Abstract: The Taliban victory in Afghanistan in 2021 has not only raised geopolitical concerns but has also sparked questions about the state’s policies and strategies concerning its rare earth elements reserves. The main objective of the presented article is to indicate how the current political change in Afghanistan may affect the raw material policy regarding the extraction of rare earth elements, taking into account geopolitical factors. Rare earth elements are a group of critical minerals that are of great importance to modern technologies, ranging from electronics and renewable energy to defence systems. Afghanistan is known to possess significant deposits of these valuable resources, which have the potential to play a crucial role in global supply chains, especially in the face of ongoing rivalry between the People’s Republic of China and the United States of America. The research problem of the considerations undertaken in this article is to assess the key challenges and opportunities in harnessing Afghanistan’s rare earth element resources after the Taliban’s return to power. The research conducted shows that despite having a significant amount of rare earth elements, Afghanistan lacks the infrastructure necessary to extract and process these valuable minerals. After the Taliban victory, the newly established government sees the potential benefit in extracting rare earth elements and is willing to align itself with China to exploit them.

Key words: rare earth elements, Afghanistan, raw materials policy, Taliban

Introduction

Afghanistan has recently attracted a lot of interest due to its rich mineral resources, especially rare earth elements, which are becoming more and more important for a variety of high-tech uses. Due to its strategic location in the centre of Asia, the nation is a focus point for interests in mineral resources around the world. Significant changes have occurred in the dynamics of Afghanistan’s raw materials policy, particularly since the Taliban retake control of the nation.

The primary goal of the article is to investigate the directions in which Afghanistan’s policy on rare earth elements has evolved since before the Taliban victory and after 2021, offering an analysis of the implications for global supply chains and geopolitics. It was revealed in the late 2000s that Afghanistan had potential for rare earth elements. There are significant deposits across the country, according to surveys and evaluations carried out by the United States Geological Survey. Numerous cutting-edge technologies depend on these components, including renewable energy systems, cellphones, electric cars, and defence uses. The discovery of rare earth elements in Afghanistan presents an opportunity to diversify the sources of these elements from the major player in the global rare earth market, China.
This article is divided into four main parts. In the Introduction section the main theoretical framework of the article is presented. The second part presents an analysis of Afghanistan’s rare earth elements before and after the Taliban takeover. The third discusses geopolitical implications in the context of securing global supply chains. The article concludes with a recapitulation of the conducted considerations and indicates the main challenges to the Afghanistan’s raw material policy on rare earth elements.

The article verifies the research hypothesis, which assumes that the Taliban’s control over Afghanistan’s rare-earth element mining and export policy following their victory in 2021 has significantly impacted the global rare-earth supply chain, with potential consequences for international trade, technology development, and geopolitical dynamics.

This research objective is addressed by the following research questions: what are the key policy changes related to rare earth elements under the Taliban’s rule? What are the main geopolitical implications of the Taliban’s control over Afghanistan’s rare earth elements resources?

During the research process, the following research methods were used: comparative analysis, descriptive method, and synthesis. Finding parallels and differences between pre-Taliban and post-Taliban approaches to rare-earth elements was made possible by the comparative analysis. The author was able to highlight the diversity of geopolitical background of the studied phenomenon by using the descriptive method. Ultimately, synthesis allowed for the presentation of a comprehensive analysis of Afghan raw material policy towards rare earth elements.

The following analysis is embedded in the theoretical approach of dependency theory. Dependency theory, which originated in the 1950s and 1960s in Chilean academic circles and is situated in the realm of political economy, aims to comprehend the dynamic between developed and developing nations. It accentuates the structural dependence of less developed countries on their more advanced counterparts (Haynes, 2008, p. 20; Wilson, 2013, p. 44). Dependency theory, while traditionally applied to economic relations, can be adapted to understand how Afghanistan’s policies are influenced by its dependence on global actors and the international economic system.

**Rare earth elements in Afghanistan. Before and after the Taliban takeover**

The historical background of Afghanistan’s search for rare earth elements spans several decades. The first geological studies date back to the middle of the 20th century. Soviet geologists played a pioneering role in acknowledging and documenting the presence of rare earth elements in Afghanistan. These early inquiries laid the groundwork for further exploration, as they identified promising quantities of rare earth elements in specific geological formations (Shroder, 2014, p. 363). During the 1960s and 1970s, Afghanistan engaged in collaborative mapping efforts mainly with Soviet partners. This close cooperation was possible due to many Soviet-Afghan friendship agreements that took place between 1956 and 1978 (Ginsburgs, 1987, p. 397).

Scientific, technological, and geological help from the Soviets lead to joint expeditions identifying areas rich with rare earth elements, including the Khanneshin Carbonatite Complex in Helmand and the Badakhshan Rare Earth Deposit in the northeast. The discov-
ery enabled to begin mapping process that provided valuable information for subsequent exploration efforts. These maps not only recorded the existence of rare earth elements, but also offered details regarding the geological setting, composition, and potential economic importance of the identified deposits (U.S. Department of the Interior, US Geological Survey, 2013, p. 21). Despite early discoveries and mapping initiatives, technological limitations of that era hindered the detailed characterisation of rare earth deposits. Geopolitical turbulence in Afghanistan during subsequent decades, including the Soviet-Afghan War and the subsequent civil conflicts, disrupted ongoing exploration efforts.

The conflict disrupted ongoing exploration activities, causing an interruption in the progress of mapping and understanding rare-earth deposits. Geopolitical instability and subsequent civil conflicts impeded sustained efforts to fully exploit the identified rare earth resources during this time. Despite the challenges, the data collected and the geological understanding gained during the 1970s and 1980s were invaluable (Shroder, 2014, p. 363). The documentation of rare earth elements during this era helped advance future exploration initiatives, providing a roadmap for the assessment of Afghanistan’s mineral wealth.

Interest in Afghan deposits of rare-earth metals increased significantly after the victory of the international coalition over the Taliban in 2001. In the aftermath, the Afghan government, with the assistance of the international community, has made efforts to attract investment in the mining sector (Smelror, Hanghøj, Schiellerup, 2023, p. 70). A characteristic feature of the period after 2001 was the establishment of a more formalised and structured regulatory framework aimed at harnessing the state’s rich mineral wealth. Among the institutions that were strengthened after the fall of the Taliban regime in 2001 was the Afghan Geological Survey. In cooperation with international community, including organisations like the United Nations and states like the United States, necessary equipment and support were established. Geological surveys and investigations were carried out to gather information that would be useful in luring investments and advancing the nation’s economy. American geologists based their preliminary research basing on abandoned Soviet maps that were left behind during the evacuation in 1989 (Dobrescu, 2023, p. 28).

In 2010, an extensive geological survey was carried out throughout Afghanistan’s 34 provinces by the United States Geological Survey and the Afghanistan Geological Survey, yielding 24 particular areas of interest (Hussein, Haddad, 2021). The studies are the result of a two-part research that started in 2004 and ended in a 2007 report that included resource estimates. The first phase of the project was based on an earlier project that was supported by the United States Agency for International Development. In September 2011 years of studies were summarised and resulted in the report “Summaries of Important Areas for Mineral Investment and Production Opportunities of Non-Fuel Minerals in Afghanistan” (United States Geological Survey, 2011). According to the report, Afghanistan may contain rare earth elements such as lithium, lanthanum, cerium, and neodymium. Especially important were deposits in Helmand province, located in the southwest of Afghanistan, estimated at $89 billion (Afghanistan Extractive Industries Transparency Initiative, 2016, p. 18).

The US Department of Defence Task Force for Business and Stability Operations, which was in charge of reconstructing Afghanistan, became interested in the data in
2010 (Nojumi, 2016, p. 76). The task team estimated that Afghanistan has $908 billion in mineral resources. The growing interest in the resources of rare elements in Afghanistan shown by the United States was also an answer to the worldwide shortage of these minerals in 2010. Scarcity raised significant apprehension because China, having dominance over approximately 97% of rare earth production that year, imposed a temporary export embargo on Japan during a diplomatic disagreement (Kalantzakos, 2018, p. 3–4).

Between 2010 and 2013, the Afghan government tried to define plans for the sustainable advancement of Afghanistan’s mineral wealth, prioritising conscientious extraction, revenue generation, and the attraction of foreign investments. This process, since 2015 was closely monitored by US Special Inspector General for Afghanistan Reconstruction. In his reports, however, he underlined that there are many factors obstructing successful mining policy. Among them the most prominent were corruption, lack of infrastructure and general insecurity (Tiess, Cameron, Majumder, 2023, p. 639).

The first consolidated mining policy in Afghanistan was adopted in 2019. It referred to all mineral resources in the state and introduced specific guidelines providing more detailed directions. The main objectives of the new policy were to promote transparency in the mining industry and eliminate corruption. Through this policy, the Afghan government was looking for mechanisms to regulate illegal and unlicensed mining operations, as well as ensure that these activities will be conducted according to the principles of sustainable development (Ministry of Mines and Petroleum, 2019, p. 1). The significance of mining policy from 2019 may also be characterised by its focus on improving the quality of life of residents within explored regions and protecting the environment (Ministry of Mines and Petroleum, 2019, p. 46).

Afghan efforts to create a coherent mining policy caught the attention of President Donald Trump’s administration. During the meeting with President Ashraf Ghani of Afghanistan in 2017 both politicians agreed that both states should start efforts that would expand Afghanistan’s economy and create new jobs in both countries while assisting American companies in developing materials vital to national security. This would help offset some of the expenses of US support as Afghans become more self-reliant (Trumpwhitehouse, 2017). However, in late 2019 Afghanistan was not included in the newly established Trump’s Energy Resource Governance Initiative, whose objective was to increase mining production through multi-ateral agreements (Saunders, 2021, p. 22). The main reason for the withdrawal of the US from closer cooperation was security concerns. The Donald Trump administration’s approach often involved seeking alternative sources or reviving domestic production rather than engaging in projects in conflict-prone areas (Trumpwhitehouse, 2020). Furthermore, engaging in mining projects, especially in a complex geopolitical environment such as Afghanistan, would require the development of clear policies, regulatory frameworks, and infrastructure support, which was impossible to achieve in the situation of an ongoing conflict.

After the Taliban victory and capturing the city of Kabul in 2021, US troops as well as accompanying personal withdraw from Afghanistan. This moment opened a new chapter in Afghan policy towards rare earth elements (Rosenberg, 2022, p. 58). The US ending support for rare earth mining projects in Afghanistan has opened up opportunities for the undisputed leader in the production of the minerals in question, the People’s Republic of China (Tan, 2021).
Geopolitical Implications and Chinese Dominance

The victory of the Taliban victory in Afghanistan has raised many concerns. Among them, discussion of the broader geopolitical situation plays a significant role. Afghanistan is at the very centre of geopolitical struggles, involving both India and Pakistan, as well as China, Iran and the US. The fact that Taliban are now in control does not make the country’s minerals any less invested and significance (Montgomery, 2021).

Since the Taliban gained power in 2021, Beijing has worked to strengthen its relations with the government, despite the fact that no other foreign government has acknowledged it (Cash, Noori, Greenfield, 2023).

For China, Afghanistan holds economic and strategic value. Furthermore, Beijing perceives a chance to invest in the Afghan mineral industry, which can then be used to fund infrastructure projects in neighbouring Pakistan worth roughly $60 billion (Marlow, Curran, 2021). China has invested $630 million in non-financial direct investment in Afghanistan at the end of 2020, primarily in the areas of mining, communications, and road building (Global Times, 2021).

In April 2023 Afghan Minister of Minerals and Petroleum Shahabuddin Delawar said, during a meeting with executives of the Chinese enterprise in Kabul, that a Chinese Company, Gochin, expressed its interest in investing USD 10 billion in Afghanistan’s lithium deposits (The Economic Times, 2023). The reason for such concern is the situation that happened in August 2021, almost simultaneously around the time Kabul fell to the Taliban, when price of lithium increased eighfold.

However, it should be highlighted that currently China seems to be more interested in securing Afghan mines rather than developing them. Beijing wants to restrict the possible influence of the West in the Afghan market while securing raw materials for its own industrial growth. Strategic access to lithium resources and other minerals is critical given the global shift toward electric cars, of which lithium is a key component. China’s existing dominant position in the world market for crucial commodities would be strengthened by this access, particularly in rare earth elements used for defence and mobile phone manufacturing (Specialeurasia, 2023).

Chinese policy towards Afghan rare earth elements seems to be a long-time initiative, whose first step is to include Afghanistan in the network of dependencies. Among the most important is the „Belt and Road Initiative”. Chaining Afghanistan into that project will mark a great step forward for China to monopolise the mining sector of Afghanistan (Fazl-e-Haider, 2023). In May 2023 Afghanistan was included in the China-Pakistan Economic Forum. The agreement will on one hand help to develop infrastructure in Afghanistan while simultaneously cornering Afghan huge rare earth deposits (Schneider, 2024).

Chinese dominance in the Afghan rare earth elements mining sector could have far-reaching consequences for the global rare earth elements supply chain. Its domination could lead to a concentration of control over the rare-earth market. China already controls the global rare earth market, and greater influence over Afghanistan’s natural resources could strengthen its position. This could potentially lead to price manipulation and supply disruptions that affect the industry around the world. Such a situation could worsen the perspectives of states or organisations that are totally dependent on Chinese
supplies. That might become the main concern for the European Union, whose import needs are far greater than those of the United States.

Only 9% of the total demand for raw materials in the EU can be covered by itself. Europe accounted for only 5% of global mining in 2020 and is the only region in the world where the mining industry is in decline. China currently supplies 98% of the EU’s rare-earth elements (Polish Economic Institute, 2023).

The European Union’s demand for lithium is expected to grow 18 times by 2030 and 60 times by 2050 (European Commission, 2023). Although the EU is creating a circular economy with increased recycling capacity and domestic production, this is not enough to ensure a stable supply of its industry.

Chinese dominance over Afghan rare-earth elements could also pose significant challenges for the second largest producer of rare-earth elements – The United States. Gaining access to rare-earth mining resources in Afghanistan might disrupt supply chain vital for American defence, electronic, and renewable energy industries. The United States sources most of its rare-earth imports from China. However, that dependence has eased to 74% between 2018 and 2021, from 80% during 2014 to 2017 (Nguyen, Onstad, 2023). Such a situation could lead to further strengthening of China’s technological advantage within the most critical areas. Securing rare earth deposits located in Afghanistan might also give China a better position in diplomatic and economic relations. By increasing its already enormous mining potential, China can use rare earth metals as a bargaining chip in trade negotiations and political disputes, as it has done several times in history. China currently processes around 90% of the world’s rare earths but only generates 60% of them domestically, meaning that it imports and processes rare earths from other nations. Reinforcing its monopoly potential using metals from Afghanistan, China, might be encouraged to introduce ban limits of rare earth extraction and export and thus blackmail other global partners (Baskaran, 2024).

**Conclusion**

The Taliban’s victory and subsequent governance in Afghanistan have introduced significant uncertainty and instability to the country’s rare-earth elements sector. The lack of clear policies, regulatory frameworks, and infrastructure support may undermine the development and extraction of these critical minerals. The complex domestic situation in Afghanistan, which is characterised, for example, by the illegal influence of many local warlords controlling transport roads or even mines, raises a serious question about the profitability of extracting rare earth elements (Chandrashekar, 2021).

The Taliban’s control over Afghanistan’s rare earth deposits should also be analysed through geopolitical situation, particularly concerning China’s strategic interests in the region. Since the withdrawal of US forces in 2021, China has sought different ways to engage with the Taliban government, to secure access to its rare earth elements resources. However, the Afghan path, which may lead in the future to consolidation of Chinese dominance in the global rare earth element market, is characterised by some uncertainty. One of the key factors that can undermine Chinese efforts is political instability and security concerns (Yunus Yawar, 2022). The Taliban’s victory in 2021 and China’s growing
involvement in the exploitation of Afghan rare-earth deposits since then will not significantly affect the current supply chain of these important elements. The Chinese dominance of the rare earth elements market is undisputed even without Afghan deposits. However, considering that the United States, Canada, or European Union are looking to diversify their supply chains, including by obtaining the analysed metals through recycling, China’s securing of deposits located in Afghanistan may be a valuable investment for decades to come.

Author Contributions
Conceptualization (Konceptualizacja): Rafał Kamprowski
Data curation (Zestawienie danych): Rafał Kamprowski
Formal analysis (Analiza formalna): Rafał Kamprowski
Writing – original draft (Piśmiennictwo – oryginalny projekt): Rafał Kamprowski
Writing – review & editing (Piśmiennictwo – sprawdzenie i edytowanie): Rafał Kamprowski
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Polityka surowcowa Afganistanu dotycząca metali ziem rzadkich po zwycięstwie Talibów

Streszczenie

Zwycięstwo Talibów w Afganistanie w 2021 r. nie tylko wzbudziło obawy geopolityczne, ale także wywołało pytania o politykę i strategie państwa dotyczące rezerw metali ziem rzadkich. Głównym celem niniejszego artykułu jest wskazanie, jak obecne zmiany polityczne w Afganistanie mogą wpływać na politykę surowcową w zakresie wydobycia metali ziem rzadkich, uwzględniając czynnik geopolityczny. Omawiane metale to grupa minerałów krytycznych o ogromnym znaczeniu dla nowoczesnych technologii, począwszy od elektroniki i energii odnawialnej, po systemy obronne. Wiadomo, że Afganistan posiada znaczne złoża tych cennych zasobów, które mogą potencjalnie odegrąć kluczową rolę w globalnych łańcuchach dostaw, zwłaszcza w obliczu nieustającej rywalizacji między Chińską Republiką Ludową a Stanami Zjednoczonymi. Problem badawczy podjętych w tym artykule rozważań polega na ocenie kluczowych wyzwań i szans w wykorzystaniu metali ziem rzadkich w Afganistanie po powrocie Talibów do władzy pomimo zawiłości geopolitycznej. Z przeprowadzonych badań wynika, że pomimo posiadania znaczących ilości pierwiastków ziem rzadkich, Afganistanowi brakuje infrastruktury niezbędnej do wydobywania i przetwarzania tych cennych minerałów. Po zwycięstwie Talibów, nowo utworzony rząd dostrzega potencjalne korzyści z wydobycia metali ziem rzadkich i jest skłonny sprzymierzyć się z Chinami w celu ich eksploatacji.

Słowa kluczowe: metale ziem rzadkich, Afganistan, polityka surowcowa, Talibowie