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## ПРОБЛЕМЫ ОЦЕНКИ ОПЛАТЫ ЗЕМЛИ В ГОРНОЙ ПРОМЫШЛЕННОСТИ МОНГОЛИИ

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После перехода на рыночную экономику в Монголии использование природных ресурсов стало без контрольным. В результате чего, загрязнение окружающей среды, деградация и истощения природных ресурсов так увеличилось, что для восстановления окружающей среды сейчас потребуется огромное количество средств. Сегодня 19.9% всей территории Монголии занимает земля на горную промышленность. Методы и модели, использующие для расчета экологического ущерба и экономической оценки, являются несовершенными. В Монголии отсутствуют нормативные документы для экономической оценки земли, а также методика оценки.

Ключевые слова: оценка земли, сборы, оценка участка шахты, оплата.

### PROBLEM OF LAND VALUATION AND LAND PAYMENT IN MINING AREA

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After the transition to a market economy in Mongolia was the use of natural resources without control. As a result, environmental pollution, degradation and depletion of natural resources increased so that the restoration of the environment now require an enormous amount of money. Today, 19.9% of the total territory of Mongolia is land for mining. Methods and models used to calculate the environmental damage and economic evaluation, are imperfect. In Mongolia, there are no regulations for the economic valuation of the land, as well as methods of assessment.

**Key words:** land valuation, fees, evaluation of the mine site, payment.

## Study in legal framework

Legal basis of nature resource and economic assessment of damage to the environment is one of important tools for properly land usage

Valuing ecological and economic assessment due to the environmental pollution, compensating for environmental damage would be implemented in case of at least proper ecological science and its best broaden practice.

The chronological table "History of the legal acts of the Land of Mongolia" was compiled to study the legal acts of the Land of Mongolia [2]. (Shown in Table 1).

Table 1
The history of legal acts of the Land of Mongolia

Number	Legal	date
1	Law on land	1913
		1921
		1925
		1971
		1994
		2002
2	Law on land fees	1997
3	Law of mongolian allocation of land to citizens for ownership	2002
4	Law of mongolia geodesy and cartography	1997
5	Law of mongolia cadastral map and land cadastre	1999

In 1997 "The Law on Land" and "The Law of Land Fees" was approved by Great State Assembly. Also 152<sup>th</sup> decision of Mongolia Government is gone in legal frame the land payment system depends on these consist of legal acts.

That's mean land fees values are by main law and other acts arrangements6

"Law on Land", "Law on mineral resources" and "Law on underground wealth" were adopted in 2002, 2006, and 1997 and amended 27, 30 and 4 times respectively. Chart 1, 2 shows the changes in the laws of the Land of Mongolia.

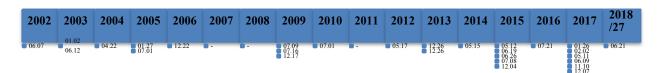


Chart 1. Chart of addition on the "Law on Land" of Mongolia

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 /30
12.19	01.08 07.16 07.16 10.15	07.01 11.25	02.10 12.23	05.17 05.17	10.03	01.09 01.24 05.15 07.01 07.01	01.23 02.13 02.18 02.18 06.04	02.04 02.04 11.10 12.10	05.18 11.10	06.21

Chart 2. Chart of addition on the "Law on mineral resources" of Mongolia

In the "Law on Land Fees" in Mongolia, a rating of compensation payments for mine requirements is given, as shown below:

- As per article 7.4 titled under "Amount and percentage of land fee" it is stated that: the fee of a mining operation field shall be set twice as high as that of the zone of agricultural land rating, or city, village, or other settled place existing on the field prior to the start of mining.

According to the legal environment related to these laws, following items were reflected as a land valuation, fee and its estimation (Figure 1).

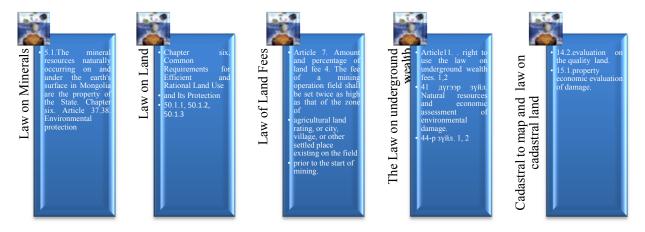


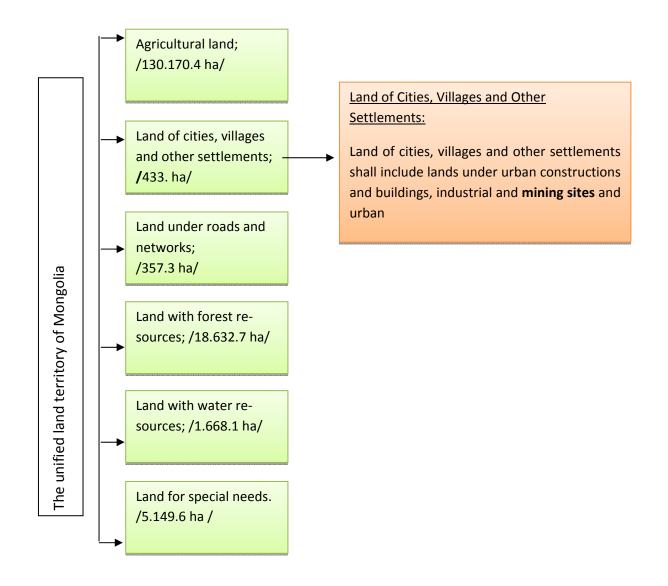
Figure 1. Land valuation, fees and its estimation in legal acts

Regardless of the form of ownership, all land within the borders of Mongolia constitutes a unified land territory. The unified land territory shall be classified based on the general purpose, of its use and the need for its use.

Some classification of land resources such as agricultural area, urban area, forest and water area, that is specified in the "Law on Land" of Mongolia of 1997 (Shown in Scheme 1).

Principles of hand base valuation area legislated in topic 5.2 of "Law on Land Fees".

- 1. The land base rate shall be determined by the Government.
- 2. The following principles shall be followed in establishing land base rate:
- the land rate of cities, villages, and other settled places shall be determined depending on their rank, location, engineering facilities, social, economic, engineering, geological and environmental conditions and their utilization purpose
- rates of lands except those referred in one of this paragraph shall be determined differently for each zone depending on their purpose of use, geographical location, and as well as income differential caused by the land fertility and yield.
- Division of unified land territories by integrated natural and territorial conditions into rating zones and the value ratings of cities, villages, and other settled places shall be determined by the Government.



Scheme 1. The unified land territory of Mongolia

As stated in the "Law of Land Fees" of Mongolia compensation payment rating of mine claims is directed as below:

As per 5/39th order (went into effect in 2010) promulgated by Citizens' representatives meeting of capital city of Mongolia land zoning has been revised to inform land cost estimation applicable to the land of the capital city. According to the revised zoning mining land has been categorized to 4th and 5th circle of zoning estimated cost of 32\mathbb{T}/m2 where actual mining exploitative activities are in process and 20\mathbb{T}/m2 where mining industrial areas are located [7].

As per 531st order (went into effect in 2011) endorsed by the Administration of Land Affairs, Construction, Geodesy and Cartography the guideline has been introduced to the public on the estimation of compensation payment of land use as following;

1. Compensation payment rating of the land entitled as quarrying, spoil dump, wetland (man-made lake), nearby the road structures and pipelines in use. Compensation payment rate shall be set twice as high as that of the highest permissible level of

annual payment rate per hectare due to the identified category of zone of agricultural land rating, or city, village, or other settled place existing on the field prior to the start of use.

- 2. Compensation payment rating of the land requested to use for the miners' residency, dressing and processing plant, administration office of the industry, machinery repair site and automobile parking. For the requested purpose of use the land fee range for per hectare shall be set at 0.03% of base rating of the land laid in the nearest city, village, or other settled place.
- 3. Compensation payment rating of the land will regard this guideline for land price estimation if permitted land is categorized to the zoning of forestry and water basin. The compensation payment rate shall be set twice as high as of the nearest city, village, or other settled place [8].

# Case study on "Baganuur" coal mine:

Baganuur is also accessible via 138 km of paved road completed in 2004. Baganuur is actually a separate city, located as an exclave of 620 km<sup>2</sup> at the border between the Töv and Khentii aimags. Later the largest open pit coal mine in Mongolia was built here. Baganuur city is one of the largest industrial production locations in Mongolia, and would rank among the country's ten largest cities.

As of the year 2017, Land of cities, villages and other settlements shall include lands under urban constructions and buildings 78.0 ha, and urban common tenure land and land under possession 324.2 ha, industrial sites 44.1 ha and mining sites 319.0 ha, and urban common tenure land and land under possession, utilization of citizens, economic entities and organizations 74.8 ha [2].

A comparative table of the innovation of the Land of cities, villages and other settlements for 2016 and 2017 is shown in Table 2.

Table 2
A comparative table Land of Cities, Villages and Other Settlements

№	Basic Classification of the Unified Land Territory	2016	2017	Difference (ha)
1	Land of Cities, Villages and Other Settlements	753.6	840.1	86.5
2	Constructions and buildings	77.6	78.0	0.4
3	Common tenure land	324.7	324.2	-0.5
4	Industrial land	43.5	44.1	0.6
5	Mining sites	236.1	319.0	82.9
6	Utilization of citizens	71.7	74.8	3.1

The applied method in the estimation of compensation payment rate for land use for mining claims in "Baganuur".

Total area of the mine is 3168.9 hectare and total amount of compensation payment is 253152000₹. As of the year 2017, payment is 274150 000₹.

"Baganuur" coal mine is situated in the outskirt of the capital city Ulaanbaatar. Given its location it is due to fall in the 5<sup>th</sup> zone according to the land zoning system of the capital city. As per 5/39<sup>th</sup> order (went into effect in 2010) promulgated by Citizens' representatives meeting of capital city of Mongolia land zoning has been revised to inform land cost estimation applicable to the land of the capital city. According to the revised zoning mining land has been categorized to 4<sup>th</sup> and 5<sup>th</sup> circle of zoning estimated cost of  $32 \mathbb{F}/m^2$  where actual mining exploitative activities are in process and  $20 \mathbb{F}/m^2$  where mining industrial areas are located.

- The area of mining where actual exploitation is taking place is 1145 hectare and denoted here as  $S_{exp}$ ;
  - The occupied area for industry is 767 hectare and denoted here as  $S_{ind}$ ;
  - The area of reserved to the date is 1256.9 hectare and denoted here as  $S_{res}$ ;

$$S_{exp}$$
11450000 $M^2*32$  $\$=366400000$  $\$$   
 $S_{rese} = 7670000M^2*20$  $\$=153400000$  $\$$ 

Total compensation annual payment is:

$$S_{total} = S_{expl} + S_{rese} = 366\ 400\ 000 \\ \$ + 153\ 400\ 000 \\ \$ = 519\ 800\ 000\ \\ \$$$

Table 3
Comparative review of the compensation payment for "Baganuur"
coal mine between theoretical and practical levels

"Baganuur" coal mine		Area size	Compensa	Difference	
		/ha/	Practical level/₹/	Theoretical level /₹/	/₮/
Baganuur	Expl	1145	Doesn't estimated	366 400.0	
	Indu	767	in distinctive, but	153 400.0	
	Rese	1256.9	in total area	0	
TOTAL		3168.9	253 200000	519 800 000	266 800 000

Mining site is classified into two section as a "Mining exploitation area" and "Mining production area", so the land fee is estimated in two different ways.

#### **Conclusions**

This paper presents recent research on the value of land in Mongolia in order to establish a new charge for the use of the land of the Baganuur coal mine, and also the following conclusions:

- 1. In an environmental assessment under the mountain land not included damage caused to the ground as such.
- 2. There is not any specified reference related to calculation of unused part of the mining area in the law on land fee and its guidance.

3. It was determined that there is not any particular guidance on the land fee calculation and charging.

# In the future

- 1. Development of methodology for the environmental assessment of land disturbed by mining operations
  - 2. To adopt the guideline in the context of charging land fee,
- 3. To emphasize the issues related mining area to separate from the cities, villages, and other settled places of the unified land territory,
  - 4. To improve the economic valuation of land caused by damages

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