AUM mine and its impact on Ult and Buuruljut valleys in Central Mongolia

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Introduction and justification

AUM Ltd. runs a gold mine on an alluvial deposit along Ult and Buuruljut rivers, both tributaries of Ongii river in Uyanga soum, Ovorkhangai aimag.

The company began its operation in 2008 after buying the license owned by Erel Ltd. that was running a placer gold mine since 1992. By law, purchase of the license of Erel Ltd. does not release AUM Ltd., from the environmental damages caused by Erel Ltd. Therefore, AUM Ltd., has responsibilities to rehabilitate the areas where rehabilitation has not been done.

Since 2006, United Movement of Mongolian Rivers and Lakes NGO (UMMRL) had worked on developing and promoting the “Law to Prohibit Mining Operations at Headwaters of Rivers, Protected Zones of Water Reservoirs and Forested Areas”. Eventually it was approved by the Parliament of Mongolia in July 2009.

Mongolian citizens and non-governmental organizations did not have the right to claim for damages caused on the environment- only local and district governors had the right. Therefore, UMMRL drafted amendments on the law on Environmental Protection in order to create rights allowing citizens and legal bodies to claim for damages caused to the environment from faulty party. On July, 2008 the amendments were successfully passed by the parliament.

242 placer gold mining licenses were suspended under the “Law to Prohibit Mining Operations at Headwaters of Rivers, Protected Zones of Water Reservoirs and Forested Areas”. However, the law is not being completely enforced and damages to the environment are rising substantially.

In 2010, The Ministry of Environment and Tourism initiated studies to estimate the damages caused to the environment and contracted environmental assessment companies to undertake this work. According to this estimation, the damages caused by AUM Ltd. on the environment is 32,788,334 MNT (17,628 million USD).

The licenses of AUM Ltd. includes areas where the “Law to Prohibit Mining Operations at Headwaters of Rivers, Protected Zones of Water Reservoirs and Forested Areas” is effective.

Although AUM Ltd continues to operate illegally. In 2011, UMMRL and local people organized a horse march in order to demand the company to follow the law and successfully stopped its operation. AUM Ltd has still not paid for the damages and even started its gold mining activities again in 2014. The company has also contracted around 40-50 small companies to undertake mining in its licensed area and the damages to the environment have been increasing significantly.

Local communities have expressed their concerns several times on the environmental and social impacts that this company has caused to the Ult river as well as the Buuruljut and the Ongii rivers. Major concerns have been addressed in relation to human rights of local communities. In particular, water scarcity and water quality have been the focus of local communities along with human rights on food, land and territories, and health.

The main focus of this study is to understand the human rights violations linked to the extractive activities in the Ult and Buuruljut valleys and also understand the environmental situation of the area. The staff of Source International visited the area for three weeks during August 2015 to analyze human rights abuses and water and sediment quality in the two valleys.
2.1. Mongolian Law to Prohibit Mineral Exploration and Mining Operations at Headwaters of Rivers, Protected Zones of Water Reservoirs and FORESTED AREAS

The Mongolian Law Prohibit Mineral Exploration and Mining Operations at Headwaters of Rivers, Protected Zones of Water Reservoirs and Forested Areas, was first approved by the parliament in July 2009 and then amended and modified in July 2010.

The law states that:

- **Art. 1.1** [...] prohibit mineral exploration and mining operations in headwaters of rivers [...] 
- **Art. 4.1** Mineral exploration and mining operations are prohibited at headwaters of rivers [...] within the territories of Mongolia
- **Art. 4.5** Exploration and exploitation licenses shall not be issued for the lands specified in article 4.1 of this law.

Despite these laws, more than 10 km of the Ult river and more than 5 km of the Buuruljut river are occupied by the mining operation of AUM company as shown in this picture. The headwater of Ult river is completely occupied by mining activities for its the 10 km until reaching the Buuruljut river. This make impossible to all inhabitants of the valley to access the clean water as they have to drive upstream of the mine in order to get water.
Violations of Human Rights laws

3.1. Human Right to land and territory

The right to land, usually considered as part of the right to individual property, assumes a completely different meaning when it comes to indigenous or nomadic peoples. In central Mongolia, all populations are nomadic and nomadic people have a particular conception of land and territory. For nomadic people, land is not a means of production or a possession. In their worldview they don’t own the land, but they use it in order to grow the cattle. They normally use a piece of land for a season and then move to another area of land for the following season. With this in mind, it is understandable that including the right to land with the right to property does not make any sense. In this sense they do not consider land as a good, they use it as a commons. For nomadic peoples the right to land and territory is a collective right and not an individual one.

Even if Mongolia has not ratified any international mechanism on the protection of Indigenous Rights and the State of Mongolia does not recognize nomadic herders as indigenous groups, we can refer to them with a concept expressed in the United Nations Declaration on the Rights of Indigenous Peoples, which Mongolia has voted for.

Article 26 of the United Nations Declaration on the Rights of Indigenous Peoples state that:

(1) Indigenous peoples have the right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired.

(2) Indigenous peoples have the right to own, use, develop and control the lands, territories and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired.

(3) States shall give legal recognition and protection to these lands, territories and resources, such recognition shall be conducted with due respect to the customs, traditions and land tenure systems of the indigenous peoples concerned.¹

In article 29 (1) the Declaration adds:

Indigenous peoples have the right to the conservation and protection of the environment and the productive capacity of their lands or territories and resources.²

In both Ult and Buuruljut valleys nomadic herders are deprived of their traditional land and resources of grass and water. According to the local people we interviewed, around 200 families have been displaced from Ult valley and roughly 100 families has been displaced from Buuruljut valley.

Although the concept of displacement can sound meaningless in a nomadic population, this is not the case. Nomadic people move from one grassland to another, but normally this peregrination takes place in the same area year after year. The herder perceives these valleys as their land and their home.

Some families that have been forced to move out of these valleys have been living there for several generations. Now, they have been forced to move to cities such as Arvaikheer or Ulaanbaatar where they will be completely detached from their culture and their traditions.

¹ United Nation Declaration on the Right of Indigenous People (2007)
² United Nation Declaration on the Right of Indigenous People (2007)
3.2. Human Right to water

Several international treaties and conventions recognize the human right to water as a fundamental right. The clearest definition of the human right to water has been issued by the United Nations Committee on Economic, Social and Cultural Rights in its general comment 15 in which it states:

*The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses.*

The human right to water places the main responsibilities upon governments to ensure that people can enjoy “sufficient, safe, accessible and affordable water, without discrimination”. More specifically, governments are expected to take reasonable steps to avoid contaminated water supplies and to ensure that there are no water access distinctions amongst citizens.

The most complete document on the right to water is the United Nation Declaration on the Human Rights to Water, recognized on 28 July 2010, through Resolution 64/292, by the United Nations General Assembly. According to the declaration water must be:

**Sufficient.** The water supply for each person must be sufficient and continuous for personal and domestic uses. These uses ordinarily include drinking, personal sanitation, washing of clothes, food preparation, personal and household hygiene.

**Safe.** The water required for each personal or domestic use must be safe, therefore free from microorganisms, chemical substances and radiological hazards that constitute a threat to a person’s health.

**Acceptable.** Water should be of an acceptable color, odor and taste for each personal or domestic use.

**Physically accessible.** Everyone has the right to a water and sanitation service that is physically accessible within, or in the immediate vicinity of the household, educational institution, workplace or health institution. The water source has to be within 1,000 meters of the home and collection time should not exceed 30 minutes.

**Affordable.** Water, and water facilities and services, must be affordable for all. The United Nations Development Programme (UNDP) suggests that water costs should not exceed 3 per cent of household income.

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3. UN CESC - General Comment 15, para.2
WATER ACCESSIBILITY

As seen in the Ul valley, this is not guaranteed. With the exception of some families who are living in the upper part of the valley, the majority of people are obliged to drive or walk a distance much longer than 1,000 m in order to get water. Some families are obliged to move 20 km in order to get water for their daily uses.

Again, according to the same declaration the time a person should spend in order to get the necessary amount of water should not exceed 30 minutes. For some families in the Ul valley, it takes more than three hours to get the necessary amount of water they need for the day.

WATER QUALITY

We have analyzed heavy metals’ concentration in twelve points in the Buuruljut and Ul valleys and in the Ongii valley. The points are described in the following table and in the map.

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Buuruljut upstream</td>
<td>Point upstream to the first mine, before any mining impact.</td>
</tr>
<tr>
<td>2</td>
<td>Buuruljut after first mine</td>
<td>Point just after the first mine.</td>
</tr>
<tr>
<td>3</td>
<td>Buuruljut lake inside mining operations</td>
<td>Sample taken into one of the lake inside mining operations.</td>
</tr>
<tr>
<td>4</td>
<td>Buuruljut after last mine</td>
<td>Point after the last mine in the Buuruljut valley, downstream all mining operations.</td>
</tr>
<tr>
<td>5</td>
<td>Ul after last mine</td>
<td>Point upstream to the first mine, before any mining impact.</td>
</tr>
<tr>
<td>6</td>
<td>Ul middle-up mine</td>
<td>Point of the Ul river after a part of the mining operations.</td>
</tr>
<tr>
<td>7</td>
<td>Ul middle-low mine</td>
<td>Point of the Ul river after a part of the mining operations, after the first half of the mine.</td>
</tr>
<tr>
<td>8</td>
<td>Ul after last mine</td>
<td>Point after the last mine along the Ul river, downstream all mining operations.</td>
</tr>
<tr>
<td>9</td>
<td>Buuruljut after confluence with Ul</td>
<td>Sample taken just after the confluence between Buuruljut and Ul.</td>
</tr>
<tr>
<td>10</td>
<td>Ongii upstream</td>
<td>Ongii river in the upper part, after the confluence with Buuruljut river.</td>
</tr>
<tr>
<td>11</td>
<td>Ongii middle</td>
<td>Ongii river in the middle part between Uyang and Arvai-kher.</td>
</tr>
<tr>
<td>12</td>
<td>Ongii Golden Steppe</td>
<td>Ongii river in Golden Steppe, before the town of Arvai-kher.</td>
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</table>
The quality of the water in the Ult and Buuruljut valleys is heavily compromised by mining activities. In the following table we can see a resume of the quality of the water in the area. As a reference we took into consideration the World Health Organization standards for drinking water. Those standard are reported in mg/l in the following table:

<table>
<thead>
<tr>
<th>Element</th>
<th>WHO standards</th>
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<tbody>
<tr>
<td>Aluminum</td>
<td>0.2</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.01</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.003</td>
</tr>
<tr>
<td>Chromium</td>
<td>0.05</td>
</tr>
<tr>
<td>Iron</td>
<td>1</td>
</tr>
<tr>
<td>Manganese</td>
<td>0.4</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.006</td>
</tr>
<tr>
<td>Nickel</td>
<td>0.07</td>
</tr>
<tr>
<td>Lead</td>
<td>0.01</td>
</tr>
<tr>
<td>Copper</td>
<td>2</td>
</tr>
<tr>
<td>Tellurium</td>
<td>---</td>
</tr>
<tr>
<td>Vanadium</td>
<td>0.015</td>
</tr>
<tr>
<td>Zinc</td>
<td>3</td>
</tr>
</tbody>
</table>

4. WHO Guidelines for drinkable water.
Available online: http://www.who.int/water_sanitation_health/dwq/guidelines/en/
Almost all the elements analyzed are present in concentrations that exceed the WHO standards for drinking water. Some cases exceeding the WHO standards by far. Points 3 and 6 show particularly heavy pollution. For example, Aluminum in point 6 is 895 times higher than the standard and 900 times higher than upstream of the mine.

Along the Buuruljut river the situation of polluted water is very clear. Upstream of the mine, the river is clean and no elements are present in concentrations above WHO standards. After the first mine, Aluminum is the only one that presents a concentration higher than the standard and 900 times higher than upstream of the mine.

The Ult Valley has similar results. Points 5 and 6 are less than two kilometers apart and the only external influence between the two points is the mine. TheSame model can be used for all elements. Manganese grows by 500 times, Iron by 867 times, Arsenic by 77 times, and Vanadium by 48, all in less than 2 kilometers. Between points 5 and 6 the only possible pollutant is the mine therefore this increase in heavy metals concentration is certainly due to mining activity.

The concentration of all elements reduce after point 6 probably thanks to the amount of fresh water that dilutes the river.

It is important to underline that points 3 and 6 are completely accessible to animals and persons. Despite being inside mining operations, both points are open and reachable by anyone, representing a real danger for animals and humans.

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3.3. Human Right to health

Heavy metals are among the most dangerous pollutants for human health. Most of these metals provoke cancer and congenital malformations. The presence of heavy metals in water and sediments can have strong effects on aquatic life. Several studies have demonstrated that high concentration of heavy metals in water and sediments of rivers can considerably decrease the number of macroinvertebrates, thus affecting the entire aquatic life chain.7

Furthermore, the presence of metals and metalloids in water can be accumulated in fish as was demonstrated with intentional exposure of sub-lethal concentrations of heavy metals in common carp.8 Several studies9,10,11, show how water pollution can influence the contamination of animal and human tissues directly and indirectly.

Moreover, communities have reported high levels of dust during the dry season of May and June. This dust is most likely highly mineralized and can increase the effects of heavy metals in water. The elements we have analyzed that are more specific to the effect on human health are:

Aluminium
The uptake of aluminium can take place through food, breathing and by skin contact. Long lasting uptakes of significant concentrations of aluminium can lead to serious health effects, such as damage to the central nervous system, dementia, loss of memory, listlessness and severe trembling.

Aluminium uptake is a risk in certain working environments, such as mines, where it can be found in the water. Due to the production process in factories, people may endure lung problems when they breathe in aluminium dust. Aluminium can cause problems for kidney patients when it enters the body during kidney dialysis. Inhalation of finely divided aluminium and aluminium oxide powder has been reported as a cause of pulmonary fibrosis and lung damage. This effect, known as Shaver’s Disease, is complicated by the inhalation of silica and oxides of iron in the air. This may also be implicated in Alzheimer’s disease.12

Arsenic
Arsenic is one of the most toxic elements on earth. It is so toxic that it has been used as a poison for a very long time. Levels of arsenic in fish and seafood may be high because fish absorb arsenic from the water they live in. Exposure to inorganic arsenic can cause various health effects, such as irritation of the stomach and intestines, decreased production of red and white blood cells, skin changes, and lung irritation. It is suggested that the uptake of significant amounts of inorganic arsenic can intensify the chances of cancer development, especially with skin cancer, lung cancer, liver cancer, lymphatic cancer. A very high exposure to this inorganic element can cause infertility and miscarriages with women, along with causes in skin disturbances, declined resistance to infections, heart disruptions and brain damage with both men and women. Finally, inorganic arsenic can damage DNA.13

Cadmium
Cadmium is first transported to the liver through the blood. It then is bonds to proteins which forms complexes that are transported to the kidneys. Cadmium accumulates in the kidneys, where it damages filtering mechanisms. This causes the excretion of essential proteins and sugars from the body and further damages the kidney. It takes a very long time before the cadmium accumulated in the kidneys is excreted from a human body. Other health effects that can be caused by cadmium are: diarrhoea, stomach pains, severe vomiting, bone fracture, reproductive failure as well as possible infertility, damage to the central nervous system, damage to the immune system, and psychological disorders.¹⁴

Chromium
People can be exposed to chromium through breathing, eating or drinking as well as through skin contact with chromium or chromium compounds. Problems that are caused by chromium are: skin rashes, upset stomachs and ulcers, respiratory problems, weakened immune systems, kidney and liver damage, alteration of genetic material, lung cancer, and death. Chromium has been listed by the National Toxicology Program (NTP) as having inadequate evidence for carcinogenicity in experimental animals. According to NTP, there is sufficient evidence for carcinogenicity in experimental animals for the following hexavalent chromium compounds; calcium chromate, chromium trioxide, lead chromate, strontium chromate, and zinc chromate.¹⁵

Iron
Iron is an essential compound. Humans need Iron as without it, health problem can occur. Iron is an essential part of haemoglobin; the red colouring agent of the blood that transports oxygen through our bodies. However, an excessive exposure to iron can also be very dangerous for the health of humans. Iron may cause conjunctivitis, choroiditis, and retinitis if it contacts and remains in the tissues. Chronic and excessive inhalation of iron oxide fumes or dusts may result in development of a benign pneumoconiosis, called siderosis, which is observable as an x-ray change.¹⁶

Manganese
Manganese is one out of the three toxic essential trace elements, which means that it is not only necessary for humans to survive, but it is also toxic when high concentrations are present in the human body. When people do not live up to the recommended daily allowances their health will decrease, though when the uptake is too high health problems will also occur. Symptoms of manganese poisoning are hallucinations, forgetfulness and nerve damage. Manganese can also cause Parkinson, lung embolism and bronchitis. When men are exposed to manganese for a longer period of time they may become impotent. A syndrome that is caused by manganese has symptoms such as schizophrenia, dullness, weak muscles, headaches and insomnia. Manganese compounds are experimental equivocal tumorigenic agents.¹⁷

Nickel
Humans can be exposed to nickel by breathing air, drinking water, eating food or smoking cigarettes. Skin contact with nickel-contaminated soil or water may also result in nickel exposure. In small quantities nickel is essential, but when the uptake is too high it can be a danger to human health. An uptake of excessive quantities of nickel has the following consequences: higher chances of development of lung cancer, nose cancer, larynx cancer and prostate cancer, lung embolism, respiratory failure, birth defects, asthma and chronic bronchitis, and heart disorders. Carcinogenicity- Nickel and certain nickel compounds have been listed by the National Toxicology Program (NTP) as being reasonably anticipated to be carcinogens. The International Agency for Research on Cancer (IARC) has listed nickel compounds within group 1 (there is sufficient evidence for carcinogenicity in humans) and nickel within group 2B (agents which are possibly carcinogenic to humans).¹⁸

**Lead**

Lead is one out of four metals that have the most damaging effects on human health. It can enter the human body through uptake of food (65%), water (20%) and air (15%). Foods such as fruit, vegetables, meats, grains, seafood, soft drinks and wine may contain significant amounts of lead. Cigarette smoke also contains small amounts of lead. As far as we know, lead fulfills no essential function in the human body, it merely does harm after the uptake from food, air or water. Lead can cause several unwanted effects, such as: disruption of the biosynthesis of haemoglobin and anaemia, rise in blood pressure, kidney damage, miscarriages and subtle abortions, disruption of nervous systems, brain damage, declined fertility of men through sperm damage, diminished learning abilities of children, behavioural disruptions of children, such as aggression, impulsive behaviour and hyperactivity.¹⁹

**Vanadium**

Vanadium can have a number of effects on human health when the uptake is too high. When vanadium uptake takes places through air it can cause bronchitis and pneumonia. The acute effects of vanadium are irritation on the lungs, throat, eyes and nasal cavities. Other health effects of vanadium uptake are: cardiac and vascular disease, inflammation of stomach and intestines, damage to the nervous system, bleeding of livers and kidneys, skin rashes, severe trembling and paralysis, weakening, sickness and headaches, dizziness, and behavioural changes.²⁰

### 3.4. Human Right to an adequate standard of living

The Universal Declaration of Human Rights firstly recognizes the human right to an adequate standard of living in its article 25 (1) that states:

> Everyone has the right to a standard of living adequate for the health and well-being of himself and his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.²¹

The International Covenant on Economic, Social and Cultural Rights, ratified by Mongolia, recognizes several aspects of the right to an adequate standard of living including, “clothing and housing, and to the continuous improvement of living condition”. In the Ult and Buuruljut valleys the right to housing and to continuous improvement of living conditions has been violated several time in the last twenty years.

Several families has been displaced by the presence of the mine and have been forced to move into town or to another valley. Furthermore, living conditions have not improved in the last twenty years; indeed living conditions in both valleys have worsened due to the presence of the AUM mine. The mine has occupied the land that was once used for cattle, it has deprived a large part of the population from fresh water, and it pollutes the air with mineralized dust during the dry season. **All these aspects have significantly declined the living condition of the local population since the mining operation started** around twenty years ago.

The human right to food plays an important role in the human right to the best standards of living. Because it has been further codified as a separate right in this analysis, it is considered separately.

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²¹ Universal Declaration of Human Rights
3.5. Human Right to Food

The pollution that has been reported in the Ult and Buuruljut rivers is heavy metal pollution. An important characteristic of heavy metals is that they are residual and they bioaccumulate along the trophic chain. This means that heavy metals present in water are also accumulated in water organisms such as plants and fish, as well as in any animals that drink this water. Moreover, the concentration of metals in the animals would be higher than in the water.

This phenomenon, known as biomagnification, affects wild animals all along the trophic chain as shown in the picture provide. As it affects wild animals it in turn affects the cattle and human beings.\(^{22}\)

In order to produce one litre of milk, a cow needs to drink roughly 100 litres of water and then absorb a much higher quantity of metals. The organism of the cow is then able to drain a part of the metal.

However, because its biosystem, the cow is able to drain just a part of the metal so that the milk has a concentration of those metals much higher than in the water. Nomadic herders drink litres of milk every day, so the bioaccumulation of metals in their tissues will be even higher.\(^{23}\)

Meat and dairy products such as milk, cheese, and butter make up the food of nomadic herders in both the valleys where the river is the unique source of water. Therefore, cattle is obliged to drink water from the polluted rivers. Although further and more specific investigation is needed we can assume that dairy and meat products both contain high concentrations of the same heavy metals present in the water.

It is important to underline that Human Right to Food must not be intended only as a right to have an adequate amount of food, but also as a right to have an adequate quality of food.

The right to food is an inclusive right. It is not simply a right to a minimum ration of calories, proteins and other specific nutrients. It is a right to all nutritional elements that a person needs to live a healthy and active life, and also the means to access them.

The right to food is described in International Covenant on Economic, Social and Cultural Rights. In this covenant the right to food is included as part of the right to an adequate standard of living in article 11:

1. The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions. The States Parties will take appropriate steps to ensure the realization of this right, recognizing to this effect the essential importance of international cooperation based on free consent.

2. The States Parties to the present Covenant, recognizing the fundamental right of everyone to be free from hunger, shall take, individually and through international cooperation, the measures, including specific programmes, which are needed:

(a) To improve methods of production, conservation and distribution of food by making full use of technical and scientific knowledge, by disseminating knowledge of the principles of nutrition and by developing or reforming agrarian systems in such a way as to achieve the most efficient development and utilization of natural resources;


Taking into account the problems of both food-importing and food-exporting countries, to ensure an equitable
distribution of world food supplies in relation to need.\(^2\)

The right to food is also recognized in other international conventions protecting specific groups, such as the Convention on
\(^{26}\) and the Convention on the Rights of Persons with Disabilities (2006)\(^{27}\). All these instruments have been ratified by Mongolia. Moreover, the right to food is recognized in several regional instruments making it a universal right.\(^29\)

As mentioned before, the right to food is not just the right to freedom of hunger. The United Nations Special Rapporteur has
described the human right to food as:

The right to have regular, permanent and free access, either directly or by means of financial purchases, to quantita-
tively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the
consumer belongs, and which ensures a physical and mental, individual and collective, fulfilling and dignified life free
of fear.\(^{29}\)

In such scenarios where the pollution of water and the occupation of soil that AUM mining is occurring, the right to adequate
food for the local populations of the Ult and Buuruljut valleys are undermined. A vast majority of the land that was used for pa-
stures is now used for mining activities and to stock mining wastes. Furthermore, from the effect of bioaccumulation of heavy
metals, the quality of the food is definitely in danger.

\(^24\). International Covenant on Economic, Social and Cultural Rights.
\(^25\). The Convention on the Elimination of All Forms of Discrimination against Women recognizes the right of pregnant and
lactating women to nutrition in article 12 (2) in the context of maternity protection.
\(^26\). The Convention on the Rights of the Child recognizes the right of children to adequate nutrition in article 24 (2) (c) and (e)
in the context of the right to health and in article 27 (3) in the context of the right to an adequate standard of living.
\(^27\). The Convention on the Rights of Persons with Disabilities recognizes the right to food in article 25 (1) in the context of the right
to health and in article 28 (1) in the context of the right to an adequate standard of living and social protection.
\(^28\). The right to food is also recognized in some regional instruments, such as the Additional Protocol to the American Convention
on Human Rights in the Area of Economic, Social and Cultural Rights, known as the Protocol of San Salvador (1988), the African
Charter on the Rights and Welfare of the Child (1990) and the Protocol to the African Charter on Human and Peoples’ Rights on
\(^29\). OHCHR Fact Sheet No. 27.
Conclusions

- AUM mining company has occupied the headwaters of Ult and Buuruljut rivers violating the Mongolian Law Prohibit Mineral Exploration and Mining Operations at Headwaters of Rivers, Protected Zones of Water Reservoirs and Forested Areas.

- AUM mining company has illegally occupied the land of the traditional nomadic herders violating their right to land and territory.

- AUM mining company has obliged hundreds of families to move more than 10 km in order to get water which violates their human right to water. The United Nation Declaration on the Right to Water states that nobody should move more than 1 km from home to get safe water. In Ult valley some families are obliged to move 20 km. The same declaration states that every human being has the right to not spend more than 30 minutes a day to collect water, but in Ult valley some family are obliged to spend more than 3 hours a day in order to get safe and drinkable water.

- AUM mining company is polluting the water with heavy metals. The analytical results show an increase in heavy metals hundreds of time higher than the WHO standard. Metals show a much higher concentration downstream from the mine, while upstream of the mine the water is completely drinkable. Because the only external activity between the two points is the mine itself, AUM company is definitely responsible for such pollution.

- The pollution caused by the mine undermines the right to the adequate standards of living of local populations and also the right to food. As bioaccumulation occurs, the quality of the food in the area is in turn polluted. This is a violation on the human right to food for inhabitants of Ult and Buuruljut valleys.

- All metals analysed are dangerous for human health. Therefore, the AUM mining company is violating the right to health for the population of the Ult and Buuruljut valleys.
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