

RESPONSIBLE AND SUSTAINABLE ARTISANAL MINING – A GOLDEN OPPORTUNITY FOR MONGOLIA

EDITORIAL

The Asia Briefing Paper Series aims to inform the development practitioners and the public about new innovations, results and impacts of Swiss development cooperation in Asia. It shall particularly highlight past and present efforts to achieve aid effectiveness through partnerships between Swiss agencies and local partners.

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THE MONGOLIAN GOLD RUSH

In the early years of Mongolia's transition, people who lost their jobs in the restructuring of the State began to engage in informal coal mining activities in areas such as

Nalaikh, a large former state-owned coal mine that had been closed. From 1998, informal artisanal miners ("ninja miners")¹ began digging for gold. The initial triggers for the subsequent gold rush were three consecutive dzuds² from 1999 and 2002, during which a total of 11 million animals perished. Artisanal and Small-scale Gold Mining (ASGM) soon became the only alternative income and employment option in rural areas for herders who had lost their livelihoods.

Many more people were lured into ASGM when the gold price entered its current

1 "Ninja" miners are so named because of the green bowls they use for panning, which, when carried on their backs, are said to resemble the shells of the Teenage Mutant Ninja Turtles.

2 Dzud: A Mongolian climatic phenomenon of dry summers combined with following extraordinarily harsh winter conditions.

upward trend, which saw a rapid increase in the number of informal artisanal miners – reaching 100,000 (two-thirds men; one-third women), or the equivalent of about 20 percent of the rural workforce. As a result, up to 400,000 people indirectly became dependent on small-scale mining.

Informal ASGM and its social and environmental impacts were at risk of becoming uncontrollable. At that point, the Mongolian and Swiss governments agreed to launch the Sustainable Artisanal Mining Project (SAM) in 2005. Lessons learnt from similar SDC projects in Latin America suggested that organised ASGM had a huge potential for local development and that formalisation was the key to converting informal "ninjas" into responsible artisanal miners.

WHY IS SWITZERLAND – WHICH IS NOT A MINING COUNTRY – SUPPORTING ARTISANAL MINING?

Switzerland's engagement with the ASGM sector dates back to 1992, when SDC identified mercury pollution as an environmental problem of a global dimension and a priority topic to be addressed within the Swiss contribution to the Global Environmental Facility (GEF).

Piloting a Temporary Regulation for ASGM, as well as a prohibition of mercury use from 2008, Mongolia enacted a definitive legal framework for ASGM in 2010. Abandoning the traditional use of mercury is a challenge, but when artisanal miners are given legal access to mining land and mercury-free technological alternatives, excellent progress towards formalisation can be observed. Rehabilitation of already mined areas reduces environmental impacts, and the income derived from gold extraction is an important source of employment and a driver of local economic development in rural areas.



A group of organized artisanal miners working on the pit of the large mining site, Zaamar soum, Tuv aimag

MERCURY FREE GOLD PROCESSING

“Amalgamation” is an ancient technology involving the use of mercury for the extraction of gold from ore. Its low cost and ease of use make it the still-preferred process for most artisanal miners. Attempts to prohibit amalgamation were unsuccessful in most countries, driving ASGM mineral processing into clandestine spaces. Planning of the SAM Project in 2005 built upon the lessons learnt from earlier SDC projects and proposed technological changes for gradually reducing mercury emissions as a best practice.

Following a cyanide spill at an industrial mining operation in 2007, public opinion and political pressure demanded tighter regulations from Mongolian authorities. As one of the measures taken, the use of chemicals, including mercury, was prohibited in ASGM in 2008. Almost overnight, thousands of artisanal miners had either to process their ore illegally and clandestinely, or lose their livelihoods.

Authorities and artisanal miners expected the SAM Project to act rapidly and to propose a viable mercury-free alternative for processing minerals from ASGM. The simultaneous initiative of the miners’ community at Bornuur provided the ideal conditions:

- Miners were convinced that the development progress could only be achieved through community organisation and created an association;
- Miners were seeking legal security through formalisation and negotiated an agreement with the concession holder; and
- A mercury-free processing plant was the only option for miners not to lose their livelihoods.

The SAM Project in cooperation with the Mongolian Minerals Authority provided support that led to the creation of the Hamo Company³, which introduced pioneering technical work into the broader framework of creating a sustainable community-based business opportunity. The Hamo Company started in 2008, with five miners from the community contributing 60 percent of the investment required for

3 A “Hamo miner” - in contrast to a “ninja miner” - is a term used in Mongolia for formal artisanal miners.



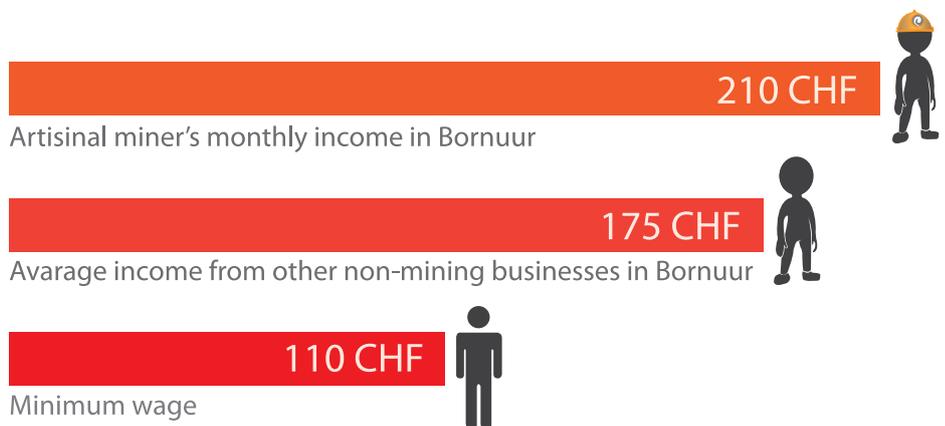
The mercury-free ASGM gold-processing plant in Bornuur soum, Tuv aimag and Bayan-Ovoo soum, Bayankhongor aimag

the construction of an 8 tonnes/day processing plant. A pilot plant with one milling circuit and a capacity of 1 tonne/day was constructed and SDC contributed the equipment for substituting amalgamation and the critically required technical advice. By 2011, the miners had managed to scale-up the plant to 8 tonnes/day, catering to an average of 80 clients daily and producing annually gold worth CHF 2.9 million. Within just three years, Hamo had become the largest employer in Bornuur, providing permanent job opportunities for more than 60 women and men from Bornuur.

The Hamo processing plant not only caters to about 300 miners from Bornuur, but also provides services to ASGM partnerships from all over the country. As a result, the local economy began to flourish,

the average income in Bornuur increased well above the minimum wage and rural average, and the quality of goods on offer in local stores approximated the good supermarkets in the capital, Ulaanbaatar.

The Mongolian Environmental and Minerals Authorities and environmental advocacy organisations closely monitored the performance of the processing plant, as did competitors offering clandestine amalgamation facilities. Accusations were made on more than one occasion. Such accusations having been able to be proved groundless, these attacks had the effect of strengthening the miners’ organisation. After two years of observation, the mining authority approved the technological process and began to promote the replication of the plant design in other ASGM areas.



The local economy in Bornuur is booming

LEGALIZATION AND FORMALIZATION OF ASGM

When ASGM emerged in Mongolia in the early 2000s, it was a new phenomenon for the country and culturally impacted on its herding traditions in rural areas. At the time, most in the government considered ASGM a temporary phenomenon and felt that it would soon disappear. As a result, it was initially treated as an ignorable, temporary annoyance without any need for governmental intervention or regulation.

ASGM might eventually have disappeared; however rising gold prices made the activity increasingly attractive and triggered an ASGM gold rush. The unemployed urban population joined the ex-herders in becoming "ninjas". With 100,000 ninjas digging for gold without any environmental considerations, ASGM ceased to become temporary, and was seen by many as a threat to herding and Mongolia's rural traditions. Resistance against ASGM grew and culminated in criminalisation and human rights abuses against ASGM families.



There is widespread public resentment towards artisanal miners, who are often blamed for destroying pristine wilderness and nature.

Setting up the SAM Project in 2005 and introducing the concept of Sustainable Artisanal Mining into public and policy dialogue by demonstrating that responsible and formal ASGM was the only sound way forward, helped to de-escalate conflicts. At that time, negative public opinion was such a strong barrier against "legalising" ASGM that it took almost three years before the Mongolian government decided to enact a Temporary Regulation for ASGM, providing miners with the possibility of formalising their operations for



Security of tenure through the formalisation of ASGM operations empowers ASGM miners and requires them to operate responsibly

the first time. Almost simultaneously, the abrupt mercury ban imposed an enormous technical challenge and placed those miners who used mercury at risk of further criminalisation.

The intervention of the SAM Project, in cooperation with sector and local authorities, was crucial in resolving the dilemma. The SAM Project demonstrated that mercury-free mineral processing was possible, and supported ASGM communities in their efforts towards formalisation.

The formalisation of ASGM is not limited to obtaining the right to mine in a determined area. It is a complex process based on respecting rights and assuming responsibilities. It requires ASGM miners to leave their "ninja attitude" behind and to focus on compliance with legal, social and environmental requirements, and to improve their organisational skills, techniques and workplace safety practices.

It is not the role of Swiss support to outreach to all 100,000 miners; however, the SAM Project provided the required capacity building at a large number of pilot sites and to such an extent that it convinced political decision-makers that responsible and sustainable artisanal mining was in fact feasible. Following the introduction of the Temporary Regulation in 2008, the number of formalised ASGM

partnerships⁴ in the project areas reached 250 in 2009⁴ and almost doubled to 410 in 2010.

In 2010, following the advice of the Swiss-supported SAM Project and its counterpart, the Ministry of Mineral Resources and Energy, the State Great Khural - Mongolia's Parliament - converted the Temporary Regulation into a permanent legal framework for ASGM by approving an amendment to the Minerals Law and providing for the first time legal security to formal and responsible ASGM in Mongolia.

In the first year (2011) following the enactment of the legislation, 317 new partnerships were reorganised in compliance with the new law, and 65.6 percent of their members were enrolled in health insurance and 21.2 percent in social insurance. ASGM miners paid more than MNT 80 million (approx. CHF 55,800) in taxes and invested more than MNT 40 million (approx. CHF 27,900) in land rehabilitation.

⁴ Under Mongolian legislation, an "unregistered partnership" is a legally recognised, non-incorporated group of individuals conducting work jointly and sharing responsibilities. Usually, ASGM partnerships generally consist of from five to 20 members.

OUTCOMES AND IMPACT

Within only a few years, SAM achieved significant results. The establishment and enforcement of an enabling legal framework for the ASM sector in 2010 was a major breakthrough. Formalization of the ASM sector clearly improved registered miners' living and working conditions. New rights and responsibilities came along with it. Registered miners are now included in the social security system and pay taxes. They gain investment security through secured land rights. This allows them to invest in technological improvements and workplace safety. The results are better health, lesser accidents, higher productivity and secured livelihoods.

As the allocation of new mining land is conditioned by the rehabilitation of formerly exploited areas, land degradation and water pollution is progressively reduced. Replication of the Bornuur processing plant in other regions after official approval of the "design" in 2010 allows a larger number of miners to stop clandestine amalgamation and become formal mercury-free gold producers.

Since 2010, miners have been organising themselves into formalized partnerships, and the number of registered miners is practically doubling each year. By the end of 2012, more than 500 organised producer groups were in existence in the project area and at national level.

"Before, my family lived in a ger (yurt); now we live in a brick house. In winter, we bought meat in small quantities, now we buy a whole cow and two sheep for the winter. Before, we didn't have livestock; now we have 90."
(Female miner G., Bornuur soum, Tuv aimag)

Every year an estimated 3-5 tonnes of gold are produced by the ASGM sector. This currently represents almost CHF 200 million of generated value and an average income for ASGM miners in the range of CHF 2000 per year. Contrary to industrial mining, money first enters at the household level and begins to circulate from the bottom up, from the local to the regional and national economies. A higher level of economic activity and local development can be observed in those soums and aimags (districts and provinces) where formalisation has made the most progress.

Sustainable artisanal mining allows the conversion of extracted mineral resources into livelihood opportunities for the poor and for future generations without detrimental environmental consequences. The SAM Project has demonstrated that this is possible in Mongolia. Until now, 5000 miners have been directly benefitting from the work and achievements of the SAM project.

Today, however, the majority of Mongolian ASGM miners are still working informally. To expand formalisation nationwide is now mainly a Mongolian task. SDC continues to support this process through advice at the political level and capacity building at the level of artisanal mining communities. The SAM Project further strengthens this process through the piloting of voluntary social and environmental standards for responsibly produced ASGM gold and ethical certification schemes (fair trade – fair mined).

On a global scale, an international treaty for the global reduction of mercury emissions has been negotiated under the auspices of UNEP. The experiences of Mongolia in reducing mercury emissions, reducing poverty and promoting local development through the formalisation of ASGM were presented as important examples and achievements for other countries to follow.

In 2011, the third session of the Intergovernmental negotiating committee took place to prepare the treaty on mercury. With the support of SAM, the Swiss and Mongolian delegations have successfully promoted the formalisation of the ASGM sector. Formalisation has been included in the text of the treaty as an important step in order to solve the problem of mercury use in the ASGM sector.

"With the use of the compressor provided by the SAM Project, our work productivity and efficiency has increased by a factor of three and we paid back our loan one month early. This month we have processed our ore twice in Bornuur, and for that we received MNT 816,000 (approx. CHF 570)."

(Haiguulchin partnership, Mandal soum, Selenge aimag)

IMPRINT

Links

SDC: www.sdc.admin.ch

SDC Mongolia:

www.swiss-cooperation.admin.ch/mongolia

SAM Project: www.sam.mn

About this Publication

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