Legal Framework Analysis of the Artisanal and Small-Scale Gold Mining Sector in Mongolia

This policy report provides an overview of the current laws and regulations governing the Artisanal and Small-scale Gold Mining (ASGM) sector in Mongolia and provides recommendations to support the professionalization of the sector.

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# Abbreviations/Acronyms

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<th>Abbreviation/Acronym</th>
<th>Definition</th>
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<tr>
<td>AGC</td>
<td>Artisanal Gold Council</td>
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<tr>
<td>ASGM</td>
<td>Artisanal and Small-scale Gold Mining</td>
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<td>ASM</td>
<td>Artisanal Small-scale Mining</td>
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<tr>
<td>ASM NF</td>
<td>National Federation of Artisanal and Small-scale Mining</td>
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<tr>
<td>CRKh</td>
<td>Citizens Representative Khural</td>
</tr>
<tr>
<td>DPMS</td>
<td>Dealers of Precious Metal and Stones</td>
</tr>
<tr>
<td>FRC</td>
<td>Financial Regulatory Committee</td>
</tr>
<tr>
<td>GASI</td>
<td>General Agency for Specialized Inspection</td>
</tr>
<tr>
<td>IFF</td>
<td>Illicit Financial Flow</td>
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<tr>
<td>IRIM</td>
<td>Independent Research Institute Mongolia</td>
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<tr>
<td>KII</td>
<td>Key Informant Interview</td>
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<tr>
<td>LLC</td>
<td>Limited Liability Company</td>
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<tr>
<td>LSM</td>
<td>Large Scale Mining</td>
</tr>
<tr>
<td>MET</td>
<td>Ministry of Environment and Tourism</td>
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<tr>
<td>MMHI</td>
<td>Ministry of Mining and Heavy Industry</td>
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<tr>
<td>MNT</td>
<td>Mongolian National Tugrik</td>
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<tr>
<td>MRPAM</td>
<td>Mineral Resources and Petroleum Agency of Mongolia</td>
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<td>NAP</td>
<td>National Action Program</td>
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<tr>
<td>NGO</td>
<td>Non-governmental Organization</td>
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<td>NSO</td>
<td>National Statistics Office</td>
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<tr>
<td>OHS</td>
<td>Occupational Health and Safety</td>
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<tr>
<td>PP</td>
<td>Processing Plant</td>
</tr>
<tr>
<td>SAM</td>
<td>Sustainable Artisanal Mining project</td>
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<tr>
<td>SDC</td>
<td>Swiss Agency for Development and Cooperation</td>
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<tr>
<td>USD</td>
<td>United States Dollar</td>
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</table>
Acknowledgements

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The planetGOLD programme is funded by the Global Environment Facility, led by the United Nations Environment Programme, and implemented in collaboration with the United Nations Development Programme, United Nations Industrial Development Organization, and Conservation International. Supporting countries’ commitments under the Minamata Convention on Mercury, planetGOLD is working to eliminate mercury from the supply chain of gold produced by artisanal and small-scale miners in Burkina Faso, Colombia, Ecuador, Guyana, Indonesia, Kenya, Mongolia, Peru, and the Philippines. The ‘child project’ planetGOLD Mongolia is executed by the Artisanal Gold Council (AGC) in partnership with the Government of Mongolia through the Ministry of Environment and Tourism.

Based in Victoria, Canada, the Artisanal Gold Council (AGC) is a not-for-profit organization dedicated to improving the working conditions, opportunities, environment and health of the millions of people involved in ASGM in the developing world.
About this Report

The objective of this report is to provide a brief overview of the current laws and regulations governing the Artisanal and Small-scale Gold Mining (ASGM) sector in Mongolia and to provide policy recommendations for improving existing legal frameworks in order to support the formalization and professionalize the sector. The report focuses on the following key aspects: formalization, extraction and processing, and gender sensitivity. This synthesis report is based on findings from two different studies, conducted as part of the implementation of the planetGOLD Mongolia project:

1. The Contextual Study of the ASGM sector, authored by the planetGOLD Mongolia team in 2020/21 (internal project report) with contributions from SICA LLC

2. A combined study consisting of a Legal and Policy Framework Assessment and Illicit Financial Flows Assessment (IFF) on gold trade, conducted by the Independent Research Institute of Mongolia (IRIM) in 2020/21 as directed by and in close collaboration with the planetGOLD Mongolia team (internal report).

1 The data collection for the Contextual Study was conducted in collaboration with SICA LLC, data analysis and report writing was conducted by the AGC and planetGOLD Mongolia team.
1. Methodology

1.1 Contextual Study

The objective of the Contextual Study was to provide a baseline assessment of current conditions, standards and practices of artisanal and small-scale mining in the following selected study areas, identified during a structured site selection process:

1. Bayangol soum (soum=sub-province) in Selenge Aimag (aimag=province) (hereinafter referred as “Bayangol”),
2. Mandal soum in Selenge Aimag (excluding Tunkhel village) (hereinafter referred to as “Mandal”),
3. Tunkhel village in Mandal soum (hereinafter referred to as “Tunkhel”),
4. Yusunbulag soum in Gobi-Altai aimag (hereinafter referred to as “Yusunbulag”), and
5. Altai soum in Khovd aimag (hereinafter referred to as “Altai”).

A mixed-methods approach was applied, combining data from a quantitative survey among 371 miners (100 women, 271 men) and qualitative key informant interviews (KII) with 73 interviewees, including local and national government officials, partnership leaders and civil society organizations.

1.2 ASGM Legal and Policy Framework Assessment

The ASGM Legal and Policy Framework Assessment was conducted in 2020 by IRIM, based on a desk review of relevant legal documents and reports, as well as KIIs with 139 respondents (61 women, 78 men) in the following locations:

1. Bayankhongor aimag (Bayan-Ovoo and Bumbugur soums),
2. Darkhan-Uul aimag (Darkhan and Shariin gol soums),
3. Tuv aimag (Bornuur, Zaamar and Zuunmod soums), and
4. Ulaanbaatar.

Key informants included leaders of ASM organizations, miners, traders, One-Stop-Service center workers, representatives from banks, processing plants, as well as central and local government officials.
2. History of ASGM and Current Situation in Mongolia

Mongolia has traditionally been a livestock-based economy. Artisanal and Small-scale Mining (ASM) only emerged in the last 30 years. The transition to a market economy during the 1990s initially led to an increase in social disparity and considerable unemployment and underemployment. Mongolians who live in the countryside were particularly affected by economic hardship, exacerbated by extreme weather events, known as ‘zud’ (drought which killed million of livestock), and climate change. As a result, workers from other sectors turned to ASM out of economic necessity (UNIDO, et al., 2017)\(^3\).

The number of artisanal gold miners in Mongolia fluctuated throughout the last two decades as well as seasonally. There is an estimation that more than 100,000-120,000 Mongolians (who indirectly support more than 400,000 Mongolians (about 15 percent of the population)) have been working in this sector since the early 2000s (World Bank, 2003 & 2007)\(^4\). Though this estimate seems high, it likely falls within a standard deviation but it nonetheless clearly illustrates the prevalence of ASM in Mongolian. As well, due to the clandestine nature of ASM (most activity is carried out illegally/informally), and the fact that it is a seasonal activity (frozen earth during winter can interfere with extraction), definitive estimates of the number of people involved are inherently difficult (UNIDO, et al., 2017)\(^5\).

In 2012, the National Statistics Office of Mongolia (NSO) carried out the first nationwide survey to establish a baseline on the ASM sector; the survey was repeated in 2016, enabling a comparison over the four-year period. Both surveys, which were funded by the Sustainable Artisanal Mining (SAM) project of the Swiss Agency for Development and Cooperation (SDC), involved miners who have established ASM partnerships and cooperatives in accordance with the ASM regulation. The 2016 survey covered 11,962 artisanal miners active in 332 sites belonging to 113 deposits or occurrences in 97 soums of 18 aimags and one district of Ulaanbaatar. Of these miners, 74% percent are engaged in gold mining, indicating the importance and extent of gold in ASM in Mongolia. Other minerals include fluorite and coal in almost equal shares (11% of ASM activities, respectively) as well as limestone, gemstones, and wolfram, engaging 6% of the sector’s workforce (NSO, 2017)\(^6\).

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Figure 1. Minerals mined by ASM (Source: CDE, 2015)

As shown in Figure 1, artisanal gold mining operations are active and dispersed in the western and central parts of the country, while fluorite and wolfram artisanal mines are concentrated in the eastern region. According to the Artisanal and Small-scale Mining National Federation of Mongolia (ASM NF), there are 844 ASM partnerships with 9,178 registered miners as of 2020, of which 7791 are gold miners from 777 partnerships.

Initially, the Government of Mongolia considered ASM as a temporary social phenomenon; it was assumed that the sector would disappear as a result of the country’s economic growth and rapid development of formal mining. For this reason, for the initial decade or so, the Government did not take any serious steps to create a legal environment that recognizes the presence and supports the development and conduct of artisanal mining. Instead, the Government focused largely on stopping or banning artisanal mining, characterizing the practice as criminal and imposing penal provisions. However, the increasing number of artisanal miners resulted in an increase in accidents and fatalities as well as environmental degradation, due, among other reasons, to poor or non-existent health and safety measures.

Therefore, the Government had to take action to regulate the sector (Info Box 1). A number of attempts were made to regulate the sector starting from the approval of the “Sub-program to develop ASM until 2015”, a Temporary Regulation for coordinating mining activities of ASM miners in 2008.

On July 1, 2010, ASM was officially recognized by amending the Minerals Law and including a clause to create a regulation on ASM by the Government. The Minerals Law provides for the right to mine without a license, taking into account the specifics and conditions of artisanal miners, and stipulates they may operate only in areas that are not economically viable for industrial use; and are not affected by large-scale mining activities (Parliament of Mongolia, 2006). The recognition of artisanal mining in the Minerals Law was an important step forwards, but it also entails limited access to prospective or “good” land. Today many countries have adopted a growing number of co-development models that help to reduce this limitation.

Following the law, the Government approved the Regulation for Extraction of Minerals by Artisanal and Small-Scale Mining by its Resolution #308 of 2010 (the ASM Regulation 308). It formally sets out the rights and responsibilities of the government organizations, local governments, and self-governing bodies, as well as the miners. It allowed the establishment of ASM partnerships and cooperatives and permitted them to establish mining contracts with local governments.

In this regard, the 2010 amendments to the Minerals Law, the Land Law and subsequent approval of the ASM Regulation 308, have officially recognized ASM as a formal mining operation for the first time and paved the way for Mongolian artisanal miners to become organized and formalized,

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despite their limited access to prospective land. Currently, the ASM Regulation is being renewed and the new regulation is expected to be approved in 2022.

**Info Box 1: ASM Legal Timeline**

- **2008**: Approval of “Sub-program to develop ASM until 2015”
- **2008**: Approval of temporary regulation for ASM activities
- **2008**: Issuance of the Order 135 of the Minister of Environment on “Prohibiting Mercury in Mineral Processing”
- **2010**: Amendments to the Minerals Law and the Land Law
- **2010**: Approval of ASM Regulation 308
- **2014**: Amendment to the Minerals law on the extraction of minerals by artisanal mining
- **2014**: Inclusion of ASM in the “State Policy on the Minerals Sector”
- **2015**: Ratification of the Minamata Convention on Mercury by the Parliament of Mongolia
- **2017**: Approval of the revised ASM Regulation 151
- **2017**: Approval of the ASM Rehabilitation Methodology
- **2017**: Approval of the ASM Safety Rule
- **2019**: Approval of the National Action Plan for reducing mercury in ASGM
- **2019**: Approval of the Government Resolution 355 on Taking Measures on Extraction of Minerals by ASM
- **2019**: Approval of the Regulation for Operating Processing Plants and Operation Requirements
- **2020**: Approval of the Regulation for Licensing, Permitting and Registration of Traders in Precious Metals and Stones and Products Made from Them.
3. **ASM Laws and Regulations**

Today, the ASM sector in Mongolia is regulated by a number of legislative acts to various degrees. Below is the list of the legislative acts in chronological order:

1. Law on State Treasury (1994)
12. Regulation on Extraction of Minerals by Artisanal and Small-scale Mining (2017) - (ASM Regulation 151)
13. ASM Rehabilitation Methodology (2017)
15. Government Resolution 355 on taking measures on Extraction of Minerals by Artisanal and Small-scale Mining (2019) - (Resolution 355)
16. Regulation for Operating Processing Plants and Operation Requirements (2019) - (Processing Plant Regulation)
18. Regulation for Licensing, Permitting and Registration of Dealers in Precious Metals and Stones and Products Made from Them (2020) - (Regulation on DPMS)

This short report will discuss the findings of the ASGM Legal and Policy Frameworks Assessment and some of the issues in respect to their implementation in the following order:

1. ASM organization (formalization of miners),
2. Land approval (formalization of activities),
3. Mining and extraction,
4. Ore processing,
5. Gender sensitivity.

The discussions related to the ASM gold trade are published in a separate short report from planetGOLD Mongolia (2022): “Artisanal and Small-scale Mining Gold Trade in Mongolia – A Review of Current Policies and Practices” which provides an overview of existing gold trading practices in the ASGM sector, the current legal environment regulating gold trade in Mongolia including the Mongolian state gold-buying program and discusses challenges and opportunities to regulate and formalize gold trade in Mongolia.\(^9\)

This report concludes with recommendations to improve the ASGM sector in Mongolia through a policy lens, referring to a more specific analysis of the main legal acts and policy documents that regulate the ASGM sector.

### 3.1 ASM Organization

Forming an ASM organization is the first key step towards a formal status for artisanal miners. The Minerals Law and the ASM Regulation provide two types of organizational forms: cooperative and partnership, with the latter being further divided into “unregistered” and “registered”.

- **Registered partnership**: a legal entity established by ‘several persons consolidating their property for the purpose of making a profit and agreeing to organize certain types of production and services in the manner specified in this law (Article 2, Partnership Law). It is a mining group that is affiliated with a legal entity and/or has registered with the local and/or aimag government registry office. For a partnership, an agreement on incorporation serves as the basis for its operations. They usually have access to better technology and equipment and are required to comply with relevant laws.

- **Unregistered partnership** is established in accordance with Article 481 of the Civil Code. By law, this form of partnership allows citizens to get organized based on their agreement and in a form of a working group and with no status of a legal entity. Unregistered partnerships are characterized by their specificity (such as members representing the partnership) and revenues generated from operations are considered as jointly owned assets of members.

- **Cooperative** means ‘a legal entity that is jointly established by several persons for the purpose of meeting their common economic, social and cultural needs, founded on a voluntary basis, with unified, democratic and joint management and oversight, with operations based on shared assets. For a partnership, agreement on incorporation serves as the basis for its operations while for the cooperative, endorsement of by-laws serves as the rationale for official registration by government authorities (Article 3, Law on Cooperatives).

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In addition, miners can also establish an ASM NGO:

- **ASM NGO**: an organization that is established by artisanal miners on a voluntary basis with the purpose to protect and express the interests and opinions of its members. Members of an ASM NGO can be members of an unregistered or registered partnership, cooperative or they can be individual miners.

The most common form of organization for artisanal miners is a partnership due to the relatively easy establishment process as opposed to cooperatives (Table 1).

### Table 1. Documents required for establishing a partnership, cooperative, and unregistered partnership

<table>
<thead>
<tr>
<th>Cooperative</th>
<th>Partnership</th>
<th>Unregistered partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence of contributions made by members</td>
<td>Evidence of assets or cash (e.g., bank account statements, property ownership), with the total amount to be approved and recorded during the General Meeting</td>
<td>Partnership establishment agreement</td>
</tr>
<tr>
<td>Resolution of the General Meeting of Members to establish a cooperative, incl. minutes of the General Meeting</td>
<td>Resolution of the General Meeting of Members to establish a partnership, incl. minutes of the General Meeting</td>
<td></td>
</tr>
<tr>
<td>Charter of the cooperative</td>
<td>Partnership agreement</td>
<td></td>
</tr>
</tbody>
</table>

### Info Box 2: Organizational Status of Miners – Findings from the Contextual Study

According to the Contextual Study, the majority of the interviewed miners in the study areas were organized (76%), mainly within registered partnerships (53%) but also within ASM NGOs (14%) and unregistered partnerships (9%). Comparing the study areas, Mandal has the largest share of miners linked to registered partnerships at 75%, followed by Tunkhel with 55%. Though Bayangol is considered to be one of the soums where artisanal mining first started, the proportion of miners linked to formally registered partnerships is lower than the average by 13%. Altai had the highest share of unorganized miners, with 54% of all respondents. Artisanal mining is comparatively new in this area and formal ASM land is limited. Only two partnerships have concluded an agreement with their soum governor on the land approved by MRPAM in 2019.

While the data provides an interesting snapshot of organizational status in five different areas, the data cannot be generalized due to the sampling strategy (purposive sampling, targeting a higher number of organized miners), and the reluctance of miners to share their legal status (information bias). In reality, the number of unorganized miners can be considered much higher (Table 2).

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### Table 2. Number of partnerships, partnership members and estimated number of unorganized miners by study area (Contextual Study, 2019)

<table>
<thead>
<tr>
<th>No</th>
<th>Study areas</th>
<th>Number of partnerships</th>
<th>Number of members</th>
<th>Estimated number of unorganized miners</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yusunbulag, Gobi-Altai</td>
<td>22</td>
<td>214</td>
<td>500 – 1,000</td>
</tr>
<tr>
<td>2</td>
<td>Bayangol, Selenge</td>
<td>27</td>
<td>108</td>
<td>300</td>
</tr>
<tr>
<td>3</td>
<td>Mandal, Selenge (excl. Tunkhel)</td>
<td>32</td>
<td>189</td>
<td>500 – 800</td>
</tr>
<tr>
<td>4</td>
<td>Tunkhel, Selenge</td>
<td>8</td>
<td>180</td>
<td>300 – 500</td>
</tr>
<tr>
<td>5</td>
<td>Altai</td>
<td>11</td>
<td>99</td>
<td>500 – 1,000</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>100</td>
<td>790</td>
<td>2,100 – 3,600</td>
</tr>
</tbody>
</table>

### Most common implementation breaches

The legal study revealed that in some ASGM areas, the legitimate interests of employees or paid workers might be violated under the disguise of the name of partnerships. It was observed that some paid workers in artisanal mines did not know about:

- relevant rules and regulations,
- occupational safety requirements,
- arrangement of partnerships, and
- revenue allocation principles.

Instead, they worked, based on oral agreements for a certain amount of salary, at the rate of MNT 30,000 to 40,000 (USD 10.52-14.03) per day, which is contradictory to the key principles of partnerships. As partnerships are formed by partners making monetary contributions, it is required for them to allocate revenues/profits according to the contributions. Every partner has a right to receive fair shares from the profit of the partnership. Some paid individuals, some of whom are not members of the partnership, worked at the ASM mines during the daytime and then extracted minerals illegally during the night in nearby artisanal mining sites. This could be profitable for them and might be one reason why artisanal miners were reluctant to formalize.

### 3.2 Land Approval

Securing ASGM legal permits to mine and process ore is a second key step towards formalization. As specified in Section 16.1.11 of Article 16 of the Land Law, the State of Mongolia provides opportunities for the extraction of minerals in artisanal mining in areas, which are designated as national and local special needs land, for citizens that are incorporated into the organizational forms stated in the law. According to the Minerals Law, the state administrative body in charge of geology and mining (Mineral Resources and Petroleum Agency of Mongolia - MRPAM) is responsible to confirm whether it is feasible to extract minerals from the special needs land. ASM conclusion is prohibited in areas where the following apply:
- restrictions or prohibitions on prospecting, exploration, and mining,
- taken for special protection, and
- in whole or in part, overlaps with a valid mineral license area.

Except for the three cases mentioned above, the Law does not prohibit the allocation of small-scale mining land.

**Figure 2. Land permit procedure for ASM (Source: planetGOLD Mongolia, 2021, based on Sustainable Artisanal Mining project, 2017)**

As of February 2020, MRPAM approved a total of 272 areas (1,113 hectares) for ASM use in 15 aimags and a district of Ulaanbaatar, the capital city. Based on the following allocations, artisanal miners were mining gold, spar and coal. According to the allocated land database, the land allocation has been increasing. From 2012-2019, the size of land allocated increased by an average of 40 hectares each year. In 2017, during the peak year, 169 areas amounting to 1,929.7 hectares were allocated in 18 aimags. However, the passing of Resolution #35511 in September 2019, halted the allocation for new artisanal mining land.

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11 The Government of Mongolia issued the Resolution #355 (Resolution 355) on September 18, 2019, to protect the environment and eliminate the negative mining impacts, promote rehabilitation, to enforce legislation, and stop illegal mining activities. It prohibited the MRPAM to issue new ASM Land Conclusions, and local governments to conclude new ASM contracts until the revision of the ASM Regulation. The new ASM regulation is expected to be approved in 2022.
3.2.1 Formalization Status in the Study Areas

While membership in an ASM organization is an important prerequisite to becoming a formal miner, ASM organizations also require formal ASM land through a contract with the respective soum governor based on a Land Conclusion from MPRAM (Figure 2).

The local governments in the surveyed soums accept that ASM is the main source of income for the residents. They agreed that once the ASM Regulation has been finally approved, with clear obligations, and land allocation for artisanal mining is sufficient, the local administration would be able to organize artisanal miners more responsibly in terms of environmental, social and safety issues. If they are formal, it will be easier to organize related trainings and establish environmental and safety controls.

Due to Resolution 355 which froze the approval of new ASM land, the economic situation of local citizens has deteriorated in the last six to eight months according to the Bayangol Governor. The Gobi-Altai aimag governor indicated they are instructed to halt all ASM operations in accordance with Resolution 355, but he believes illegal mining operations are increasing as a side effect, leading to increased impact on the environment and future restoration expenses.

“There are more than 1,000 artisanal miners in our soum. ASGM is one of the employment opportunities in our area. Therefore, we will support them if the miners' group operates in accordance with the regulation, meets the OHS safety requirements and obtains the Land Conclusion. No new contracts have been signed yet, but miners who have already signed contracts are working officially.”

Male officer, Selenge aimag

As of June 2020, some of the ASM partnerships with current valid land contracts (issued before September 2019) are conducting their mining operations in Mandal, Tunkhel and Altai. But due to the suspension of the implementation of Resolution 355, no new Land Conclusions have been issued by the MRPAM, no new mining contracts with artisanal mining partnerships and cooperatives have been made, and the official closure of formal processing plants has created uncertainty at the local areas and will potentially increase illegal mining.

In Tunkhel, an ASM organization has signed an ASGM contract with the soum governor in 2019 for their mine site where they had been mining informally for more than 10 years. As a result, artisanal mining has become more organized, and occupational health and safety regulations, as well as land rehabilitation, have become more responsible. Thus, it has become easier to monitor the ASM operations.

In Bayangol, there is no land permitted for ASM operation for hard rock gold mining. The main ASM area called “Nart”, where artisanal miners have been operating for a long time, belongs to Boroo Gold and Selenge Mineral companies' licensed area. The soum governor informed that they
made an initial solution to formalize the land allocation and requested an official Land Conclusion from the MRPAM; but due to Resolution 355, it is on hold.

In Gobi-Altai aimag, there is currently one ASM partnership with a Land Conclusion in hard rock artisanal gold mining in Altai soum of the aimag. Two years ago, artisanal miners of Yusunbulag signed an agreement with the Altai governor and were mining in the area. However, local mining and environmental specialists indicated that the “Zamiin Am” ASGM site in Altai was shut down in March 2019. Due to the difficult geological conditions, it was concluded that blasting permits could not be issued. Furthermore, the site is located in an earthquake zone, posing a great risk for high-altitude mining operations. While the permit for the site is still valid, with difficult extraction conditions, the mining shafts have been closed and most miners have returned to Yusunbulag, the provincial center.

3.2.2 Barriers in Obtaining Land Permits

Conflicting regulations

The ASM formalization procedure contains conflicting and incoherent regulations in respect to responsible authorities for land requests. Section 11.1.23 of the Minerals Law states that the district (soum) governor is responsible for submitting land requests to the state central administrative organization while Sections 6.1.2 and 8.1.3 of the ASM Regulation 151 state that the request shall be submitted by provincial (aimag) and capital city governors. In other words, the ASM Regulation 151 includes an obligation, which is not stated in the law. Provincial and capital city governors play a relatively inactive role, merely linking the soums/districts to the state administrative body in charge of geology and mining (or MRPAM), bypassing requests from the lower administrative level to the authority. This could lead to increased bureaucracy and miners will lose time waiting for the exchange of information between local soum government and aimag government.

Long delays and waiting period

Provincial Citizens Representative Khurals (CRKh) convene only twice a year, resulting in long delays in making decisions to obtain land for artisanal mining purposes, as mentioned by artisanal miners that participated in the Contextual Study.

The land permit process takes a long period of time which affects mining operations and leads to financial losses. These clauses drive artisanal miners to shift to illegal mining or remain informal while waiting for permits. Artisanal miners that participated in the field study criticized the regulation for making them lose their time, and for being impractical and unclear.

ASM Regulation 151 describes the periods/deadlines for decisions to be made by respective government agencies, providing a good regulatory framework. For example, Section 7.1.2 of Article 7 of the Regulation requires provincial and capital city Citizens’ Representative Khurals to submit their decisions on obtaining land for artisanal mining purposes (after discussion) within
Section 9.1.1 of Article 9, requires the state administrative body to provide the Land Conclusion for the artisanal mining land within 10 working days. These clauses enable artisanal miners to plan their operations and serve as leverage for ensuring transparent and quick operations of the government agencies, but the level of enforcement has been inadequate.

According to some government officers, the average time for artisanal miners to receive decisions on the feasibility of receiving a land conclusion for mining was about one month. It took three days for soum governors to send requests to the aimag, 14-21 days to send it from the aimag to MRPAM and receive replies, and three days to send the decisions from the aimag back to the soum.

Some artisanal miners said there were cases where requests/applications for the extraction of minerals by artisanal mining took as long as one to two years. According to artisanal miners, the duration for MRPAM to issue conclusions is different for every ASM organization, for some it is issued faster for some it takes longer periods.

“When the aimag governor issues an approval for artisanal and small-scale miners, contract signing is not rushed. The contract will be signed only after some development works have been done. Some partnerships do it at their own initiative. For example, the old well has been repaired to meet the standard.”

Local CRKh member (male), Bayankhongor aimag

After the receipt of the decision from MRPAM, soum governors are obliged to make contracts with artisanal miners within 10 working days; stating the proposed site can be granted for artisanal mining, as required by Article 2 of the ASM Regulation 151. But according to miners, some local governors fail to perform this duty and violate the regulation by delaying the process, prolonging the waiting time for ASM organizations even further.

Non-transparent “First come-first serve” principle

According to Article 3 of the ASM Regulation 151, soum/district level governors make contracts with applicants according to the order applications were received. This is identical to the principle stated in the Minerals Law, which is applied in issuing mineral exploration licenses (by chronological order of application) on a first-come-first-serve basis. This principle has some advantages such as protecting the rights of the first applicants, simplifying stages of receiving applications, and providing clarity. However, if not managed transparently, it poses risks of injustice. For example, it has been reported that a local governor may change the order of application to benefit him/herself and violate the rights of fair applicants by giving the mining sites to his/her associates, or those who pay a bribe.
Limited size of ASM land

Paragraphs 4.1 and 4.2 of Article 2 of the ASM Regulation 151 require the total size of land for the extraction of minerals by artisanal mining in a soum or district to not exceed 10 hectares; each site with a maximum area of five hectares. As the areas for possible extraction of minerals by artisanal mining are limited, artisanal miners encounter a major challenge through the unavailability of land for operations. For example, Bayankhongor aimag has a total of 19 soums, of which less than 10 have extensive mining sectors in place. As of 2018, only seven sites were approved for artisanal mining as opposed to the 60 applications.

Such limitations of the area, which does not consider the total size of a soum or its geology and suitability for ASM activities, could be the reason for the low number of fully permitted miners versus a high number of illegal miners without permitted land.

“Illegal gold mining by artisanal and small-scale miners is a major cause of conflict due to the lack of adherence to legislations in the allocation of land. However, artisanal miners are very interested in formalization.”

Soum Officer (male), Tuv aimag

3.3 Mining and Extraction

3.3.1 Equipment and Machinery

Article 3 of the ASM Regulation permits artisanal miners to use machinery and equipment with internal combustion engine capacities not exceeding 3,500 cubic cm. Most public official respondents said during the Contextual and Combined Study that one of the most common violations that artisanal miners perpetrate was the use of equipment and machinery with capacities higher than permitted in the Regulation. For example, 16 mining machines were seized from artisanal miners of Bayankhongor aimag in 2019 because they were of higher capacity than permitted. Article 3 of the Regulation permits artisanal miners to use machinery and equipment with internal combustion engine capacities not exceeding 3,500 cubic cm. It is well-known that artisanal miners use machinery exceeding the permitted levels for the extraction of minerals. However, some miners use high-capacity machinery and equipment due to the size of their mining land and the type and specificity of the deposit. Therefore, not considering these as artisanal miners - based solely on the capacity of the engine of the machinery - leads to violations of the Regulation. A limitation on the engine capacity also reduces the ability of artisanal miners to create enough revenue to pay for other regulatory requirements.

Similarly, some artisanal mining partnerships that extract minerals from tailings of LSM companies working in placer deposits have to use high-capacity mining machinery. The reason is that they work on land eroded by heavy machinery during past mining operations, where small-scale low-capacity machinery could not operate. Land that was previously extracted by LSM companies often has pits 5 to 10 m deep, where low-capacity machinery could not work.
Hence, the current limitations on the capacity of machinery and equipment used in ASGM require a revision to reflect the current geological and technical realities of miners in a way that still respects the scope and scale of ASM operations.

“It is often difficult to dig with a small tractor in areas that have been damaged or excavated by large machinery. This makes us spend needless expenses.”

Artisanal woman miner from, Bayankhongor aimag

3.3.2 Blasting

As specified in Section 3.2.7 of Article 3 of the ASM Regulation, artisanal miners are obliged to solicit licensed legal entities for blasting. The failure to perform this obligation relates to the following reasons.

Artisanal miners lack information on required documents and licenses for blasting

The General Agency for Special Inspection (GASI) gives permission for using blasting equipment and explosives, which is called the ‘Control Sheet’. The control sheet specifies the required explosives and blasting equipment for the specific mine in detail and requires reporting back. Blasting services are provided by professionals licensed by the Ministry of Mining and Heavy Industry (MMHI) and artisanal miners can use their services by making contracts.

GASI requires applicants to submit a copy of the mining license and mine plan approved by MRPAM or provincial governors (for common minerals). Contrary to this requirement, artisanal miners are allowed to extract minerals without obtaining a mining license. Also, artisanal miners are not required to have their mine plan endorsed by MRPAM. Instead, they can also operate based on a contract made with the local governor. Therefore, GASI may give the blasting Control Sheet to artisanal miners based on the conclusion for the extraction area (issued by MRPAM) and a contract signed with the blasting service provider. However, some artisanal miners have no knowledge and information on the documents required to apply for a blasting permit. Or, they do not know how to fill out these documents, and cannot always get the control sheet from GASI.

The situation demonstrates the need for GASI to provide information and knowledge to artisanal miners related to the documents and authorizations required for blasting. This is required to provide the necessary regulatory framework for blasting at the artisanal mines.

Blasting costs are high for artisanal miners

Blasting service providers charge MNT 3,000-4,000 (USD 1.05-1.40) per cubic meter. If a small mine needs to blast 5,000 cubic meters of rocks each time, the average cost for blasting could reach MNT 15 million (around USD 5,263). In addition, some blasting service providers tend to make blasting service agreements taking into account the amount of required explosives for the mine and costs per worker. According to such contracts, the total price for blasting work for a one-month period may amount to about MNT 20 million (around USD 7,000). Such prices are
prohibitively expensive for artisanal miners, which could be one of the reasons why they tend to avoid to use the services of blasting companies, which either results in illegal blasting or the stop of extraction at a mine site.

3.3.3 Environmental Rehabilitation

Unclear legal framework

The ASM Regulation 151 does not adequately cover the legal obligations of artisanal miners for environmental protection. The issue of environmental rehabilitation is solely managed by the Procedures for Artisanal and Small-scale Mine Rehabilitation approved by joint decrees #A/269 and A/182 of Minister of Environment and Tourism (MET) and Minister of Mining and Heavy Industry (MMHI) on August 17, 2017. These procedures state the sequence and technology required for rehabilitation only and do not include other environmental management issues (e.g., waste management) required for the environmentally sound extraction of minerals.

Rehabilitation deposits and their expenditure

Prior to commencing extraction, artisanal miners are required to place deposits, for instance, MNT 3.0 million (around USD 1,052), in the soum environmental rehabilitation fund as collateral, in case that artisanal miners leave their mining areas unrehabilitated. However, it is unclear whether the local administration spends this fund for its designated purpose or whether the fund is disbursed in time (or at all) to the ASM organization to assist in rehabilitation, as the spending is not reported, and information is not disclosed.

As stated in the annex of the Regulation on Control over the Special Account for Deposits on Environmental Protection and Mine Rehabilitation, endorsed by decree #A/04 of MET (2014), the amount, revenues and spending data of funds deposited in special accounts in the soums and districts should be open and transparent to the public, online. However, the websites of MET and provincial and soum administrations do not contain any information related to these special funds. Government agencies should perform their legally mandated duties and disclose this type of information to the public.

No clear reporting channel on ASM rehabilitation

MET generates data and information on the land rehabilitated by artisanal miners, based on data from MRPAM. Data on artisanal mining is merged with data from all active mines in Mongolia; therefore, such data cannot serve adequately for the designated purpose.

Therefore, ASM NF keeps submitting environment rehabilitation reports of its member partnerships to MET directly. This is expected to clarify the incorrect understanding that artisanal miners do not rehabilitate the environment, and to help the line ministry receive comprehensive and accurate information on the environmental performance of artisanal miners. In the future, it is important to establish a system, where MET directly receives information on environmental rehabilitation from local administrations.
Info Box 3: Environmental Rehabilitation in the Study Areas (Contextual Study)

From all surveyed miners as part of the Contextual Study, 69% stated that their mining organization had an environmental rehabilitation plan in place (Figure 3). Among the study areas, the positive response rate was the highest in Tunkhel (86%) and the lowest in Bayangol (52%) and Altai (55%).

This finding is also supported by statements from ASM partnership leaders and miners during KII. Five out of eight interviewees responded that they complied with the regulation regarding the environmental rehabilitation plan.

Overall, 82% of miners interviewed responded that rehabilitation is conducted at their mine site. Only 9% responded that rehabilitation was not conducted (Figure 4). Of the miners who partook in rehabilitating their sites, two-thirds of respondents (69%) indicated the activity of backfilling as part of their rehabilitation efforts. However, this alone does not indicate that successful rehabilitation has been carried out. It was revealed through more detailed questioning that the primary purpose of backfilling is not for rehabilitation, but rather to deter other miners from plundering their ore and for ground stability purposes. Furthermore, quantitative surveys revealed that only 4% of the surveyed miners conducted biological rehabilitation such as re-soiling land and replanting trees.

Figure 3. Percentage of respondents who reported that their respective ASM organization has an environmental rehabilitation plan

Figure 4. Actions taken to rehabilitate the extraction site (n=371)
3.3.4 Ore Processing

Mercury use

Prior to the ban of mercury use in 2008, mercury was heavily used in gold mining in Mongolia to extract the gold from the ore (see Info Box 4). Inspections on the implementation of the Law on Toxic and Hazardous Chemicals nationwide in 2007-2008 revealed that a total of 203,509 m³ of soil was contaminated with mercury and other toxic chemicals; at more than 120 points covering 53.4 hectares in 36 soums of 10 aimags. A total of 147 used mills were confiscated. In 2008, the Government issued Resolution #127 on some measures to neutralize sludge and soil contaminated with chemicals and spent MNT 1.4 billion (491 thousand USD) for this activity (Sustainable Artisanal Mining, 2011).

The government has highlighted this issue as serious, and issued Resolution #28 on January 23, 2008, with the following objectives:

- regulating the activities of artisanal miners,
- stopping the use of mercury, and
- preventing the danger of poisoning people, animals, and the environment.

The resolution includes a provision on the establishment of centralized processing plants for artisanal gold miners to regulate and control processing technology, which was a timely decision.

Within the framework of the regulation and the Sustainable Artisanal Mining project (funded by the Swiss Agency for Development and Cooperation-SDC) a gold ore processing plant was established in Bornuur soum, Tuv aimag, to present an alternative solution for gold processing. The plant was established in Mongolia to test and introduce mercury-free technology. Following the first plant, a second plant was established in Mandal soum, Selenge aimag. In 2011, as part of the partnership between the Government, MMHI and SDC, an ore processing plant was established in Bayan-Ovoo soum, Bayankhongor aimag, which later (2014) became Khongoryn Khuder LLC. (See Issues in Implementation of Regulations).

Today, a total of 23 plants are processing gold mined by artisanal miners. Twelve plants are operating in Selenge aimag, while four are in Gobi-Altai, three in Khovd, and one each in Bayankhongor, Tuv, Umnugobi and Zavkhan aimags, respectively (NSO and SDC, 2017). According to planetGOLD Mongolia’s own research, around half of the above 23 plants have a full circuit of equipment (mostly crushers, hammer mills, pan mills, sluice boxes, and shaking tables). But up to date, only two plants are fully permitted to operate an ore processing plant. The other half have only rudimentary equipment, such as crushers, hammer mills and sluice boxes.

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Infobox 4: Mercury and Gold Processing Plants

**Mercury**: Elemental mercury, a silver liquid, is a highly toxic heavy metal that cannot be destroyed and persists in the environment. It is a deficient but simple and cheap method to extract gold. Artisanal gold miners are exposed to elemental mercury during amalgamation (mixing ore with mercury), squeezing (separating solid amalgam from excess mercury), vaporization (heating of amalgam), smelting (melting sponge gold with residual mercury), and during the refining of raw gold doré.

**Gold processing plants**: Gold is extracted from two different types of deposits; placer and hard rock. Of these types of ores, gold in hard rock deposits is embedded within rocks and therefore must be processed according to a beneficiation process conducted at processing facilities to extract the gold. In Mongolia, gold ores from hard rock deposits are mostly processed today in centralized mercury-free processing centers, using gravity circuits consisting of jawbreakers, mills, sluices, and sometimes shaking tables. As a final stage, gold concentrate is purified and smelted to form small bullions to be sold. However, due to the low gold recovery rates of some plants or lack of access to a processing plant, some clandestine mercury amalgamation operations still exist.

While centralized processing systems have increased access to mercury-free processing in Mongolia, there are still many issues such as lack of permitting, too high standards of permitting, low recovery rates (with tailings being sold for high profit), and unequal geographical access to processing plants (See Issues in Implementation of Regulations).

In addition, interventions for law enforcement such as the confiscation of mills or the establishment of the Ecology Police Department have been unable to stop mercury use completely. Instead, it encouraged clandestine use of mercury indoors, often inside homes (using small pounders, and mortar-and-pestles). According to data from the Ecology Police Department, as a result of police inspections in Selenge and Darkhan-Uul aimags (August 2020), 154 grams of mercury was seized from artisanal miners, verifying its use still exists. The Government of Mongolia estimated that mercury use by the sector in 9 soums to be 181.9 kg per year (Government of Mongolia, 2020).

**Regulations on operations of processing plants**

In order to operate processing plants, businesses and miners must get licenses in compliance with the following seven regulations:

1. Law on Licensing,
2. Minerals Law,
3. Subsoil Law,
4. Safety Regulation for Mineral Concentration, Separation, Grinding and Ore and Concentrate Pelletizing Factories,

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5. Regulation for Operating Processing Plants and Operation Requirements (Processing Plant Regulation) (see Info Box 5),

6. Mines, Mining Operations and Processing Plant Commissioning Procedure (PP Commissioning Regulation), and

7. Resolution #A/205 of the Minister of Mining and Heavy Industry, and its annexes of October 17, 2019, endorsed the renewed Processing Plant Regulation.

**Info Box 5. Requirements for Processing Plants**

1. Premises of the processing plant must be formally accepted by a plant building commission, appointed by the provincial and capital city administration.

2. The equipment and technology of the processing plant must meet modern requirements and have no adverse effect on human health and the natural environment.

3. Toxic and hazardous chemicals emitted to the air, soil, and water must not exceed the permissible level.

4. The content of the main and secondary minerals in the concentrate must be determined.

5. Water, electricity, and thermal supplies for the processing plant must be secured, necessary permits obtained, and contracts made.

6. The external environment of the plant must meet the following requirements:
   - General map and scheme showing the plant’s address and location,
   - Roads and surrounding areas must be cemented (metaled), signed and well lit,
   - Conform to hygiene and landscaping requirements,
   - Designated areas for household and business waste (storage and disposal),
   - Designated areas (cemented/metaled) for transportation, loading and unloading of products and materials, and
   - Special warehouse for storage of chemicals.

7. Requirements of the workplace for the processing plants include:
   - A clear description of activities in the workplace,
   - All stages of the process are to be operated by professionals, by qualified and trained staff,
   - Adherence to occupational safety and health guidelines for processing plants,
   - Plant map, showing entries and exits, and
   - Official conclusion on the workplace must be issued.

8. Following 17 documents must be available at the processing plants: Legal entity’s certificate (copy), License to use toxic and hazardous chemicals, Feasibility study for the plant, Design drawings for the tailing’s facility, Mine’s processing plan and reports (weekly, monthly, and quarterly), Hazards and accidents management plan, Detailed environmental impact assessment, Environmental management plan, Land use agreement, Water use agreement, Electricity use agreement, Property (and other assets) leases, and/or sales agreement, Raw materials purchase contracts, Work performance instructions and/or procedures, Health and safety procedures, instructions, and training logs, Employees’ data (qualifications, etc.), Reports on inspections, assaying, performance and implementation of recommendations (from inspection agencies), Daily records on the beneficiation process control).

9. Processing plants need to have technology flow charts, which are subject to update every five years and approved by authorized officials.

10. A logbooks and related documents for use and maintenance of equipment need to be maintained.

11. Control, monitoring and evaluation of the tailing’s facility shall be made in cooperation with the respective professional agency.

12. Citizens, legal entities and officials that do not adhere to the Regulation may be punished by the Infringement Code and other laws.
3.3.5 Issues in Implementation of the Regulations

Regulations are more suitable for large-scale mining

Decree #A/16 (2019) of the MMHI endorsed the Mines, Mining Operations and Processing Plant Commissioning Procedure (PP Commissioning Regulation) and decree #A/205 endorsed the Regulation for Operating Processing Plants and Operation Requirements (Processing Plant Regulation), respectively.

These rules and regulations endorsed by the MMHI were found to fail to comprehensively regulate all relevant matters and the scale pertaining to processing plants for minerals extracted by artisanal mining. Requirements stated in the Regulation exceed the capacity and scope of small-scale processing plants (putting more pressure on them). For example, Paragraph 3.12 of the Processing Plant Regulation states that plants must have advanced infrastructure, such as railways and roads for transporting ore, and Paragraph 4.6 requires plants to have paved roads and areas around them. However, small-scale processing plants have no financial capability and resources to develop such infrastructure. Most of the ASGM processing plants visited by the planetGOLD Mongolia team during the site assessment and contextual study had a daily ore processing capacity of up to 15 tons. In comparison, LSM processing centers tend to process more than 500 tons per day. Hence, it seems that the above-mentioned regulation is more fit for large-scale processing plants and is unsuitable for the scale of artisanal and small-scale operations.

Developing mine plans is not viable for the processing plants that process ASGM ore

According to the legal study, processing plant owners said during KII that they had to develop mine plans and formulate documents for authorization of a processing plant. However, processing plants (providing services for artisanal and small-scale mines) operate separately from extraction, so plant owners have no opportunities and no need to develop mine plans. Although processing plants often operate as separate legal entities - independent from the extraction operations of artisanal miners - their operations are directly affected by artisanal miners, as impacts their number of clients and daily ore volume to be processed.

High cost

In the process of getting permission to establish a processing plant, a Feasibility Study and Detailed Environmental Impact Assessment must be conducted. However, these need to be done by licensed companies and the costs are high. Based on own calculations, approximately USD 75,000 are required to acquire all necessary permits (Table 3).

“The process of establishing a processing plant is difficult. Feasibility Studies and Detailed Assessments are difficult and costly. A Feasibility Study costs around MNT 20.0 million (USD 7,000) and Detailed Environmental Impact Assessment costs about MNT 15.0 million (USD 5,263).”

Representative of a processing plant (male), Tuv aimag
In addition to the costs for all these documents, MNT 570.0 million to MNT 1.0 billion (approx. USD 250,000 – 300,000) investment is required for establishing the processing plant (constructing building and purchasing equipment) according to respondents (See Table 3).

Table 3. Example calculation for establishing an ore processing plant in Mongolia (Capital Expenditure) (planetGOLD Mongolia project)

<table>
<thead>
<tr>
<th>Cost items</th>
<th>Total (USD)</th>
<th>Total (MNT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permits</td>
<td>74,764</td>
<td>≈213 mln.</td>
</tr>
<tr>
<td>Equipment</td>
<td>104,162</td>
<td>≈297 mln.</td>
</tr>
<tr>
<td>Construction</td>
<td>268,017</td>
<td>≈764 mln.</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>446,944</strong></td>
<td>≈1,274 mln.</td>
</tr>
</tbody>
</table>

In addition to the capital investment costs, equipment repairs, maintenance and renewals require considerable and recurring operational costs. Overall, the processing plant is a business involving high costs and expenditures, which does not fit with the scale of artisanal mining, the difficulties in getting ASM permits as well as the lack of exploration of ASM organizations due to financial barriers (for more information on this topic, see planetGOLD Mongolia (2021)\(^\text{15}\)).

“Three people invested a total of MNT 680.0 million (around USD 239,000) to MNT 1.0 billion (around USD 350,000), which included the cost of documentation and the initial cost of construction and equipment. It also performs routine maintenance once a year and regularly makes necessary repairs during production. This includes services such as crusher parts, hammer replacement, and wheel mill pan replacement.”

Representative of a processing plant (male), Bayankhongor aimag

Gold trade at the plant

Another service offered at the processing plants is gold trading. Some plants buy the gold, while some have independent gold traders at the plants. According to the Regulation for Licensing, Permitting and Registration of Dealers in Precious Metals and Stones and Products Made from Them (Regulation on DPMS), the traders are required to have a license to buy and sell precious metals. Though it creates an important part of the value chain for artisanal miners - from the processing of mined ore to selling - and is convenient for miners, this form of trade does not always provide miners with a fair price for their gold. As the gold is often assayed using the water density (water weight) method, miners might not always get an accurate weight and price for their gold. In addition to the ongoing formalization of traders, regulation and control of trading practices including assaying at the processing plants could increase transparency and fairness of

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**Recovery rates, distrust of miners, revenue sharing and tailings reprocessing**

Processing plants only provide the technology and equipment, whereas artisanal miners carry out the core activities on their own which are ore crushing and grinding. In other words, the processing plants act as renters of the processing equipment and miners do the heavy work themselves. The reason behind this issue is the distrust of miners in the processing plants. Miners prefer processing their ore with their own hands. Processing plants charge a fee of usually MNT 150,000 to 200,000/tonne (USD 53-70) for ore processing.

Recovery rates - the percentage of gold recovered after beneficiation - vary. During the Combined Study, processing plant owners reported that they achieve 60-70%, while the leaders of ASM partnerships think the recovery rates are closer to 30-40%. As observed during the Contextual Study, processing plants consist of simple gravimetric circuits, with grinding carried out usually by hammer mills and by wet pan mills (38% of all respondents, respectively). In terms of physical gold recovery, sluices were used 70% of the time while more sophisticated shaking tables were used 47% of the time. The type of equipment used in most processing plants indicates that gold recovery is most likely low with only few plants achieving up to 60% recovery.

Sometimes disputes arise between processing plants and partnerships if the processing stage does not seem to recover adequate amounts of gold, with the remaining gold being left in the tailings\footnote{17 ‘Tailings’ refers to the leftover ore material after being ground and processed to separate the valuable minerals.}. Tailings are stored in the processing plants’ tailing storage pond located near the plant and usually sold to LSM processing factories using cyanide as there are considerable amounts of gold remaining in ASM tailings that must be chemically extracted. Miners and processing plants said that (currently) cyanidation plants in two aimags (Tuv and Bayankhongor) receive tailings for cyanide reprocessing. Cyanide is on the list of severely restricted chemicals, based on Resolution #95 of the Government of Mongolia, approved in 2007, and a special license is needed for its use.

Almost all processing plants keep the profits from tailings processing to themselves, leaving artisanal miners without any share. Though, in one case, a processing plant shared the tailings proceeds on a 50%:30%:20% (processing plant, miners, and local government respectively) share basis. The current no profit-sharing scheme poses other serious issues such as unequal distribution of profits, labour exploitation, and waste mismanagement. In addition, this practice does not provide any incentives for processing plant owners to improve their recovery rate. On the other hand, it disincentivizes miners to use processing plants for a low-grade or small amount of ore leading to an even greater risk of using mercury amalgamation for ore processing.
Based on the results from the Contextual Study and Combined Study, the following actions are required:

- The gold recovery rate at the processing facilities needs to be improved through better technology and equipment calibration, and
- Allocation of profits gained from processing tailings must be reconsidered as the current share is to the disadvantage of miners.
4. Gender Sensitivity Assessment of ASM Laws and Regulations

Gender equality is a fundamental human right. Mongolia has not only signed major international conventions on the right of women and children but also introduced several policies to improve gender equality within the country. The Law on Promotion of Gender Equality (2011), for example, ensures gender equality in political, legal, social, cultural, and economic relations. The advancement of gender equality in Mongolia remains a critical development objective, especially in a male-dominated sector such as mining. The planetGOLD Mongolia project published a detailed report on gender dynamics in the ASGM sector in Mongolia, which was carried out as part of the Contextual Study.

Most legislations specifically governing the ASM sector do not address gender issues. However, some of the legal frameworks regulating the mining sector in general do address gender, especially the Gender Policy in Geology, Mining and Heavy Industry for 2019-2026. The section below provides a brief overview of legal documents that address or mention gender issues in the mining sector.

4.1 Law on Toxic and Hazardous Chemicals (2006)

Paragraph 13.5 of the Law on Toxic and Hazardous Chemicals prohibits the employment of pregnant and breastfeeding women in areas that might bring them into contact with toxic and hazardous chemicals. This provision respects the rights of mothers and children, by protecting them from the negative and harmful effects of toxic and hazardous chemicals. It is a measure to protect developing fetuses in utero and breastfeeding infants against the effects of toxic and hazardous chemicals such as mercury that can harm the nervous system and other organs.

4.2 National Program for Reducing Mercury Pollution Caused by ASGM in Mongolia (2019-2012)

The National Action Plan (NAP) is a comprehensive program, aiming at the reduction of mercury pollution caused by artisanal gold mining. The program consists of 13 strategies centred around four objectives: (1) Elimination of worst-practices and harmful technology, (2) Accelerating ASGM sector formalization, (3) Protecting the health of ASGM miners, particularly women and children by preventing exposure to mercury, and (4) Increasing access to information.

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The NAP includes some gender-related provisions, for instance, the Program's emphasis on health and social protection policies to prevent children, women, and especially pregnant women from being exposed to mercury. To achieve this goal, it is planned to establish specific measures to prevent pregnant women from being exposed to mercury and to increase their coverage with health and social insurance. In addition, knowledge and information on the dangers of using mercury and its impact on human health and the environment shall be provided to increase knowledge and awareness of artisanal miners and their families. It is not clear what action has been taken, yet.

4.3 Gender Policy on Geology, Mining and Heavy Industry (2019-2026)

This medium-term policy document is designed to:

- Support the implementation of treaties, convention commitments, and recommendations,
- Support other sector policy reforms and their implementation,
- Reform the policy and legal environments of the geology, mining, oil, and heavy industry sectors (with a gender concept),
- Reduce negative impacts upon the environment, human rights, societies, and the other impacted areas,
- Share – equally - the benefits resulting from the sector among women and men, and
- Provide a working environment that is family friendly.

The purpose of this policy is to change gender stereotypes and attitudes, to ensure gender equality, and to implement gender legislation by creating an environment for labour relations and developing cooperation and partnership in all areas. To achieve this, the following objectives have been set:

- Introduce a gender concept aimed at reflecting gender content in the sector’s legal reform, policy, planning, budgeting, monitoring and evaluation, eliminate gender discrimination, and reduce negative impacts in areas of influence, and strengthen capacity in this regard;
- Create an environment that is appropriate for all levels within public and private sectors, meets different gender needs and provides work and life balance;
- Manage line ministries, agencies, aimags, the capital city, soums, districts, bags, khorooos, and business entities;
- Implement special measures and various other activities aimed at ensuring women's participation and representation at the grassroots level, for equal benefits among women and men in all spheres;
Implement a comprehensive strategy to change gender stereotypes and attitudes that are the root causes of discrimination, gender-based violence and inequality (among sector workers, stakeholders, and the public); and

Implement gender-sensitive policies in the sector, develop strategic networks of partnerships and an integrated policy governing the relationship between government, civil society, investors, donors, international organizations and the private sector.

This policy will be implemented in two stages during 2019-2026. The first phase, 2019-2022, will be linked to the implementation of the Government’s National Program on Gender Equality (2017-2021). The second phase (2023-2026) will be coordinated with the implementation of the Mongolian Sustainable Development Concept, 2030. A course of action has been developed to implement the above policy.

The policy aims to reform legal frameworks governing the mining sector through a gender concept to 1) reduce the negative impacts on the environment, human rights, society and affected zones, 2) to share the benefits resulting from the sector with women and men equally, 3) to create a family-friendly working environment, and 4) to change gender stereotypes, ensure gender equality and enforce gender-related legislation by improving all level of cooperation throughout the sector.
5. Conclusions and Recommendations

The formalization process of the artisanal mining sector in Mongolia has been taking place for a considerable period and has accomplished significant success and achievements. For example, artisanal miners are now able to operate in accordance with the law by working as registered and unregistered partnerships and cooperatives, by signing contracts with the local community and sometimes large-scale mining companies. In other words, the government is recognizing, legalizing, and formalizing ASM operations in Mongolia. The improvements of the legal frameworks governing the ASM sector have helped to resolve issues pertaining to human-rights violations of artisanal miners, compliance with international due diligence requirements, combatting hidden trade of gold, chemical use, tackling gender issues and inequality.

However, many issues - in legislation, law enforcement, and the socio-economic work environment of artisanal miners – can still be further addressed by policy revisions in order to incentivise further improvements. Additional policy revisions could strengthen existing efforts to make the ASGM sector a more significant contributor to the country's economic development, especially in remote areas, and improve future operations of the artisanal mining sector.

The following tables provide recommendations on how to improve the ASGM sector through different approaches:

- Policy revisions,
- Implementation improvements, and
- Capacity building and awareness-raising.

The recommendations are organized in six central topics:

- ASM organization,
- Formalization and land approval,
- Ore extraction,
- Ore processing,
- Awareness building and inclusion of CSPs, and
- Gender sensitivity of ASGM regulations.
## 5.1 Organization

<table>
<thead>
<tr>
<th>Conclusions</th>
<th>Recommendations</th>
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<tr>
<td>1. It was observed that artisanal miners prefer to become organized as an unregistered partnership, as it is easy to establish, the group enjoys flexible conditions for profit-making and spending, and can be easily converted to a company with expanded operations. However, unregistered partnerships bear less responsibility and do not pay the necessary taxes. Thus, local governments tend to push ASM organizations to become registered as a precondition for a possible land agreement.</td>
<td>1. (Capacity building) Actively organize and promote awareness and capacity-building activities on the Law on Partnerships and Cooperatives among artisanal miners. This kind of awareness can help miners to innovate compliant organisational structures. Also, in order to professionalize and promote responsible ASM, build awareness on becoming registered as opposed to an unregistered partnership.</td>
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## 5.2 Formalization and Land Approval

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<tr>
<th>Conclusions</th>
<th>Recommendations</th>
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<td>2. Mongolia has a continental legal system, according to which any social group is regulated by a stand-alone custom law. While the group of artisanal miners has grown considerably in recent years, constituting a larger social segment, there is no law for this specific sector. In addition, several regulations governing ASM seem more suitable for LSM operations, causing issues for ASM to comply with regulations, i.e. processing plant regulations.</td>
<td>2. (Policy revision) A stand-alone law should be developed and enacted based on the existing ASM Regulation. In addition to issues of land approval regulated in the current ASM regulation, the law should tackle issues that are currently not fully regulated, esp. environmental management and responsibilities, OHS standards, gold trade, traceability and due diligence, technical requirements and classifications. A consistent legal framework taking into account the features of ASM will provide miners with the ability to understand responsibilities and to innovate ways to accomplish them.</td>
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<td>3. One of the goals of the ASM Regulation, “helping the local community to reduce poverty by creating jobs”, is not fully implemented due to the practice that wealthier people and small companies operate as ASM partnerships. They use the civil identification cards of local senior citizens to establish partnerships and employ paid workers for extraction instead of active partnership members. Due to this, many people remain unemployed in rural areas.</td>
<td>3. (Implementation improvement) This issue can be regulated by regularly reviewing the registration of members of partnerships and cooperatives engaged in artisanal mining along with the identification cards of miners working there. In addition, ASM NF could cooperate with the local government in registering and providing identification cards to artisanal miners.</td>
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<td>4. The intersectoral non-staff council to coordinate the activities of government organizations on issues related to artisanal mining specified in Article 10.1.2 of the ASM Regulation is not established. The activities of this council may coincide with some of the activities of the intersectoral council which is responsible for coordinating activities of government agencies in ensuring the implementation of the National Action Program for Reducing Mercury in ASGM, as stated in Article 8 of the program.</td>
<td>4. (Implementation improvement) The intersectoral council, as stated in the ASM Regulation, should be established. The operations and activities of these two councils should be coherent and correlated with each other in order to translate national strategies to adequate activities on the local level, which address social, economic and environmental issues in ASM in an integrated manner.</td>
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5. Articles 6.1.2 and 8.1.3 of the ASM Regulation contradict the Minerals Law. Section 11.1.23 of the Minerals Law clearly states “...based on a request from soum/district governor...” make a conclusion on the overlap and determine the size and boundaries of the land’ while Sections 6.1.2 and 8.1.3 of the ASM Regulation 151 states that provincial and capital city governors are obliged to deliver requests for the conclusion to central state administrative agency and receive replies. The provision of the Regulation violates and supersedes the Minerals law. In the Mongolian legal system, a law is superior to any regulation or procedure.

5. (Policy revision) The provisions of the ASM Regulation should be corrected to be compliant with the Minerals Law. At the same time, it might be more useful to revise the Minerals Law to harmonize both policies. A more decentralized approach, in which the soum governor requests a land conclusion seems more feasible and might shorten the bureaucratic process (see next item).

6. The stipulated time for the decision-making process on ASM land approval as specified in the ASM Regulation is not being enforced adequately in practice. According to this study, miners’ applications for ASM land get stalled mostly at the MRPAM and at the local government level.

6. (Implementation improvement) An analysis should be conducted on why the decision-making process on ASM land approval is taking longer and improvements should be made. ASM NF could act as an additional monitoring agent for the implementation of the decision-making period specified in the Regulation and start developing a monitoring report along with recommendations to avoid future delays, working as an advocate for the ASMrs rights. Shorter approval timelines are likely to incentive miners to apply for land permits.

7. The procedure of applying for and receiving an ASM land permit is not transparent enough which creates room for injustice. For example, the ASM Regulation stipulates that land applications should be reviewed on a first-come, first-serve basis. However, as there is no clear system for registering the land applications, the order of the applications could be changed, thus potentially creating opportunities for corruption.

7. (Implementation improvement) It is important to introduce a new system, that meets the principles of openness and transparency in accepting the ASM land applications and providing ASM permits. Enabling an application and permitting process through advanced government service platforms such as E-Mongolia would be an option.21

8. The clauses that Provincial Citizens Representative Khurals (the Khurals) discuss and approve land for artisanal mining present significant obstacles to artisanal miners, as in practice, the Khurals usually convene twice a year, resulting in long delays in making decisions to obtain land for the artisanal mining purpose. This situation leads artisanal miners to extract minerals illegally without permission due to the long waiting period.

8. (Policy revision) It would be appropriate if the soum (district) Citizens Representatives Khural (CRKh) made decisions on giving land permits instead of the Khural at the provincial level (aimag). Even though both administrative units convene at a minimum of twice a year, it is easier and more accessible to convene the soum CRKh, compared to the aimag CRKh. Therefore, it is recommended to add ‘soum/district Citizens’ Representative Khural’ in Article 7 in the ASM regulation and Section 7.1.2 as part of the Power and Authority of Soum/District Citizens’ Representative Khurals. This will not contradict applicable regulations. For example, Article 16.2. of the Land Law states that soum and district CRKhs have the right to designate land for artisanal mining. This policy

21 E-Mongolia is a system, which compiles and integrates government services to provide easy and smooth round-the-clock access. It allows citizens to obtain more than 181 government services through mobile application (iOS and Android) and online. https://www.e-mongolia.mn

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revision would accelerate the decision-making process.

9. Resolution #355 (2019) could potentially limit and restrict the government policy and legal framework on artisanal mining in the future. If so, the legal status of more than 12,000 artisanal miners would deteriorate leading to increased unemployment and higher crime rates, as well as many other negative influences.

9. (Implementation improvement) It is important to improve and make amendments to the ASM Regulation, as mentioned in Resolution #355, as soon as possible. Refer to recommendations for the ASM Regulation in the Conclusion and Recommendation tables “Formalization and Land approvals”, “Ore extraction” and “Ore processing.”

5.3 Ore Extraction

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<td>10. One of the common violations reported in ASM is the use of machinery/equipment with a capacity exceeding the limit set by the ASM Regulation. The miners state that the equipment/machinery capacity limit set by the ASM Regulation does not fit the extraction and rehabilitation work in practice. Furthermore, the current specifications on equipment/machinery capacity stated in the Regulation are vague and lead to different interpretations by law enforcement officials.</td>
<td>10. (Policy revision &amp; Awareness raising) The ASM Regulation should reflect the technical and practical needs of ASM. Furthermore, awareness needs to be built on the allowed technical capacity, conditions and requirements in order to reduce misconceptions among miners and local law enforcement, which can also prevent conflict between the two groups.</td>
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<td>11. The legal framework for artisanal miners to fulfill their obligations to protect the environment (mainly rehabilitation) is unclear, which can be another source for government overreach. The ASM Regulation does not have clear articles and clauses on the environmental responsibilities of artisanal miners.</td>
<td>11. (Policy revision) The ASM Regulation should be revised to clearly specify the environmental obligations and responsibilities of artisanal miners. A clear regulation can also clarify obligations and prevent conflict between miners and law enforcement.</td>
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<td>12. It was commonly reported by miners that rehabilitated areas were re-extracted again. According to miners, re-extraction is mainly carried out by illegal miners from other provinces.</td>
<td>12. (Implementation improvement) Formalization and awareness-raising of artisanal miners is the main solution to minimize the prevalence of illegal mining and its negative impacts, such as the re-extraction of rehabilitated land.</td>
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<td>13. Local governments do not report the expenditure of funds that artisanal miners deposit into the environmental rehabilitation fund. The timely release of funds was also mentioned as a problem. Because of this, artisanal miners are often blamed for not rehabilitating the environment.</td>
<td>13. (Policy revision) Local environmental rehabilitation funds/accounts that receive ASM funds should be linked to the respective reporting system of the MET. This will enable the disclosure of the accrued amounts, spending and expenditures, to ensure that funds are spent on designated purposes. A clear mechanism of how and when the funds are supposed to be released should be included in the ASM Regulation to increase transparency and accountability of local governments and miners.</td>
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<td>14. Information/data on rehabilitated ASM land is not shared directly with the MET. MRPAM provides aggregated data for ASM and LSM to MET. This procedure does not give a full picture of the ASM sector.</td>
<td>14. (Implementation improvement) Introduce a system, where the MET directly receives disaggregated information on the environmental rehabilitation of artisanal miners from local governments. This will enable MET to receive</td>
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authentic and correct information on artisanal miners’ legal compliance, conduct realistic evaluations and publicize information on rehabilitation.

15. Some artisanal miners have no knowledge on the application process for blasting permits or do not know how to fill out these documents. They cannot always get the control sheet from GASI which is the key permission for blasting.

15. (Capacity building) GASI needs to improve the capacity of artisanal miners on how to apply for blasting permits and supply them with the necessary information and application forms. This will enable miners to follow the formal procedures when it comes to blasting at their mine site.

16. Licensed blasting companies encounter considerable challenges in cooperating with artisanal miners. For example, there are reported cases where artisanal miners insisted on illegal blasting and on disregarding safety procedures. Some companies refuse to work with artisanal miners because of these requests.

16. (Awareness raising) Training and awareness-raising events should be organized for artisanal miners about the specificity of blasting work and the importance of safety procedures. Training could be jointly organized with the ASM NF and Association of Blasting Service Providers.

17. The high cost of blasting work makes it difficult for artisanal miners to pay for the services from blasting companies.

17. (Implementation improvement) It is possible to reduce the cost of blasting by arranging a professional blasting company for several ASM sites located close to each other. This step will reduce barriers for artisanal miners to work with licenced blasting companies.

**5.4 Ore Processing**

**Conclusions**

18. Article 2 of the Requirements on Processing Plants and Operational Regulation states that MMHI shall oversee and inspect the processing plants. This is contrary to the Minerals Law and overlaps with the functions of government agencies, stated in Article 10 of the Minerals Law. ‘Powers of government agencies’ does not confer oversight and inspection rights and Paragraph 11.3 clearly states this oversight/inspection function shall be performed by the specialized inspection agency.

**Recommendations**

18. (Policy revision) This regulation should be revisited and amended consistent with Article 10 and 11 of the Minerals Law and confer the oversight/inspection rights to a specialized inspection agency, i.e. GASI.

19. Paragraph 3.13 of Requirements on Processing Plants and Operational Regulation (2019) obliges the plants to refrain from concentrating/beneficiating ores of unknown origin - attempting to cease trading of illegally extracted minerals. This could lead artisanal miners to pursue more hidden and illegal processing options, such as using toxic and hazardous chemicals, including mercury, for processing gold and other minerals.

19. (Policy revision - Awareness raising) The government needs to provide a transition plan with milestones and/or a grace period for processors and miners to comply with this Clause. Also, the issue of tracing the origin of gold and the ore needs to be mentioned in all the legislations regulating ore extraction, ore processing, and gold trade. A comprehensive framework to trace due diligence according to international standards is required. This needs to be complemented with training and information campaigns, provided to all levels of government stakeholders, processing plants, ASM organizations and traders.
20. Existing legal requirements for ASM processing plants are more suitable for LSM industries and exceed their financial and technological capability. They make it challenging to build new plants and existing plants with missing permits operate in a legal grey zone; many plants reported to be shut down on a regular basis by law enforcement. This jeopardizes access of artisanal miners to centralized processing centers with adequate technology, which could push miners into illegal processing and mercury use.

21. As the regulation on processing plants is relatively new, processing plants owners and local governments had different levels of knowledge about the regulation.

22. As the processing plants operate separately from the extraction process and usually receive a fee per tonne of processed ore, they do not have any incentives to improve their gold recovery systems. In addition, processing plants sell tailings to cyanidation plants. Low recovery rates increase the gold content in the tailings and the profit of the plant owners. This puts artisanal miners in a vulnerable position and causes loss of income.

23. (Awareness raising) Undertake a systematic, effective, and far-reaching information drive to create awareness in artisanal mining communities and appropriate government agencies on related legal documents.

## 5.5 Awareness Building and Inclusion of Civil Society Organizations

### Conclusions

23. Local government agencies, officials and artisanal miners are poorly informed or unaware of the following: National Program for Reducing Mercury Pollution from ASM Sector (as endorsed by the Government Resolution #317, 2019), Mines, Mining Operations and Processing Plant Commissioning Procedures, Regulation for Operating Processing Plants and Operation Requirements (endorsed by Decrees #A/16 and A/205, Minister of Mining and Heavy Industry, 2019), and Regulation for Licensing, Permitting and Registration of Dealers in Precious Metals and Stones and Products Made from Them (endorsed by Decrees #150, FRC, 2020). Target groups have not adopted these legal documents in their operations, so it is impossible to evaluate the level of implementation.

### Recommendations

23. (Awareness raising) Undertake a systematic, effective, and far-reaching information drive to create awareness in artisanal mining communities and appropriate government agencies on related legal documents.
24. The government does not always ensure artisanal miners’ participation in decision-making processes, nor do they reflect the voices and opinions of artisanal miners.

24. (Policy revision) The Government should make the following improvements to the legal framework of the artisanal mining sector:

- Make its policy and directions clear by ensuring engagement with representatives of the ASM sector in policy and law-making processes;
- Create incentives and protect the interests of the miners;
- Provide transparent and available avenues for redress to miners; and
- Consider fundamental human rights (incl. Gender equality) in assessing miners’ needs.

With these considerations, policy documents and legislation will be developed with a keen eye on field realities expressed by the miners themselves, and legitimate interests and human rights of artisanal miners could be protected through the resulting policies.
6.6 Gender Sensitivity of ASGM regulations

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