghanistan: The first five years of Soviet occupation*. Washington, D.C; NDU Press.
2. Anonymous (1973). *Geology and Mineral resources of Afghanistan*. Ministry of Mines Database, Kabul.
3. Anonymous (2001). Agreement concerning the provisional arrangements in Afghanistan until the reestablishment of the permanent institutions of government. U.N Security Council.
4. Anonymous (2008). *Airborne gravity survey and ground gravity in Afghanistan*, Lakewood, Colo.: U.S. Dept. of the Interior, U.S. Geological Survey.
5. Cleuziou, S., & Berthoud, T. (1982). Early tin in the Near East: A reassessment in the light of new evidence from Western Afghanistan. *Expedition: the Magazine of Archaeology and Anthropology*, 25, 14-19.
6. Eppinger, R.G., & Sipeki, J. (2006). Database of geoscientific references through 2006 for Afghanistan: U.S. Geological Survey Open-File Report –1370 (9) p, Version 1, available at <http://pubs.usgs.gov/of/2006/1370/>
7. Klett, T.R., et al (2006), Assessment of undiscovered petroleum resources of northern Afghanistan: U.S. Geological Survey Fact Sheet 2006–3031, 2 p., available at <http://pubs.usgs.gov/fs/2006/3031/>.
8. Lakhani, S. (2013). *Extractive industries and peace building in Afghanistan: The role of social accountability*. United States Institute of Peace.
9. Manilla. (2004). *Securing Afghanistan's future, accomplishments and the way forward: Natural resources sector in recovery*. Asia Development Bank.
10. Marwah, G. S., & Ladhani, V. S. (2016). *Financial Sector in Afghanistan*.

11. Moran and Theodore. (2010). *China's Strategy to Secure Natural Resources: Risks, Dangers, and Opportunities*. Peterson Institute for International Economics.
12. Noorani, J. (2015). *Afghanistan's emerging mining oligarchy*; United States Institute of Peace.
13. *Ostrowski, W. (2018). The Rise and Limits of the Extractive Industries Transparency Initiative.*
14. Peters, S.G. (2007). Preliminary assessment of non-fuel mineral resources of Afghanistan, U.S. Geological Survey Fact Sheet 2007-3063, 4 p., available at <http://pubs.usgs.gov/fs/2007/3063/>
15. Sengupta, Kim (June 15, 2010). "Afghanistan's resources could make it the richest mining country on earth". The Independent. London.
16. Sengupta, Kim (June 15, 2010). "Afghanistan's resources could make it the richest mining country on earth". The Independent. London