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The Climate Change-induced Global Decisions and Destiny of Afghanistan's Coal Resources

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ABSTRACT

This paper examines the implications of global decisions on climate change for Afghanistan and the fate of its coal resources. As a responsible member of the international community, Afghanistan must consider the extent to which these decisions may impact its national interests. The global demand for energy has not only increased but also accelerated the search for energy resources, with coal being a widely used source. Afghanistan possesses vast reserves of coal, which are considered a significant national resource. The Ministry of Mines and Petroleum anticipates that this sector will play a vital role in terms of national income and investment in the future. However, the exact quantity of coal reserves in Afghanistan remains uncertain, ranging from 100 to 400 million tons or approximately three billion cubic meters. Environmental protection, public health, and social security are key concerns at the governmental level, as the combustion of coal and its byproducts contribute to climate change. Failure to address these issues could pose a significant threat to national resources, particularly coal. The findings of this study suggest that Afghanistan's mining sector, specifically the coal industry, may be impacted by international decisions on climate change in the long term. However, with the formulation of appropriate policies, these challenges can be transformed into opportunities.

Keywords: Afghanistan, Climate Change, Coal, Energy, Environment, Health

INTRODUCTION

Coal, a sedimentary rock formed from the remains of ancient vegetation, has played a significant role in human history, dating back to its use in China for copper smelting before the Common Era. Composed of carbon, sulfur, hydrogen, nitrogen, and oxygen, coal deposits are found worldwide, with notable economic reserves located in Asia, Australia, Europe, and South America.

Among these regions, Afghanistan stands out as country rich in coal mines, primarily situated within the Hindu Kush mountain range. Stretching from Badakhshan Province to Herat Province, these coal deposits are found in layers within the soil and mountains, with notable active mines including Dara-i-Suf, Ash Pashta, Sabzak of Herat, Ahn Dara, Dud Kush, and Balkhab. It is estimated that these mines hold substantial reserves, potentially reaching up to 400 million tons (SACEP, 2023).

However, the global push to mitigate climate change and reduce greenhouse gas emissions has brought about significant shifts in energy policies. The Paris Agreement, adopted in 2015, urged countries to decrease their reliance on coal and work towards its phased reduction on a global scale by 2030. The recent United Nations Climate Change Conference (COP26) in 2021 further emphasized the need to decrease coal usage and ultimately eliminate it. With mounting pressure, both domestic and international, the focus on transitioning away from fossil fuels, including coal, has intensified in recent years (UNFCCC, 2022).

The decisions made in international climate change forums, such as the United Nations Climate Summit, have far-reaching consequences for coal-rich countries like Afghanistan. As countries commit to reducing their reliance on organic fuels, concerns arise regarding the fate of Afghanistan's coal reserves and the challenges the nation may face in extraction, investment, and utilization. This study aims to assess the implications of these international decisions on Afghanistan's coal industry and proposes strategies to navigate this evolving landscape while ensuring environmental protection, public health, and social security.

This research article holds significance in providing insights into the economic value of Afghanistan's coal resources. Moreover, it seeks to identify mechanisms through which these resources can be utilized in an

environmentally sustainable and socially beneficial manner, enabling Afghanistan to navigate the changing global energy landscape effectively.

THE GLOBAL IMPACTS OF COAL USE

Coal has long been a primary source of energy and plays a vital role in various sectors worldwide. Its usage extends beyond energy production, as it serves as a central heating system in many third-world countries. However, the environmental impact of coal combustion has led governments to acknowledge and commit to international decisions aimed at addressing climate change.

Australia, with 35% of global coal exports, leads as the largest exporting country, followed by Indonesia (approximately 20%), Russia (18%), the United States (7.3%), and South Africa (5.5%) (Statista, 2023). The International Energy Information Administration reports that coal consumption peaked in 2022 and is projected to rise further in China, India, and Southeast Asian countries (Administration, 2023). Coal has been responsible for approximately 35% of the world's electricity generation since 2020, surpassing all other energy sources (IEA, 2023).

China and India are prominent players in both coal production and consumption. China alone accounts for nearly half of global coal production and remains its largest consumer (Lam, 2005). China's economic growth, coupled with increased industrialization and a growing global population, has created a significant demand for energy, as evidenced by its leading position in coal consumption and overall energy usage (Liu, 2023).

In 2023, the Climate Change Summit (COP28) took place in Dubai, focusing on financial support, partnerships, and sustainable solutions for combatting climate change (UN, 2023). Notably, a historic agreement was reached, signifying a commitment to reduce the use of organic fuels (Nations, 2023). Regrettably, Afghanistan, as a vulnerable country, was excluded from this critical meeting, a decision that has raised concerns about its representation and involvement in shaping global climate change policies (NEPA, 2023).

This study aims to explore the implications of international decisions on coal usage and their potential impact on Afghanistan's coal resources. By examining the global coal landscape, energy consumption trends, and significant climate change agreements, we seek to shed light on the challenges and opportunities faced by Afghanistan in navigating the evolving energy transition and addressing environmental concerns.

How has Afghanistan dealt with international decisions on climate change?

It is important to note that Afghanistan has not contributed to greenhouse gas emissions on a scale comparable to that of industrialized nations. However, the adverse effects of neighboring countries' emissions have had a significant impact on Afghanistan, resulting in widespread droughts and respiratory illnesses. These repercussions have inflicted substantial damage on Afghanistan's economy, agriculture, and public health, positioning the country as the fourth most vulnerable nation on the crisis index (UNOCHA, 2023).

Afghanistan, lacking the necessary capabilities and resources, faces considerable challenges in combating climate change (ND-GAIN, 2023). In response to these challenges, the National Policy on Coal Utilization was collaboratively developed by the Ministry of Mines and Petroleum, the National Environmental Protection Agency, the National Agency for Norms and Standards, coal companies, and experts. This policy mandates the protection of the environment and the well-being of the Afghan people across all relevant agencies (Portal, 2011).

To address the issue of illegal coal mining, the government of Afghanistan issued the National Coal Policy in 2011. This policy explicitly prohibits unauthorized mining activities and stipulates that legal actions will be taken against any instances of illegal mining, in accordance with the law. All mining operations must adhere to geological maps and possess valid licenses or work permits issued by relevant government bodies. Throughout these activities, utmost priority is placed on environmental preservation, social safety, and public health (MoMP, 2011).

How much Impact does the Climate Change Decision Have?

The decisions made during the climate change summit have significant implications, putting Afghanistan's valuable resources at risk. However, it is important to note that complete closure is not imminent, as there is still a considerable timeframe of over twenty years. Afghanistan lacks large-scale industrial factories, and the environment has not reached a level of pollution that poses a severe threat. Nevertheless, major cities,

particularly Kabul, have faced escalating environmental hazards in recent years, with the victims of the polluted environment outweighing those affected by the ongoing war (CSRS, 2019).

Another critical concern is that although Afghanistan itself does not produce greenhouse gases at a level that directly endangers the ozone layer, neighboring countries, particularly China and Pakistan, with their factories and energy centers, pose a significant risk to Afghanistan and the entire region. Numerous international agencies and media outlets report Afghanistan as one of the country's most vulnerable to climate change and suffering the most as a result. This situation arises due to the lack of robust cooperation from the international community in this domain, coupled with the Afghan government's withdrawal from climate change negotiations and conferences. Despite being one of the world's lowest greenhouse gas emitters, Afghanistan faces disproportionate consequences (Batha, 2023).

Moreover, the utilization of coal in the industrial sector brings economic benefits. With its high energy content, coal can be employed in various applications, including iron smelting, railway track production, and cement manufacturing. The Islamic Emirate can strategically utilize coal in different locations, such as railway tracks in the northern regions, cement factories in Kandahar and Herat provinces, and iron mills in Bamiyan and Herat provinces. Initiatives have already been undertaken to explore these possibilities.

However, considering climate change decisions, there is a serious threat to the extraction, investment, and utilization of coal in the forthcoming decades, jeopardizing the fate of Afghanistan's extensive natural resource.

CONCLUSION

In conclusion, this study underscores the potential impact of international climate change decisions on Afghanistan's mines, specifically coal, and the consequent risk to these valuable natural resources. As a responsible member of the international community, Afghanistan is obligated to implement climate change decisions while considering its energy requirements and utilizing its own resources. To maximize the benefits of coal, the government should explore alternative international markets for increased extraction and exports. Emphasizing domestic coal use will stabilize the economy and reduce dependence on neighboring nations. Implementing climate change decisions in a cooperative and efficient manner is essential, and the international community should include Afghanistan in important discussions to collectively address the global challenge of climate change. Sustaining Afghanistan's active involvement is crucial to achieving sustainable outcomes.

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