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## TRADITIONAL PASTORALISM OR MINING? CONFLICT OF INTEREST IN ACCESS TO NATURAL PASTURES IN MONGOLIA AND THE PROBLEM OF ECOLOGICAL AND ENVIRONMENTAL JUSTICE

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**ABSTRACT:** The article deals with the problem related to the growing conflict of interest in access to natural pastures, which is the basis of nomadic pastoralism in Mongolia. The discovery of significant mineral resources (inter alia: gold, copper and coal) resulted in a huge increase in interest in their extraction and use of this potential to accelerate the economic development of the country. The open-cast mining causes the degradation of natural pastures and permanently hinders the migration of animals between winter and summer stands. This is a serious threat to traditional pastoralism, which is of high importance not only from the economic point of view, but also from cultural one. The aim of the article is to show the specificity of the issue of ecological justice in Mongolia, and to find an answer to the research question: How can ecological justice in this country be restored? Until this day there are no effective solutions to ensure fair access to areas where fossil resources have been discovered. Simultaneously, due to air pollution, and degradation of water resources, environmental health became a problem of the highest importance among Mongolians' population. Ecological justice is becoming an increasingly pressing issue in the country, that has been so far considered an example of the most successful pro-democracy transformation in Central Asia.

**KEY WORDS:** ecological justice, traditional pastoralism, mining, Mongolia, conflict of interest

## Introduction

Transition to a market economy which started in Mongolia in the early 1990s marked the beginning of profound structural and social changes. After years of economic collapse, Mongolia is currently one of the countries with impressive growth. GDP growth rate averaged 5.45 percent from 1991 until 2018, reaching an all-time high of 17.50 percent in 2011 (<https://trading-economics.com/mongolia/gdp-growth>). In the last few years, this vast but sparsely populated nation with 2.06 inhabitants per square km (2018) – has seen an astonishing boom (<http://worldpopulationreview.com/countries/mongolia-population/>). The most important source of this increase is the dynamic development of mining. It is expected that exploitation and export of mineral resources would stimulate further growth. Mining accounts for around a quarter of GDP and more than 80 percent of exports in Mongolia (Mongolia Mining Sector Overview, 2019). IMF predicts that by 2021 only Oyu Tolgoi copper-gold mine in the South Gobi region will contribute a third of Mongolia's GDP (Searching for another Oyu Tolgoi..., 2017). The country earned the nickname *Minegolia* (The Guardian 23 April 2014). Some warned of "the resource curse" (Moran, 2013), thus, the issue of ecological justice is particularly important.

In Mongolia the problem of environmental and ecological justice is a new issue. It has appeared and is growing due to the economic and social changes taking place in this country mainly due to two reasons: expansion of mining and climate change. They are a threat to traditional pastoralism, which for hundreds of years was the basic form of economic activity, provided livelihoods for thousands of shepherd families and ensured permanent access to natural pastures. The pastures were used as a common good in a way that enabled their natural regeneration.

The previous assumptions regarding the finding of many precious mineral resources in Mongolia have been confirmed by large-scale geological research conducted since the 1990s. The inflow of foreign capital enabled the expansion of the old and the construction of new mines. Discovering of new gold deposits stimulated also illegal mining operated by artisanal or so-called "ninja" miners. Questions about the social and ecological costs of both legal and illegal mining expansion gain in importance.

In the article, the issue of ecological justice is discussed in relation to the threats that the expansion of legal and illegal mining brings to nomadic shepherding. The aim of the discussion is to show the specificity of the issue of ecological justice in Mongolia and to find an answer to the research question: How can ecological justice in this country be restored?

## Methods of research

The research was conducted in 2019. The following methods were used:

- literature studies related to history of ecological justice,
- analysis of statistical data on mining and pastoralism in Mongolia in 1995-2018 based on: yearbooks; reports written by IMF, the World Bank, and the Bank of Mongolia,
- searching for online sources to identify social protests against the appropriation of pastures by mines,
- questionnaire survey among herders who lost their livestock.

Collected data made it possible to assess the situation among Mongolian shepherds who cannot continue nomadic shepherding because of the conflict with the mining sector.

## Definition of ecological justice – literature review

The discussion about ecological justice was initiated in the USA in the 1960s and resulted mainly from the deterioration of the environmental living conditions of the colored population. This was connected initially with the location of landfills, including hazardous waste, in the neighborhood of districts inhabited by Afro-Americans. However, the environmental justice has a wider dimension. It also covers the problem of appropriation of land belonging to the indigenous population by mining, transport or agricultural enterprises. This is usually the beginning of a degradation of nature and the cause of numerous conflicts in which the original inhabitants are in a hopeless position. This is especially true for both Americas and Australia. For the indigenous people, the possession of land is of great economic and cultural importance. Hunting, fishing and gathering are the main sources of their livelihood. These areas are also a treasury of memorabilia of the past, a place of burials of ancestors and religious cult (Krysińska-Kałużna, 2002, p. 39; Surrallés and Hierro, 2004).

Since 1990s the ecological justice has been broadly discussed in literature. It is worth to mention publications of Eckersley (1992), Pulido (1996), Dobson (1998, 1999), Low and Gleeson (1998). Eckersley focused on a broad environmental political theory, in turn, Pulido described issues of environmental justice struggles in the US southwest. She has argued that environmental movements of the poor focus not only on economic justice, but also on cultural identity and survival as an element of environmental justice (p. 29-30). The differences between the ideas of environmental justice and ecological justice have been discussed. The first is often used to describe the relationship among people regarding environmental goods and bads, while

the second is used to discuss the relationship between people and the rest of the natural world (Low and Gleeson, 1998). The environmental justice, is focused primarily (but not entirely) on human health, and ecological is focused on our treatment of nature. In turn Dobson examined the relationship between distributive notions of social justice and understandings of environmental sustainability. He argues, poverty is often identified with environmental degradation, and relative wealth determines access to environmental goods or, (at least) avoidance of bads (1998, p. 17).

In accordance with Environmental Protection Agency from US, where the term *ecological justice* was born, it is defined as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies”. This goal is achieved when everyone enjoys:

- The same degree of protection from environmental and health hazards, and
- Equal access to the decision-making process to have a healthy environment in which to live, learn, and work (EPA, <https://www.epa.gov/environmentaljustice>).

Fair treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies.

In the context of ecological justice, Mongolia has appeared as a subject of scientific inquiry only recently. When the Mongolian nomads declare that natural steppe is their pharmacy, market, university, factories and warehouses of household appliances, they speak about economic reality, hardly understandable by those, who do not live from traditional pastoralism. Another important aspect is the cultural dimension of the inhabited space. It is filled with elements of symbolic and spiritual significance. Territory is not just the sum of the resources it contains. The use of land and natural resources always has two interrelated aspects: material and cultural. The first is responsible for survival in the physical sense, the second for the possibility of continuing the traditional lifestyle and preserving spiritual and religious values.

The issue of property rights is of key importance to the emergence of problems with fair access to the environment. Groups potentially or actually exposed to the negative impact of the changes in natural environment, are usually not entitled to participate in deciding on the ways and scope of its use. They also have no guarantee that their needs and expectations will be considered accordingly with a sense of ecological justice (Hill, 2014).

As regards natural goods which for centuries have been used as common goods, property rights had never been formally specified. The use of pastures in Mongolia by nomadic herders was so far free of the “Tragedy of the commons”, described by G. Hardin (1968). It met standards discussed among others by E. Ostrom (1990). Nowadays governments treat such land as state-owned and dispose of them freely without paying attention to the property rights of aboriginal users and herd owners. The ecological (and environmental) justice issue arose because of a lack of respect for traditional ownership of natural pastures and degradation of nature in mining regions.

### Pastoralism and mining in Mongolia in the light of statistical data

In Mongolia there are over 100 types of pastures, on which more than 2,000 different grasses and herbs grow (Enkhtuvshin, 2001, p. 20). It gives a unique opportunity for breeding animals, which stay whole year in the steppe. For centuries, herders led the nomadic lifestyle wandering across the grasslands with their animals, building, packing, and rebuilding their traditional gers. As a consequence of the privatization process in agriculture since 1990s, the total number of livestock animals has increased significantly. According to Mongolian Statistical Information Service data, in 1970 there were 22.5 million livestock, in 1980 – 23.7 million, in 1990 – 25.8 million, in 2000 – 30.2 million, and in 2018 – 66.5 million, including: sheep 30.5 m, goats 27.1 m, cows 4.4 m, horses 3.9 m and camels 0.5 million (Mongolian Statistical Information Service, [http://www.1212.mn/stat.aspx?LIST\\_ID=976\\_L10\\_1](http://www.1212.mn/stat.aspx?LIST_ID=976_L10_1)).

Currently, the land management of pastures is regulated by the Land Act, which was passed in 1994. In general, land is state-owned and used jointly by shepherds in specific administrative areas. This means that pastures are treated as a good with free access, which is associated with the lack of sufficient care for their condition. The 38th resolution of the State Great Khural (parliament) in 2003, stressed the need to create a new law regulating the principles of using pastures. The issue came back in 2010 in connection with the implementation of the Mongolian herds program. Despite the fact that the matter is crucial for the functioning of a very important sector, nothing has been determined so far. With the increase in the population of livestock, the problem of a significant deterioration of the condition of land and pastures arose due to the existing system of land ownership. Mongolia is one of the most sparsely populated countries in the world with population barely over 3 million inhabitants of which the third part lives in the capital Ulaan-

baatar. Over 153,000 herder families live in the country, for whom shepherding is not only business but also a lifestyle (Vernooy, 2011). The dynamic changes taking place nowadays in Mongolia's economy are based mainly on the extraction of minerals. For a long time it has been known that the country is rich in mineral resources. The searches carried out on a large scale in 1990s confirmed the earlier assumptions. The country's richest resources are the following minerals: coal, copper, fluorite, gold, iron ore, lead, molybdenum, oil, phosphates, tin, uranium, and wolfram. According to estimates, the value of reserves of the 10 largest mineral deposits in Mongolia exceeds USD 1.3 trillion. There are approximately 8,000 deposits, including 1,170 deposits of over 80 different minerals. Because only 27 percent of the country's area has been surveyed, many locations of raw materials can still be discovered (Overview of Mongolia's Mining Industry, <http://sesprofessionals.com/overview-of-mongolias-mining-industry/>). The Mineral Resources Law was first issued in 1997, and since that time it has been revised in 2006 and amended in 2009 and 2014. The Law regulates the relations between the activities of the mining sector and environment and socio-economic sectors. The changes were due to the need of a more tailored approach, which would take into account Mongolia's unique location and development trajectory. According to the Mineral Resources Law, mineral resources are the State's property. They were divided into three groups according to their importance and use in the economy: strategic, common and conventional. A deposit is considered strategic when its potential affects national security and the economic and social development of the country or when its exploitation may provide more than 5 percent of the total GDP of the country. The Government of Mongolia considered as strategic 15 deposits of coal, copper, molybdenum, uranium, gold, silver, phosphorus, zinc and lead (art. 4.1.12.). Whereas a common deposit (Article 3.3) is a deposit of sediments and stones used as building materials. Other deposits are included in conventional deposits (<http://www.legalinfo.mn/law/details/63?lawid=63>).

In 2008, the new standards on restoration of mining sites and "A guideline and methodology to identify ecological and economic damages resulted from adverse environmental impact of mineral resource exploration and exploitation" were introduced.

On 1 July 2014, the Great Khural passed amendments to the Mineral Resources Law which reflect the new State Minerals Policy. This policy aims to:

- establish a stable investment environment,
- improve the quality of mineral exploration, mining and processing,
- encourage the use of environmentally friendly and modern technology,
- strengthen the competitiveness of the Mongolian mining sector in the international market.

This document emphasizes the importance of the mining sector in the country's economy. The environmental issues are mentioned but without caring about ecological justice.

The mining sector has been dominated by three main actors – Tavan Tolgoi (coal producer), Oyu Tolgoi (gold and copper) and Erdenet (copper and molybdenum) (International Journal of u- and e- Service, Science and Technology, 2016). Due to huge deposits of mineral resources Mongolia has become the object of interest of foreign investors. It was a chance for the country to enter the pace of a rapid growth. In 2013, three large-scale mining projects were launched. Extractive companies such as Rio Tinto (Australia), Turquoise Hill Resources (Canada) and Erdene Resources (Canada) are expanding their operations in the country. To date, Rio Tinto and its partners are investing more than USD 5 billion in an underground expansion project that will extract 560,000 tonnes annually from 2025 to 2030 (Mongolia Foreign Investment, FDI in Figures).

According to the Bank of Mongolia, FDI flow to Mongolia amounted to USD 2.1 billion in 2018, up from USD 1.4 billion in 2017, due to higher metal prices (Investment Protection Council). It is worth emphasizing that as much as 79 percent of FDI were located in mining sector (<https://montsame.mn/en/read/13323>).

## Conflicts between herders and mining companies

Unrestrained movement of shepherds and their herds becomes more and more difficult not only because of opencast mines which have appeared on their way. Mining, exhausting water resources which until now were the basis for the functioning of local communities destroy traditional pastoral economy. As mentioned by M. Tolson (2012), Oyu Tolgoi and the coal mine Tavan Tolgoi only in their exploitation phase, together use four times more water than all herders' livestock combined in the Gobi provinces. This is aggravated by the diversion of river courses and the influx of migrant workers to the region, who are employed at the mine. As a result over 20 wells and springs in the area have dried up.

Table 1 presents the data about demonstrations of herders against mining companies. From the administrative point view Mongolia is divided into ajmags, soums and baghs where bagh is the smallest administrative territorial division comprising a population of approximately 500 people and soum – of about 3000 on average. Large mining soums comprise 15,000 people.

**Table 1.** Demonstrations of herders against mining companies 2013-2019

Place	Location area	Number of herders	Date	Mining company name	Reason of demonstration
Javhlant bagh /South Gobi aimag/	250 km <sup>2</sup>	90 herders	01-July-2013	"Rio Tinto, Ivanhoe Mines and Erdenes" LLC	The herders' families were negatively impacted by the project.
Gavlit bagh /South Gobi aimag/	250 km <sup>2</sup>	90 herders	01-July-2013	"Rio Tinto, Ivanhoe Mines and Erdenes" LLC	Water, pasture and reserve pasture, winter and summer camps were affected by the projects.
Galuut soum, Bagh #3 /Bayankhongor aimag	6 km <sup>2</sup>	120 herders	09-Oct-2017	"Tulga Jargalant" LLC	Herders and livestock's water wells and pasture were affected by the projects.
Noyon, Bayandalai and Gurvantes soum /Umnugobi aimag/	140 km <sup>2</sup>	Citizenry of three bagh's	03-Sept-2018	"Javhlant Ord" LLC, "Terra Energy" LLC, "Usuh Zoos" LLC	Mining dust affects herders' and livestock's health. Animals with black lungs were found or herders had a chronic cough.
Durvuljin soum / Zavkhan aimag/	*	Whole bagh's citizenry / around 400 people	March-2019	Unknown LLC	Herders' winter camps were destroyed by the mining projects. No place for keeping herds during harsh winter and protect from cold wind.

Sources: author's own work based on: <https://news.mn/r/511749/>; [https://www.ebrd.com/downloads/integrity/OT\\_addition\\_to\\_the\\_complaint\\_4.2014.pdf](https://www.ebrd.com/downloads/integrity/OT_addition_to_the_complaint_4.2014.pdf); <https://www.facebook.com/SBNMongolia/videos/>; <http://unuudur.mn/>; <http://www.bolod.mn/mobile.php?nid=94829>

Although the number of protests and their participants mentioned in the Table 1. may seem small, we must remember that Mongolia belongs to the least populated countries in the world (for example, around 180 shepherds keeping mostly goat, sheep and camel, live in two baghs Javhant and Gavlit (South Gobi province) on an area of about 250 km<sup>2</sup>). The hotspots of the protests varied. Oyu Tolgoi – one of the biggest copper-gold mines in the world, caused a lot of controversy. The mine is located in one of the driest areas in Mongolia. Herders worry that Oyu Tolgoi is draining the region's water supply, since it uses more than four billion liters of water a month (Searching for another Oyu Tolgoi). Explaining how this has changed the lives in the region, a local herder says: "Water levels are decreasing; our household can only sustain 60 animals instead of 200. This is not sufficient for earning a living; it is even hard to feed the family." Another said: "I was not resettled by (Oyu Tolgoi), but I am one of many who had to move without compensation, because of no water." The company's answer to these problems is to shift the responsibility to the herders asking them to reduce the amount of animals to save water (The Guardian, 9 March 2015).

The complaints also relate to negative impacts caused by construction and use of all project-related roads associated with two financed mining operations: (1) Oyu Tolgoi LLC's copper mining operation; and (2) Energy Resources LLC's coal mining operation at Tavan Tolgoi. The protests in the period July–September 2013, were conducted by nomadic herders of Javhlant bagh in Khanbogd soum, and of Jargalant, Uekhii bagh in Manlai soum. Herders have also sent written complaints and e-mails with the help of Oyu Tolgoi Watch – the knowledge hub involved in realization of UN Convention to Combat Desertification (<https://minewatch.mn/?lang=en>).

The 105-kilometer Oyu Tolgoi-Gashuun Sukhait route – an unpaved road – has been used by investors since around 2010 to deliver materials to the Oyu Tolgoi site from China. The death of a brother of one of the complaining herders in an accident with a road construction truck along this road due to low visibility caused by dust was an impulse for the protest.

In desert regions, heavy vehicles driving on unpaved roads raise huge amounts of dust. It adversely affects the health of herders and results in an increase in respiratory illnesses, such as bronchitis. In addition, dust, noise and water pollution directly harm the health of livestock. Due to emotional stress animals are experiencing poor weight gain and low fat gain, which makes it less likely that they will survive the harsh South Gobi winter. Livestock that graze near the roads are dying off and, in most cases, are found with black lungs as result of inhalation of dust. The decrease in quantity and quality of livestock has an adverse economic impact on herders. These factors provoked protests against “Tulga Jargalant” LLC in the Galuut bagh (Bayankhongor province), and against “Javhlant Ord” LLC, “Terra Energy” LLC, “Usuh Zoos” LLC in the Noyon, Bayandalai and Gurvantes soum in Umnugobi aimag.

The mining sector brings significant economic benefits to Mongolia, but their distribution is uneven. When poverty in country dropped by more than 11 percent between 2010 and 2012, predominantly within cities, nomadic people and rural communities continue to live in high levels of poverty, with very limited access to running water or electricity (Searching for another Oyu Tolgoi, 2017). To meet the growing public interest in the possibility of benefiting from profits from the mining boom in 2008 Great Khural passed a National Development Strategy and created a Human Development Fund (HD-Fund) with the ambitious goal of bringing Mongolia's human development status to the same level as that of the developed countries by 2020. In 2009 the HD-Fund was established. Initial capital for it was drawn from the Oyu Tolgoi mine project. The goal of the fund was to transfer a portion of natural resource revenues on an ongoing basis to the entire population. The fund gives out cash, pays tuition fees, and possibly engages in other social

expenditures. In 2010 every citizen received two cash handouts equivalent to approximately USD 90 per year. In 2011 cash handouts equaled about USD 180 per year, with one-quarter in the form of tuition fee support (Moran, 2013, p.4.) Unfortunately the fund has stopped working on 5 February 2016 (<https://www.legalinfo.mn/law/details/559>).

## Conclusions

In the past two decades, Mongolia has experienced an enormous mining boom. There are dozens of large-scale mines with many more being planned. However, the country and particularly the Gobi Desert is more than a vast store of mineral deposits. It is also home to people, mostly herders' families, and to many plants and animals now endangered because of rapid environmental degradation. The greatest challenge for the next generations of Mongolians is to strive for ecological justice. As it was confirmed in research conducted in recent years mostly by foreign civil society organizations the lack of ecological justice is becoming a huge problem in this country with a young democracy. Particularly it is a threat to the indigenous people living in the Oyu Tolgoi region, where one of the world's largest projects of extraction of copper and gold has been developed. Some communities don't have access to clean water, safe living conditions, and environmental protection. The degraded regions are called "sacrificed zones". The nomads and mining companies are competing with each other for the same resources – land and water. The nomads need the land and water to sustain their herds and livelihoods, while the mining companies search for more land to expand their extraction sites, and need large quantities of water to perform mining operations. Too little attention is paid to the risk of resource nationalism in Mongolia, which is a growing and serious concern. The environmental and social impact of resource extraction on natural pastures and herders' families has not only been underestimated. It seems it has been ignored by politicians in Ulaanbaatar. The destructive impact of mining is amplified by the climate change.

The ecological justice is focused on the treatment of nature by the people. In turn, the goal of environmental justice is to ensure, that all people are protected from disproportionate impacts of environmental hazards. It is important to maintain a healthy environment, especially for those who have developed, and were able to protect nomadic culture for over 3000 years. In Mongolia, the lack of both environmental and ecological justice is growing rapidly due to the expansion of mining on an unprecedented scale. Rehabilitation of land after exploitation is very costly; therefore most mining companies leave exploited area without its revitalization. To enhance environmental and eco-

logical justice, Mongolia needs government policies, not only environmentally friendly, but also nomadic culture friendly. The suffering of the many pays for the luxury of the few. So far there are no effective solutions to ensure fair access to areas, where fossil resources have been discovered. The collapse of the Mongolian's Human Development Fund after few years of its functioning is the best evidence of weakness of the political institutions in this country. Answering the research question: How can ecological justice in this country be restored?, it is recommended: development of a law protecting land ownership enabling a fair distribution of the benefits of exploiting Mongolia's natural resources – both minerals and natural pastures; capacity building for land degradation neutrality, sustainable land management, and combat desertification. It is also worth considering re-launching the human development fund. Funds should be collected to ensure long-term sustainability in line with the principles of ecological and environmental justice.

### The contribution of the authors

Małgorzata Burchard-Dziubińska – 50% (theoretical part and methodology of research).

Tsolmontuya Myagmarjav – 50% (research part).

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