Project Document

Sustainable Artisanal Mining Project (SAM)

Phase 3, 2011 - 2014

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1. Foreword

The Sustainable Artisanal Mining Project (SAM) started in 2005. The Project was initially supposed to cover a period of 8 years, with a 1½ years Preparatory Phase, a main implementation phase of 4 years from 2007–2010 and an exit phase.

Based on demands from the Mongolian Government and Mongolian artisanal mining communities, and adopting the recommendation of the Mid-Term review in 2009, SDC decided to amend its commitment by adding a second main phase (Phase 3) of 4 years, from 2011 to 2014.

When the Project started in 2005, artisanal mining in Mongolia was a highly controversial topic, providing very much needed employment opportunities for ex-herders and population affected by the process of economic transition, but trapped in the informal sector with miners subjected to discrimination and human rights violations. SDC was the only development agency that had the courage to engage with this sector and to support the Mongolian minerals sector in its efforts to cope with these challenges.

Five years later, a legal framework for artisanal mining exists and the lessons learnt from the Project indicate a clear way forward. Nevertheless, all stakeholders agree that the development of the Mongolian ASM sector and its conversion into formal economy, providing employment for almost 20% of the rural workforce, follows its own logic and requires more time than the initially considered 4-year implementation phase. SDC is still the only development agency accompanying this process in Mongolia.

For Phase 3, it was clear from the beginning that sustainability can only be reached if the process, and therefore the Project, is based on very strong national ownership. The planning process was conducted in a highly participative manner, based on interviews, discussions, workshops, site visits, consultation, and negotiation, involving mostly all relevant stakeholders, and covering a period of several months. The project plan incorporates the latest national and international experiences and trends in the field of community mining development.

The implementation of the project plan should result in a "smooth" Phase 3, which requires from the management sensibility and a good portion of operational flexibility, but is guided by a clear, straightforward, and risk-minimizing project strategy towards sustainability.

The Mongolian artisanal mining sector needs this support now more than ever. The next years will shape the long-term future towards respected, socially and environmentally responsible artisanal mining. SDC and the Mongolian Government represented by the Ministry of Mineral Resources and Energy (MMRE) and its Agencies are committed to implement the SAM Project in close cooperation and in benefit of the artisanal mining communities.

2. Executive Summary

During the last two decades, **Mongolia** has accomplished the transition from a centrally planned command-administrative system to a multiparty democratic market economy. The endowment of the country with rich mineral resources allowed developing an extractive industries sector that currently contributes about 60% to the country's industrial output and 20% of its export revenues.

Parallel to the boom of industrial large-scale mining (LSM) attracting international mining companies, the Mongolian population encountered in **artisanal mining (ASM)** a new self-employment opportunity, which offered relief from unemployment during early years of transition as well as from natural disasters. Despite creating between 40,000 and 100,000 workplaces and contributing annually well above 100 million USD to export revenues, ASM was treated as an annoyance and artisanal miners have been regularly subjected to discrimination and human rights violations.

The **Sustainable Artisanal Mining (SAM) Project** started in 2005 with a 1½-year preparatory phase (Phase 1) and built on SDC's experience in ASM projects. According to the Mid-Term Review (MTR) of the main implementation phase (Phase 2), which took place in October 2009, the SAM Project is highly relevant for Mongolia's development and crucial for the population involved in this sector, and has adequately addressed the most relevant issues pertaining to Mongolian ASM. For the continuation of the Project in a suggested additional main implementation Phase (Phase 3), the MTR recommended streamlining it into two more integral components: an ASM Policy Component and a Community Mining Component.

Despite the progress made during Phase 2, the ASM sector is still predominantly informal, unorganized, and poor and in consequence, workplaces remain unsafe, environmental impacts remain a major concern and contribution to sustainable local development is limited. Public opinion about ASM has however improved and recently in 2010 allowed for enacting the ASM Amendment of the Minerals Law with an impressive majority of votes (more than 80%).

The **development goal** of Phase 3 is the "*Recognition of artisanal mining as a formal sub-sector contributing to Mongolia's economic development*". The Project is directly contributing to Outcome 3 of the Swiss Country Strategy (SCS): "Increased income of herders and ex-herders in targeted areas based on improved productivity of their livestock and income diversification". The Project is also aligned with the National Development Strategy of Mongolia, which aims for creating the "… legal environment for activities to exploit mineral deposits by micro-mining methods based on principles of being state regulated, environmentally friendly, safe for living environment".

Phase 3 will work with and towards permanent and seasonal **community based ASM**, where the Project's interventions contribute to sustainable livelihoods. The Project will scale up **gold-mining** community development and technologies and start piloting similar strategies with **fluorspar** and **coal** mining communities. Artisanal miners have been marginalized during more than a decade and only recently, the public and political opinion is changing towards recognizing ASM as an employment generating rural economic activity, which needs to be carried out in a responsible manner. Under such circumstances, a **rights based empowerment approach** is the most suitable one to achieve the development goal.

The Project's **working hypothesis** is to reverse the vicious circle in which ASM was trapped at the time of initial project planning and to convert it into a virtuous circle. Favourable conditions for the integration of ASM into the formal economy shall act as incentives for formalization and responsible practices. Demonstrated responsible ASM shall create broad stakeholder confidence in the development potential of ASM. For that purpose, the Project needs **two components**:

- An **ASM Policy Component**, which has the role to promote a favourable public policy towards ASM and to act as a facilitator for the creation of adequate regulatory framework conditions for the development of formal and responsible ASM.
- A **Community Mining Component**, which has the role to build capacity in local ASM communities for carrying out safe, environmentally and socially responsible and

economically rewarding mining within their territory and to empower local artisanal miners to organize and formalize their operations for that purpose.

The **implementation strategy** for Phase 3 is entirely based on a participative bottom-up planning process, during which Mongolian stakeholders identified the following **6 priority topics**, to be addressed for converting the past and still predominant informal "ninja" mining into a responsible ASM activity:

- Legal framework and formalization
- Organization and institutional strengthening of ASM
- Social responsibility, social security and workplace safety
- Environmental responsibility, eco-efficient technology
- Capacity building and access to information
- Local development and income generation

By incorporating operational focuses such as "fair mine-to-market trading chains" and "sustainable livelihoods", as well as emphasizing on gender balanced development, a project strategy results which is fully compatible with three mainstream development frameworks (rights based approach, empowerment approach, Fair-trade) and can be cross-validated from a sustainable livelihoods perspective. Each of the six priority topics is relevant under all four development frameworks.

The **Logical framework** defines component **outcomes** and project- and component outputs for the six priority topics. **Component outputs** are mutually dependent and reinforcing between both components. This highlights the required close integration of both components. **Indicators** are intentionally formulated at Project level and not at Component level, as the Project can only contribute significantly to the development goal if it makes simultaneous progress in both components. At activity level, a very detailed "**portfolio of activities**" with orientation and guidance notes for the project management is elaborated. The portfolio is intended to support a **dynamic project management**, monitoring the context for surfacing opportunities and adjusting the project activities accordingly. Progress at activity level is therefore not measured by indicators but by **milestones**, which are tangible results and shall be achieved through suitable activity combinations.

As the Project contributes to Mongolia's development priorities and is highly relevant, **risks** for its continuation in Phase 3 are considered low. As the recent enactment of the ASM Law Amendment shapes a clear public policy, relatively safe **assumptions** can be made. For the remaining risk scenarios, clear **risk mitigation strategies** are elaborated.

Sustainability is an inherent element of SAM's rights based empowerment approach, articulating the relevant rights holder and duty bearer, and empower artisanal miners to access their rights and comply with their social and environmental responsibilities. Capacity building, which is transversal to all key topics focuses on sustainable structures for general audience targeted capacity building and finds long-term support in "champions" oriented, specialized capacity building through the Project's uplink into the global long term initiatives like Fairtrade and Fairmined and CASM. A clear distribution of tasks and duties within the close cooperation with the counterpart also contributes to sustainability.

Phase 3 postpones the **exit** phase by four years and allows consolidating the Project's achievements in the pivotal moment after the enactment of the ASM law. Capacity building and handing over the experiences and lessons learnt from the Project will put all national stakeholders in a better position to continue working with the ASM sector beyond the lifespan of the Project.

Increased outsourcing of tasks to external service providers (as handover to national stakeholders) is already part of the exit strategy. Final handover remains the task of a 2 years' exit phase.

An in-depth **stakeholder** analysis allowed for detailed stakeholder mapping. **Beneficiaries** of the Project are "responsible artisanal mining communities". Artisanal miners shall not be perceived as "beneficiaries" but as "drivers of change" and partners of the Project. The stakeholder analysis confirmed the **key-stakeholder** position of the mining sector of the Central Government, the Regional- and Local Governments, and a few number of likeminded international actors. A wide

portfolio of relevant **primary stakeholder** exists which is composed by governmental as well as non-governmental organizations and the private sector. To work with these **partners** is crucial for the SAM. Capacity building in Governmental institutions, local and national NGOs, and research and academic institutions, and the creation of national ownership of the solutions developed within the implementation of the Project will ensure long-term sustainability.

Counterparts of the bilateral cooperation agreement will be the Government of Mongolia represented by the Ministry of Mineral Resources and Energy (MMRE), as the competent sector and the Government of Switzerland represented by the Swiss Cooperation Office (SCO) at the Swiss Embassy in Mongolia.

At operational level, the Project will cooperate closely with the Mineral Resources Authority of Mongolia (MRAM) as the agency of the Mongolian Government under the MMRE in charge of the minerals and mining sector. MRAM is planning to re-establish an ASM Unit.

The Project will be administrated as "self-implementation" by SDC.

In consequence, a **Project structure**, which consists of a SDC SAM Team closely cooperating with the MRAM ASM Unit, is chosen for the implementation of the Project. A **Project Board** of the SAM Project serves the purpose of strategic decision-making, approving Project Plans and Reports, and inter-institutional coordination. This structure, which is quite similar to the structure of Phase 2, allows for continuity, but emphasizes on a much closer cooperation between the operational counterparts SDC and MRAM, which will become possible once MRAM has established its ASM Unit.

The most appropriate **Project Management** structure is a structure led by a National Project Director (PD) who represents the Project vis-à-vis the external partners, is the "public face" of the SAM and has a strong position in the public and policy dialogue. This PD shall be supported by an international Project Manager (PM) who leads the Project team, brings international experiences to the table, and oversees the implementation, administration, and planning and monitoring functions. The PD and PM report collectively, as "*SAM Project Management*", as well as individually to SDC and the Project Board. The team itself consists of 2-3 senior experts, 6 specialists (4 funded by SDC and 2 seconded by MRAM), and the required administrative staff. Further specialist staff will be contracted in a flexible manner according to existing operational needs, by outsourcing to service provider organizations, consultants and peer trainers. Result-oriented short-term contracts shall assure efficiency and efficacy. Specialized national and international expertise is procured through short-term backstopping mandates.

SAM will benefit from **Alliances** with likeminded organizations, such as Asia Foundation (project ESEC "Engaging Stakeholders in Environmental Conservation") as well as the Alliance for Responsible Mining and Fairtrade Labelling Organizations International through the Fairtrade and Fairmined Partnership for ASM Gold, and potentially even with private sector enterprises sourcing gold for ethical jewellery. **Synergies** in vocational training exist with SDC's VET Project.

Project progress will be documented in semi-annual activity reports and output and outcome level focused annual reports. Activity **monitoring** by milestones shall allow for easy and clear appreciation of "reached" or "not reached" status. Output indicators are designed for easy assessment and provision of meaningful insights. Monitoring of the Project's priority pilot sites needs to outreach into operational work in order to measure tangible and visible changes at outcome level in the communities' livelihoods asset endowment. Independent third party Fairtrade certification adds a monitoring dimension of its own.

An internal mid-term **review** shall take place at the end of the second implementation year (end 2013) and allow for eventually necessary adjustments of the phase's operational plan. An external review should be part of the planning process for the phasing out of the Project and its exit and handover after 2014.

The Project is a cooperation effort of Mongolia and Switzerland and draws therefore on **Mongolian and Swiss resources**. The Swiss contribution consists of **4,500,000 Swiss Francs (CHF)** allocated by SDC to the Project budget over the period of 4 years. . The Mongolian contribution amounts to 7**00,800 USD** and consists of in-kind contributions of 200,000 USD by the counterpart, 100,800 USD

by local and regional Governments and 400,000 USD by the beneficiaries reflect time, travel expenses, communication and other associated costs. In addition, the Project has the potential to un-tap for the beneficiaries additional Fairtrade revenue streams dedicated to local development in the order of 1.0 Mio USD/year. Each Project partner administrates its contribution according to its own administrative procedures.

3. Context

3.1. General development context

Starting from the early 1990s, Mongolia has witnessed a rapid transition from a command-administrative system to a multiparty democratic system and from a centrally planned economy to a market economy with numerous challenges being overcome in changing the country's social relations, consciousness, and mentality. Currently, the transition period is nearly over and the country is entering a stage of dynamic development.

The Millennium Development Goals (MDG)-based Comprehensive National Development Strategy (NDS) of Mongolia defines a policy towards "promoting human development in Mongolia, in a humane, civil, and democratic society, and developing intensively the country's economy, society, science, technology, culture, and civilization in strict compliance with global and regional development trends."[1]

3.2. Current situation of Mongolia's minerals sector and artisanal mining

Mongolia has rich mineral resources, with more than 8000 deposits of 440 different minerals, of which about 600 deposits and outcrops have been further explored.

3.2.1. Industrial mining

The industrial mining sector contributes 28.2 percent of the country's Gross Domestic Product (NSO 2008), accounting for 59.7 percent of the country's industrial output (NSO 2008) and 18.4 percent of its export revenue (2009). In 2009, Mongolia exported 11.4 tonnes of gold in processed and unprocessed form worth USD 326 million.

Today, more than 200 foreign and joint venture companies are operating in the Mongolian mining sector. The sector employs more than 46,500 people, which, in a country with one of the world's lowest population densities, amount to more than 37 percent of the total industrial-sector workforce. For key sector statistics, see Annex 2.

3.2.2. Artisanal mining (ASM)

Informal employment in the mining sector emerged in Mongolia after the country's transition to a market economy. In the early years of the transition, informal coal mining activities by people who lost their jobs during restructuring began in areas such as Nalaikh (formerly large state-owned coalmine that was closed).

Since 1998, artisanal informal gold mining ("Ninja mining") began. The initial triggers for a subsequent gold rush were the three dzuds[2] in a row between 1999 and 2002, in which a combined number of 11 million animals were lost. ASM gold mining has suddenly become the only alternative income and employment opportunity in rural areas for herders who had lost their livelihoods. Even more people were lured into ASM when the gold price entered its current upwards trend in 2003.

ASM was initially treated as a temporary annoyance, which would soon disappear. However, as ASM grew in size and impact and developed outside the control of the Government, it became an important economic sector and simultaneously a political issue. Legitimate environmental concerns and vested interests started to create a public opinion in which ASM was considered an undesirable aspect of Mongolia's mining scene and where artisanal miners have been frequently been subjected

[1] MDGs based comprehensive national strategy of Mongolia approved by Parliament resolution No 12, dated 31 January 2008

[2] Extraordinary winter conditions

to discrimination and human rights violations. Despite a notable shift in perception, such opinions, in combination with wishful thinking of a "temporary nature" of ASM, survive.

At present, artisanal miners produce not only gold and coal, but also fluorspar and a series of other mineral commodities. Current official statistics admit a number of 38,000 artisanal miners but officials stress at the same time the need for a census or survey. According to unofficial estimates a number in the range of 100,000 artisanal miners (1/3 women, 2/3 men) is likely, equivalent to about 20% of the rural workforce[3] and in consequence about 400,000 people depending indirectly from this activity. Estimates vary inherently whether only permanent or permanent and seasonal artisanal miners are counted, or whether only persons dedicated to mineral extraction or also persons engaged in related activities (mineral sorting, transport, etc.) are included.

Gold production from ASM can be conservatively estimated in the range of 4 tonnes per year. Less conservative estimates are in the range of 5 to 7 tonnes. The annual gold sales of artisanal miners can therefore be safely estimated well in excess of 100 million USD.[4] Due to the current tax regime (windfall profit tax) which is incompatible with the de-facto currency nature of gold, gold from artisanal production is usually not reported by buyers and informally exported. Nevertheless, these more than 100 million USD can be counted as additional de-facto Mongolian export revenues.

According to a survey conducted by MRAM, 90.6 percent of all artisanal miners mine gold, 4.2 percent fluorspar, 3.2 percent coal, and 2 percent other minerals. ASM fluorspar production adds significant volumes to the industrial production and places Mongolia in the position of the world's third largest producer. Coal from ASM provides affordable heating for poor households and by replacing wood contributes to combat deforestation in the northern Aimags.

Despite its importance in terms of rural job creation, income generation, volume of production and export revenues, it took more than a decade to create awareness for the need of an enabling legal framework for ASM. An Amendment to the Mongolian Minerals Law, allowing for formalization of ASM recently passed the Mongolian Parliament (Great Khural) on July 1st 2010.

3.3. Results and lessons from previous phase

The Sustainable Artisanal Mining (SAM) Project started in 2005 and built on SDC's experience in ASM projects in Latin American countries (Ecuador, Bolivia, and Peru). In these countries, SDC has made significant progress in relation to the legalization of ASM operations, support for the decentralization of mining administration, the establishment of innovative communication structures, integrated (technical, environmental and social) demand-oriented service delivery, and the empowerment of artisanal miners and local service providers.

The 1½ year preparatory phase (Phase 1) and the 4 year main implementation phase (Phase 2) from July 2005 to December 2010 focused on bringing the ASM issue into public debate and demonstrating possibilities of appropriate regulation, coordination and cooperation structures, and the development and empowerment of mining communities. In so doing, the Project has

- Worked at all levels and has contributed to the development of regulations and discussions on the appropriate legal framework at the macro level
- Initiated and promoted community mining institution-building and encouraged constructive communication and cooperation between miners' organisations, local and central governments and private companies at the meso level, and
- Developed and introduced environmentally friendly and economically viable technologies at the micro level

[3] T. Navch, Ts. Bolormaa, B. Enkhtsetseg, D. Khurelmaa, B. Munkhjargal: Informal Gold Mining in Mongolia. ILO 2006. (http://www.unescap.org/stat/isie/reference-materials/Analysis-Country-Documents/Informal-gold-mining-MNG.pdf)

[4] This is a very conservative estimate. At current market price mid July 2010 of 38,000 USD/kg (1,200 USD/oz), 4 tonnes of gold represent 150 million USD.

As a result, the Project has contributed to sound decision-making between the partners and instigated the first steps in the transformation of the informal "ninja" mining sector into a formal ASM sector.

In order to achieve the goal of "Contribute to the development of responsible mining in Mongolia by ensuring artisanal miners are recognized as responsible members of a key economic sub-sector contributing to sustainable rural development", Phase 2 focused on the following four outcomes:

Component 1: To improve the development and implementation of a transparent and straightforward policy and regulatory framework for artisanal mining

Component 2: To improve the formation and functioning of institutional structures and organizations within artisanal mining at all levels

Component 3: To strengthen the capacity of artisanal mining communities to engage in profitable and responsible mining and extended business activities aimed at reducing poverty

Component 4: To empower artisanal miners and other resource users to responsibly address and solve ecological and social conflicts

Phase 2 has produced tangible results at macro, meso, and micro level:

- In mid 2010, the Parliament enacted an Amendment to the Minerals Law, creating a legal framework for ASM, as proposed by SAM since 2006. This can be considered the most outstanding achievement of the Project as it creates new development opportunities for the population of about 400,000 people directly or indirectly involved in ASM.
- Communities, which were SAM Pilot sites, have experienced considerable changes, perceived by the local population as a significant increase in quality of life. "*Before, family lived in ger, now they live in a brick house; in winter they bought meat in small quantities, now they buy a whole cow and 2 sheep for winter; before they did not have livestock, now they have 90 livestock*" (Woman miner G., Bornuur).
- ASM organizations (NGOs like BASMA in Bornuur) are created, and are instrumental for the changes at local level.

A Mid-Term Review (MTR) took place in October 2009, and concluded that the SAM Project is highly relevant for Mongolia's development, and has adequately addressed the most relevant issues pertaining to Mongolian ASM. However, while the clear thematic separation of Components 1-3 with linear relations to the intervention levels had simplified project steering as an apparent straightforward implementation of 3 largely independent thematic areas, it caused lacking coordination between the different components, particularly in terms of not fully exploiting the synergies between the components and missing opportunities. In order to improve the coordination and integration of project components, the MTR recommended streamlining the Project into two more integral components: an ASM Policy Component and a Community Mining Component.

Based on that recommendation, the SAM Project has tested the viability of restructuring of the Project into two components, starting from January 2010. Encouraging initial experiences with such approach are already integrated into the Project Document for Phase 3 of the SAM Project.

3.4. Problems, potentials and challenges

3.4.1. Problems

During the initial project planning in 2005, the main problem was identified as the "reduced contribution of artisanal mining to the sustainable rural development". The main causes were identified as:

(i) The Mongolian Government's inability to manage the exploitation of mineral resources by ASM efficiently

(ii) The applied mining practices which caused severe environmental damage, social problems, conflicts and unacceptable livelihood conditions for the artisanal miners and their families; and

(iii) The public opinion on ASM, which was not recognising the potential of the artisanal miners for the country [5]

Four years of project implementation have contributed significantly towards alleviating the situation, but as SAM is the only development project in Mongolia that takes on the challenge to fundamentally reform an entire informal sector employing up 20% of the rural workforce, it is not surprising that the problem still exists in its essence.

The ASM sector is still predominantly informal, unorganized, and poor and in consequence, workplaces remain unsafe, environmental impacts remain a major concern and contribution to sustainable local development is limited.

The main **causes** are:

The lack of a legal framework for ASM until mid 2010: The fact that it took almost 10 years to regulate the ASM sector, has several causes such as

(i) The erroneous perception that ASM would be transitory and therefore does not require to be legislated;
(ii) The erroneous perception that ASM can be eradicated by criminalizing it; this includes wishful thinking of environmental protectionists
(iii) Lobbying of medium scale mining companies perceiving ASM as their competition
(iv) Economic interests to draw high illicit profits (e.g. gold black market) from a vulnerable, marginalized, and suppressed informal ASM sector, nursing a public opinion favouring all before mentioned motives

The low level of organization of the ASM sector: Artisanal miners organize locally in small brigades to carry out their work. The concept of organizing at higher level to defend their interests is slowly gaining acceptance. Despite encouragement by the Project, ASM miners have not yet taken the initiative to establish a national umbrella organization.

Artisanal miners are poor. Poverty is usually not a cause but an effect; however, ASM is trapped in the vicious circle of a poverty trap where poverty becomes the cause of the problem. The official unemployment rate in Mongolia is quite low (2.8%)[6] but apart of herding no major alternative employment opportunity exists in rural areas. Overgrazing and deficient disaster prevention (e.g. against dzuds) drives increasing numbers of people into ASM, as last resort to make a livelihood. As these people are poor, their possibilities to invest in improving their operations and conduct ASM in a responsible way are limited, - even more their capacity to contribute directly to local development. For most miners it is true that they would not be in ASM if they had alternative employment opportunities. Herding (although most of the miners are ex-herders) is no realistic alternative for them anymore, as they had been herders and many of them entered the ASM sector after a total loss of their livestock! Poverty is however not only the lack of financial resources, the harsh living conditions in ASM sites and the permanent fear of being chased away and again lose everything are for most miners even worse.

The main **effects** are:

Most ASM operations are informal. ASM operations are not entitled to obtain mineral rights and even under the recently enacted Amendment of the Minerals Law only temporary land use rights for mineral extraction can be granted to ASM partnerships (which is a huge step forward in comparison to no rights at all). In consequence of its illegal status, ASM has no access to formal finance, limiting its possibilities to advance technologically. ASM still bears the negative stigma of “ninja” miners and has therefore low capacity to lobby for improved conditions.

ASM communities are fragile and depend on informal social safety nets. The lack of organization in combination with the informal status of the operations makes ASM communities fragile and vulnerable. Under these restrictions, ASM cannot deploy its full potential for local development.

[5] SDC, MRPAM, 2005: Project document on the Support for Artisanal Mining Project.

[6] www.indexmundi.com

Investment in social and physical infrastructure (see footnote 15) will lag behind and ASM may even be trapped in resource conflicts. Another serious limitation is the lacking coverage by formal social safety nets such as social and health insurance. In consequence, and despite of overcoming lacking access to formal safety nets through informal safety nets based on solidarity and mutual help, artisanal miners are again considered irresponsible "ninjas".

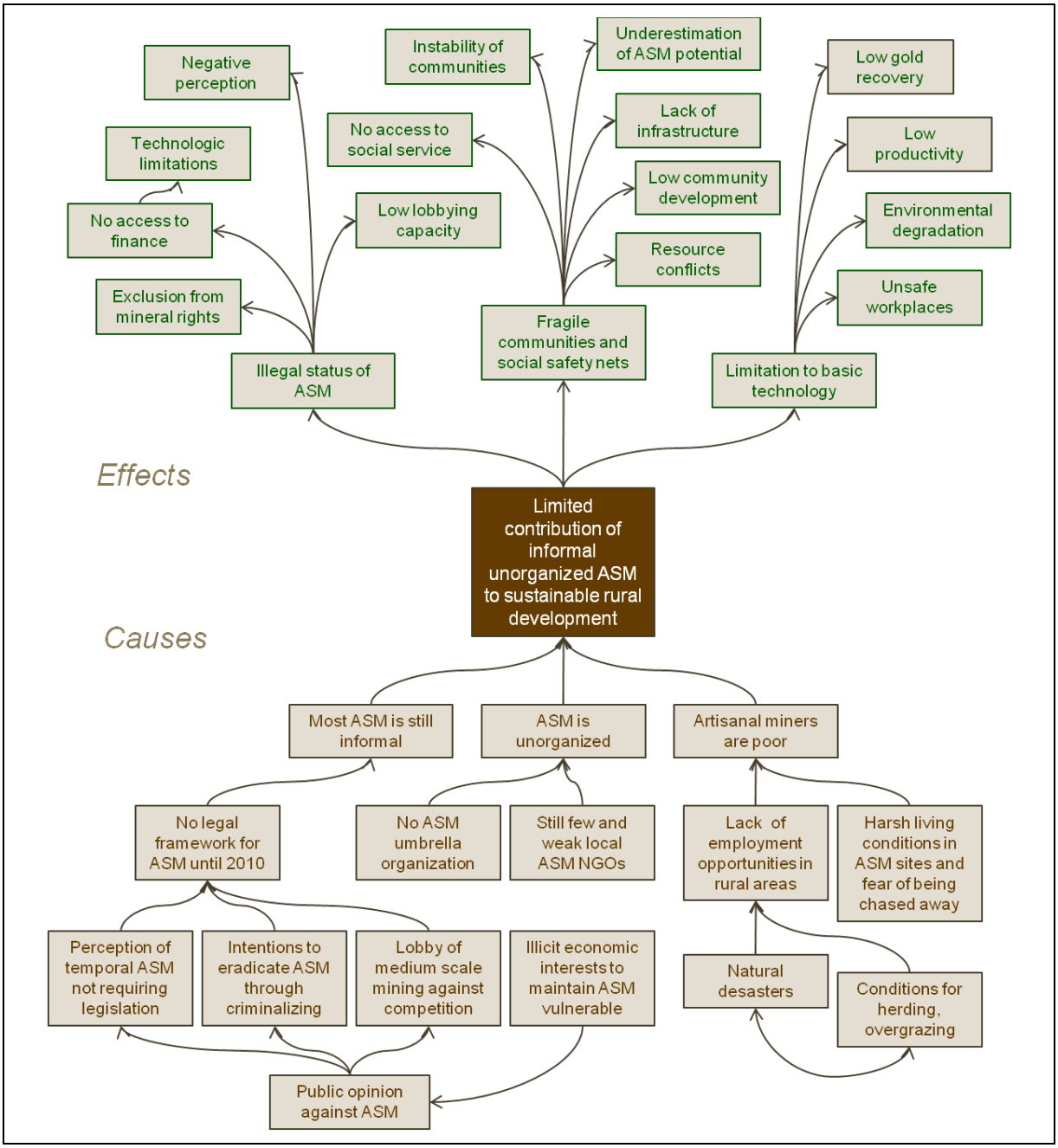


Figure 1: Problem tree

Artisanal miners have limited access to appropriate technology. As miners are poor, they are in most cases limited to most rudimentary tools (which in some cases not even merit the term "technology"). Such technology has inherently low productivity and low recovery, reducing the miners' income and perpetuating the vicious circle of the poverty trap. Unsafe (in some cases highly unsafe!) workplaces are the consequence and it is to some degree understandable that under such conditions of subsistence miners have little spare capacity to invest in proper rehabilitation or other environmental measures. Improved technology (providing safety, environmental performance, and efficiency) is often technology at major scale that is only accessible at collective level and with access to finance. Limitations of organization and formalization leverage the exclusion.

3.4.2. Potential of ASM

Despite the series of problems and obstacles which artisanal miners face in making a livelihood out of mining, ASM already contributes significantly to local development and has an even higher potential if formalization progresses in consequence of the recently enacted ASM amendment of the Minerals Law.

Employment generation

The estimated number of artisanal miners varies between 38,000 (official estimate) and 100,000 (unofficial estimate, probably based on a wider definition of the term "miner"), in comparison with 46,500 employees of the industrial mining sector. In terms of self-employment generation, the contribution of ASM can be considered at least in the same range as the contribution of the industrial mining sector. Considering workplace creation costs in the Mongolian mining sector in the range of about 17,000 USD/workplace (Annex 2), the contribution of ASM is equivalent to well above 500 Million USD. Without the counting on the opportunity to engage in ASM, the unemployed rural population would most probably have migrated to urban areas.

Local income generation

The value of gold production from ASM is conservatively estimated "well in excess of 100 million USD". The main difference to large-scale mining is that this amount pays almost entirely for labour costs, which not only stay in the country but also stay in the region. Considering labour costs in Mongolian large-scale mining (which are the major local cost item) in the range of 15 – 20%, the local income generation of ASM is equivalent to 4 - 5 times its production volume in large-scale mining. Local income generation of gold ASM can therefore be considered in the same range as local income generation from gold LSM.

This income from ASM starts circulating at local level and is *the* motor of local economies. Testimonies of local citizen like the one of the Bornuur woman miner in chapter 3.3 underpin this statement.

Government revenues from formal ASM

ASM is usually "accused" of not paying taxes and not contributing to public revenues – which is inherent of a sector kept in informality but still wrong[7] – formalizing the sector will unleash this potential. It is important to notice the artisanal miners' attitude regarding income tax documented in the planning workshop (Annex 11): "*But it would be really proper if there was a tax with the title of "Tax from gold extracted by ASM". Then it would really honour our reputation*". In fact, costs of formality (taxes, fees) are in most cases lower than costs of informality (bribes).

Potential for increasing individual income

Formal and responsible ASM will evolve towards higher mechanization (e.g. Bornuur processing plant, Jargalant small earth moving equipment, etc.) and in consequence towards higher productivity and recovery. Increasing both parameters has a direct positive effect on miners' income. Improving the technologic level will also increase workplace safety.

Potential for increasing resources for local development

Additional to its existing potential to contribute to local income generation and local development, the Mongolian ASM sector is well positioned to engage with global Fair-trade markets. Fair-trade is in progress to outreach for gold from ASM to satisfy the growing demand for ethical jewellery. Fair-trade revenues are usually earmarked for investment in local development.

[7] An internal working paper of the Peruvian Ministry of Mines and Ministry of Finance (Non published, 2003) demonstrated that total government revenues from ASM dropped by about 30% by formalizing this sector, as formalized miners started to recover value added tax (VAT) on supplies and services, like any other formal business.

3.4.3. Challenges

The upcoming years will be crucial for the development of the Mongolian ASM sector.

The public opinion about ASM has improved but still major opinion leader are sceptical regarding its potential to convert into "responsible ASM". The improved opinion has allowed for enacting the ASM amendment of the Minerals Law with an impressive majority of votes (more than 80%).

These "credits" given to the ASM sector need now to be fully justified by proving that ASM can really convert into a socially and environmentally responsible formal sector of the economy. This is a major challenge for the ASM sector, and as the ASM sector is not yet sufficiently organized to take collectively on this assignment, support through the SAM Project is now more urgently needed than ever.

Important support to the ASM sector is now required from the Government. The authority for assigning land rights for ASM usage are the local Soum and Aimag Governments. The Central Government Mining Sector (MMRE and MRAM) needs to handover the required mineral resource governance expertise through advancing decentralization efforts. Governments at local and central level are in urgent need for support through the SAM Project, as at the current moment only SDC can bring the required international expertise and experience to the table (see Annex 10: Stakeholder Analysis).

If the conversion of informal ASM into formal and responsible ASM starts and progresses well during the next 2 - 3 years, the sustainability of the outcome of the SAM Project is practically guaranteed.

3.5. Coherence with development strategies

The Project is aligned with the National Development Strategy of Mongolia, which aims for creating the "… legal environment for activities to exploit mineral deposits by micro-mining methods based on principles of being state regulated, environmentally friendly, safe for living environment"[8], and the Government Sub-Program on the Development of Artisanal and Small-scale Mining up to 2015. The objective of the Sub-Program is twofold:

(i) To establish the legal and regulatory framework for the use of mineral resources by ASM and to regulate ASM operations in accordance with relevant legislative acts; and
(ii) To systematically develop ASM models on the use of minerals on non-industrial reserves from licensed mining sites, technogenic deposits or tailings of exploitation and technological wastes and deposits that are regarded as inefficient for industrial mining by utilizing advanced small-scale equipment and technologies and ensuring safe and economically efficient mining.

The Project is directly contributing to Outcome 3 of the Swiss Country Strategy (SCS): "Increased income of herders and ex-herders in targeted areas based on improved productivity of their livestock and income diversification", and the National Development Strategy of Mongolia.

4. Strategic orientation and project design

4.1. Core strategy of the SAM Project

The core strategy reflects the common understandings laid out in the planning platform for Phase 3 of the SAM Project.

[8] Millennium Development Goals-based Comprehensive National Development Strategy of Mongolia, Chapter 5.2.1.1. Development policies for geology, mining and minerals, and heavy industry, Strategic Objective 1. Parliament resolution No 12, dated 31 January 2008.

4.1.1. Development goal

The development goal of Phase 3 of the SAM Project is the "Recognition of artisanal mining as a formal sub-sector contributing to Mongolia's economic development".

4.1.2. Organizational scope: community based mining

Four types of ASM can be broadly classified:

- Permanent ASM: Full time, year round activity: For the involved people mining is frequently the only economic activity or sometimes accompanied by other activities like herding or small-scale goods trading
- Seasonal ASM: Seasonal switching of activities or seasonal migration of people into artisanal mining areas, to supplement their annual incomes
- Rush-type ASM: Massive migration of people to mineral rich areas based on the perception that the expected income opportunity from a recently discovered deposit far exceeds the current actual income
- Shock-push ASM: Poverty driven switch to mining as a last resort for subsistence after recent loss of employment in other sectors or natural disasters

Mongolia's ASM sector started in the early 2000's as shock-push ASM. Discoveries of attractive deposits in combination with increasing gold prices converted it subsequently to rush-type ASM. Rush-type and shock-push ASM as such are temporary but have the potential to convert into permanent and seasonal ASM if income opportunities from mineral deposits offer a sustainable livelihood.

Permanent and seasonal ASM are frequently referred to as community based mining. Implicit in the term is the understanding that the local population is the driving force behind the mining operation, building their own livelihood strategy upon the mineral resources within their communal territory.

As Mongolia's transition period is nearly over and the country is entering a stage of dynamic development, shock-push ASM has widely disappeared and many ASM sites in Mongolia have converted into permanent and seasonal community mining which are no longer temporary. Rush-type ASM is "permanently temporary", as it will always re-appear when new, rich mineral occurrences are discovered.

Socio-economic surveys conducted by SAM in four Soums (Jargalant, Bornuur, Biger, and Uyanga) confirm this trend. The distribution of all artisanal miners (68% placer mining, 32% hard rock mining) in these Soums resulted in:

- 65% Permanent ASM (conduct ASM "to earn their livelihood")
- 20% Seasonal ASM (conduct ASM "whenever they need extra money")
- 15% Rush-type ASM (conduct ASM "to make profit")

In order to optimize the impact of SAM, the Project (Swiss and Mongolian counterparts) needs to build champions among permanent and seasonal ASM (community mining) and intervene jointly with local and regional Governmental and non-governmental institutions in shock-push and rush sites, guiding the miners towards community mining which contributes to local development.

Phase 3 of the Project will work with and towards permanent and seasonal community based ASM, where the Project's interventions contribute to sustainable livelihoods.

4.1.3. Commodity scope

During the project phases from 2005-2010, SAM worked primarily with artisanal gold miners, empowering them through organization, skills trainings, access to technology, formal registrations and policy development.

While gold mining represents 90% of Mongolia's ASM, some generic problems such as mine safety are more rampant in mining for other commodities, such as fluorspar and coal. Converting Mongolia's ASM sector into a responsible and sustainable economic activity requires therefore focusing on the ASM sector in a holistic way. In Phase 3, the Project will consequently outreach to artisanal miners producing other mineral commodities such as fluorspar and coal, which are predominantly permanent or seasonal community based ASM.

Building on the lessons learnt in Phase 2, the Project will scale up gold-mining community development and technologies, and start piloting similar strategies with fluorspar and coal mining communities.

4.1.4. Working hypothesis

The Project's main strategy is to reverse the vicious circle in which ASM was trapped at the time of initial project planning and to convert it into a virtuous circle. Favourable conditions for the integration of ASM into the formal economy constitute incentives for formalization and responsible practices. Demonstrated responsible ASM creates broad stakeholder confidence in the development potential of ASM.

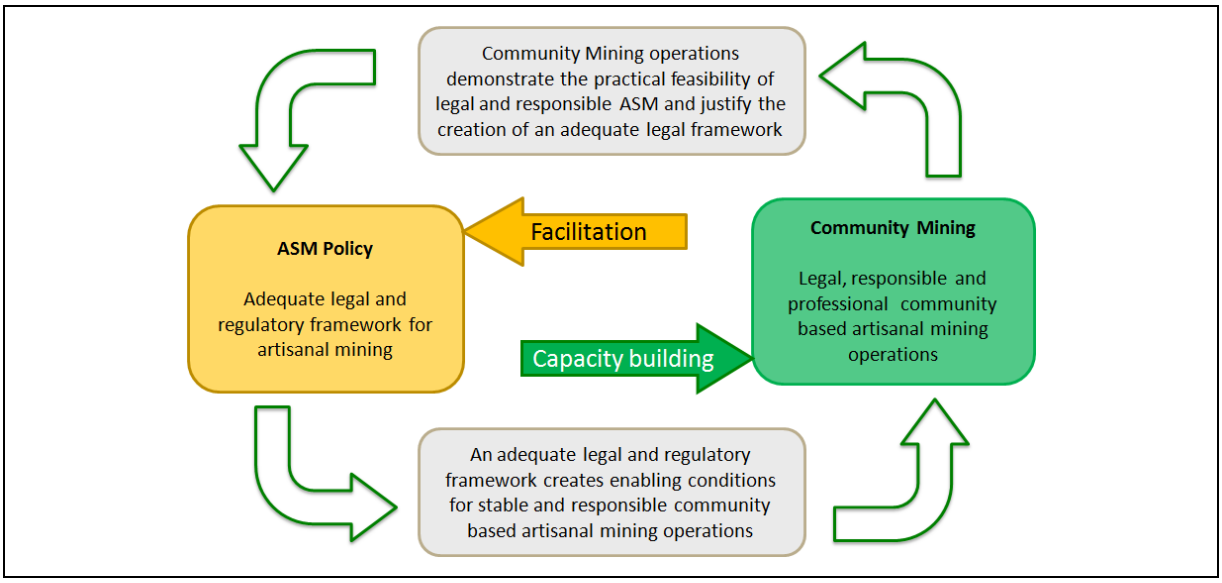


Figure 2: Virtuous circle for sustainable development of community based ASM

To kick-start such virtuous circle, initial facilitation at policy level and capacity building at community mining level is needed. Mutual positive feedback between policy and community level provides the virtuous circle then with the required momentum to become self-reliant.

4.1.5. Project components

For project implementation, the working hypothesis of the virtuous circle translates directly into two main components:

ASM Policy Component

An ASM Policy Component has the role to promote a favourable public policy towards ASM and to act as a facilitator for the creation of adequate regulatory framework conditions for the development of formal and responsible ASM.

This component will support the Mongolian Government in its efforts to regulate the ASM sector and convert the sector into an active part of the formal national economy. Experiences in other countries, among other within another SDC supported project in Peru, have proven that ASM has the potential to develop towards local and formal small enterprises.

To pass the Government's current draft for a minerals law amendment on artisanal mining in Parliament was the first and most decisive step, which gave ASM its "birth certificate". A series of challenges lies ahead, especially when it comes to regulate the different ASM relevant legal matters beyond land and mining rights, such as social, health, environmental, fiscal issues, etc.

Within the ASM Policy component, SAM shall play a facilitation role for an enabling legal and regulatory framework, bringing at macro level artisanal miners and international experiences to the table, and demonstrating the feasibility of legal responsible ASM at micro through successful interventions.

Community Mining Component

The Community Mining Component has the role to build capacity in local ASM communities for carrying out safe, environmentally and socially responsible, and economically rewarding mining within their territory and to empower local artisanal miners to organize and formalize their operations for that purpose.

Work at partnership level, as carried out during Phase 2, is a starting point. Formal miners' organizations in permanent or seasonal ASM communities need to be in place to take the lead in community development and professionalization of the mining operations through increased safety, environmental performance, and improved technology. Depending on the legal framework, improved technical and business skills may then lead to the spin-off of ASM cooperatives or companies, as legal entities fully qualified to obtain mineral rights.

Within the community-mining component, SAM shall work closely with artisanal miners, supporting their efforts to acquire the technical, organizational, and social skills to carry out responsible ASM within the Mongolian legal framework. Project implementations in ASM sites shall demonstrate best practice contributing to visible local development and serve as strong arguments for further improvements of an enabling legal framework at macro level.

4.1.6. Project approach

The planning platform follows the MTR recommendation to apply a rights-based empowerment approach.

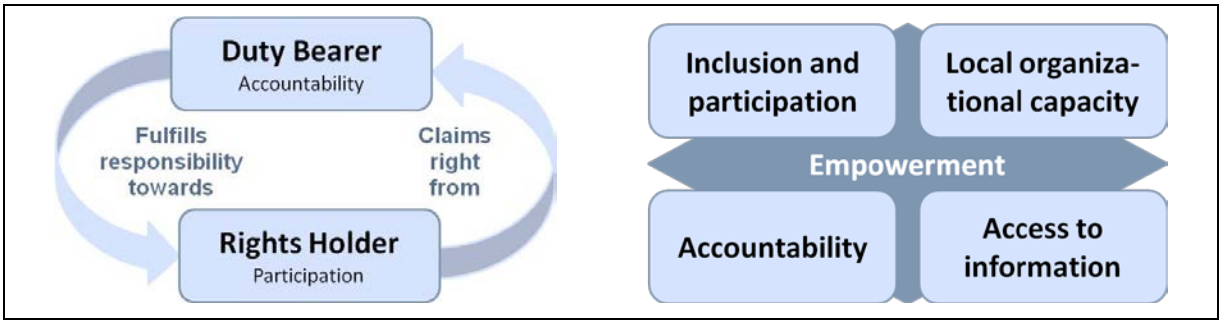


Figure 3: Rights based approach and Empowerment approach

Empowerment is the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes. Empowerment is a process that fosters power through capacity building in people, for use in their own lives, their communities, and in their society. It helps people gain control over their own lives and focuses on issues that they define as important.

Empowerment is a process in which the disadvantaged are empowered to exercise their rights.[9] The rights perspective provides a framework for addressing the key aspects of power relations that influence people's capacities, rights, and responsibilities. In a balanced approach, the public and civil society and the individual are both to be understood as rights-holder and duty-bearer.

Given the situation of ASM in Mongolia, where artisanal miners have been marginalized during more than a decade, and where recently the public and political opinion is changing towards recognizing ASM as an employment generating rural economic activity that needs to be carried out in a responsible manner, a rights based empowerment approach is the most suitable one to achieve the development goal.

4.2. Implementation strategy of the SAM Project

The implementation strategy for Phase 3 reflects the common understanding of Mongolian stakeholders. It is the result of a fundamentally participative planning process involving more than 250 key stakeholders from central, Aimag and Soum Government, Parliament and citizen Khurals, artisanal miners and their organizations, civil society, academics, private sector, as well as likeminded donors, through interviews, site visits, and a planning workshop with 68 participants as central event.

4.2.1. Stakeholders' vision for responsible artisanal mining

The stakeholders attending the planning workshop (Annex 11) attempted to reach a common understanding of the term "responsible artisanal mining". ASM in Mongolia will be perceived well if it:

- Operates as a formal economic activity according to the legislation and protected by an appropriate legal framework
- Is carried out by organized miners
- Demonstrates social responsibility, respecting the rights of others and the individual rights of miners and their families for social security and safe workplaces
- Demonstrates environmental responsibility, working with eco-efficient technology and completing environmental rehabilitation after extraction of the mineral resource, and
- Contributes to local development, sustainable livelihoods, and income generation

4.2.2. Key topics for the development of a responsible artisanal mining sector contributing to Mongolia's economic development.

Development of responsible ASM has to address a broad range of issues. Mongolian stakeholders identified the following six key topics, to be addressed for converting the past and still predominant informal "ninja" mining into a responsible ASM[10] activity contributing to Mongolia's economic development:

- Legal framework and formalization
- Organization and institutional strengthening of ASM
- Social responsibility, social security and workplace safety
- Environmental responsibility, eco-efficient technology
- Capacity building and access to information
- Local development and income generation

[9] SDC (2004) Creating the Prospect of Living a Life in Dignity – Principles Guiding the SDC in its Commitment to Fighting Poverty, Berne: SDC. (www.deza.admin.ch/ressources/resource_en_24237.pdf)

[10] See also Annex 11: Workshop outcomes

Legal framework and formalization

The process towards creating a legal framework for ASM has started with the approval of an amendment to the Minerals Law. Its practical applicability and impact will strongly depend on an enabling regulation. This needs further facilitation work from the Project as well as continued efforts to communicate progress to the public opinion. As "formalization" goes beyond land and mineral rights and associated obligations, further work on complementary legal matters, such as fiscal regimes, social security, etc. will need to continue.

Artisanal miners will need to comply with the existing legislation, obtaining land rights as unregistered partnerships, but simultaneously develop into higher level legal entities like NGOs and further towards such as companies or cooperatives qualified to obtain mineral rights.

In order to make existing regulations and national standards compliable for artisanal miners, the essence of these needs to be determined based on ASM-sector wide best practice, approved, and officially published as "minimum requirement" shortlist for ASM. Such ASM standards will provide guidance for miners and can serve as objective criteria for inspectors.

To bridge existing gaps, SAM needs to continue facilitating an enabling legal and regulatory framework in mining related and adjacent legal matters. Artisanal miners shall be supported in their formalization process and coached on their way onwards from unregistered partnerships towards legal entities fully qualified for mining rights.

Organization and institutional strengthening of ASM

Organization building and institutional strengthening is crucial for the empowerment of miners, at mine site, Soum, Aimag and national level. The urgent need for a organized ASM sector at national level (e.g. "Federation") is expressed from the miners' side in order to be able to express their collective concerns and demands (e.g. advocacy for improving legal environment), as well as from Government side (MRAM) in order to be able to communicate and enter a dialogue with the "entire ASM sector".

Organizational strengthening at local level links into the key topics of local development and formalization, by developing legally qualified ASM entities. The existence of such entities is a requirement for up scaling and replication of technological solutions that operate at major ore volumes (e.g. Bornuur processing plant) or for small earth moving equipment for rehabilitation and other mine mechanization. Such technology can only be owned either by individuals (where it becomes a legitimate entrepreneurial activity), or more within the organizational scope of the SAM Project by member based legal ASM entities.

To bridge existing gaps, SAM needs to strengthen the organization building process of artisanal miners at regional and national level, providing the miners with a voice and the Government with a partner for dialogue. Strengthening organizations at local level is the basis for local development and technologic up scaling towards collectively operated technologies (e.g. replication processing plant).

Social responsibility, social security and workplace safety

Responsible ASM is expected to demonstrate social responsibility by respecting the rights of others and the individual rights of miners and their families for social security and safe workplaces. The process to change the mindset of artisanal miners from uncontrolled and uncontrollable wild "ninja" miners towards responsible "Hamo citizen" needs to continue and to be strengthened.[11] Well-targeted support of community miners according to the organizational scope of the Project will contribute to this change.

[11] The term "ninja" was coined in early years of Mongolia's gold rush and describes informal artisanal miners. This term derives from the green plastic bowls used for gold washing often carried on the back of miners, which was associated with the picture of ninja turtles. However, the term also describes a certain outlaw attitude, of which these early miners were proud. This mindset is changing since the temporary regulation for ASM is in place and formal artisanal miners are now keen to distinguish themselves as „Hamo citizen".

The highest priority is given by all stakeholders to improving the operational safety and health (OSH) conditions in ASM. The general perception is an urgent need to make ASM workplaces safer by raising safety awareness and promoting the use of safety equipment among miners, and to prepare better for accidents. Accidents are particularly frequent in coal and fluorspar mining. Although the overall absolute frequency of accidents in ASM appears to be similar as in LSM, the consequences are usual much severer and need to be addressed by an outreach of mine rescue services to remote ASM sites. Safety also links into the topic of formalization, as informal operations will always remain precarious and unsafe.

Social responsibility is also associated with a shift from informal social safety nets based on solidarity of miners within a family or partnership context towards inclusion of artisanal miners into the formal social security system. For the lower organizational level of ASM, this requires changes in the legal framework, recognizing ASM as a self-employed rural activity like herding. At a higher organizational level, this requires enabling conditions for affiliating miners to Social Security as formal workers of an ASM NGO, cooperative or company.

Social responsibility of ASM also links into the topic of local development. As mining usually provides better income opportunities than alternative economic activities, miners are expected to engage actively with local community development programs.

To bridge existing gaps, SAM needs to continue promoting the transition from the informal wild "ninja" image towards the responsible "Hamo citizen" mindset. This requires giving high priority to safer workplaces and making progress towards the inclusion of miners and their families in the Social Security system.

Environmental responsibility, eco-efficient technology

Environmental impacts from ASM, especially from alluvial mining, are a general concern and the need for rehabilitation of mined areas is given a high priority by the Government and the public opinion.

Clear, simple, and realistic environmental requirements for ASM need to be in place. Regulations need to take into account the size of the operations and be enforceable. The Project can play an important role by demonstrating feasible best practices and curb exaggerated expectations such as ASM doing rehabilitation work on abandoned un-rehabilitated LSM mining sites. Environmental monitoring by the local community can be an important element to assure responsibility of the operations; self-policing is in most cases more effective than external inspections.

In many cases, the need to carry out rehabilitation links into the topic of organization, as such work requires the coordinated effort of the miners and the use of collectively owned technology (e.g. earthmoving equipment). This linkage to organization exists also for hard rock mining, where processing plants are the only option to replace the banned use of mercury. The Bornuur plant model needs to receive final approval as "officially accepted" ASM technology, and be released for unrestricted replication. Only a sufficient mineral processing capacity will be able to eradicate clandestine amalgamation in homes and will guarantee that plants are operated according to best practice.[12]

To bridge existing gaps, SAM needs to facilitate a rational consensus of feasible and enforceable environmental requirements for ASM, including the local communities in environmental monitoring. Rehabilitation of mine sites has to be common practices and the Project's support is required to design such efforts in technical and organizational terms. Replication and up scaling of mercury-free mineral processing technologies will contribute to the eradication of clandestine amalgamation.

[12] Processing plant models like Bornuur are very usual and considered standard practice in most countries. Miners compare the efficiency of different processing plants and recur to those, which offer the best service, lowest cost, and highest gold recovery.

Capacity building and access to information

Capacity building needs to address all above-mentioned topics. To carry out responsible ASM, it is mandatory that miners have basic knowledge in legal matters, technology, OSH, environment, as well as organizational and business skills. Most of these skills can currently only be partly acquired in practice, by doing ASM. In order to professionalize ASM, vocational training opportunities will need to be created. Different options and combinations can be considered, such as formal training according to vocational training curricula (like for most other professions), on-site training by specialized institutions like MRS or vocational training institutions (e.g. stationary or mobile ASM training unit initially mandated by SAM and progressively handed over to governmental budget financing), and peer-training by local ASM NGOs.

The Mongolian challenge is to establish nationwide structures and processes for capacity building. The Projects' challenge is to strike a balance between strengthening such broad processes and capacity building at project sites, which should pioneer top-level best practice and demonstrate the way forward for the majority of still less advanced ASM.

Mongolia's experience with ASM is relatively recent and comprises approximately one decade. Other similar countries have accumulated three (since the early 1980's) and more decades of experience. Knowledge sharing and access to information is therefore crucial to cover the gaps. International experience needs to be brought to the table, processes and contents for national knowledge sharing need to be established and linked with social networks of miners.[13]

Capacity building has to address rights holder and duty bearer equally. The recently enacted ASM amendment to the minerals law creates a new context from where central, regional and local Governments need to start building capacities for good resource governance.

As capacity building is the key input for progress in all topics, SAM needs to follow a dual approach: Work on national level towards establishing structures and processes for professionalization of ASM through vocational training and work on pilot site level towards pioneering replicable top-level best practice. This includes creating mechanisms that enable stakeholders to access information and share knowledge. Capacity for good ASM resource governance needs to be built at all levels after the recent enactment of the ASM law.

Local development and income generation

Artisanal mining has gained an important position as major alternative self-employment opportunity to herding in Mongolia's rural areas, providing in most cases attractive income opportunities. Community based ASM has the potential to contribute significantly to local development, as revenues from the extractive activity start to circulate at local level and enable upstream, downstream and alternative businesses.

Transparent and equitable land allocation to ASM by regional and local Governments will play an important role for tapping into the local development potential of ASM. Regional and local Governments often have little mineral resource management expertise and need support in assuming their duties within the ongoing decentralization process.

Local development links into the topic of formalization, as only secured rights over the mineral resource allow artisanal miners to invest into their mining operations. Rights of tenure allow increasing productivity, improving product quality and recovery, and growing income generation. Increased value generation through improving product quality need to be explored for coal and

[13] This is in a simplified view often expressed as the need for an "ASM Database". The term "database" has to be understood in its generic sense, as a tool or mechanism for converting data into useful information and create the required knowledge for proper decision making. The term "database" must not be misinterpreted as a single piece of computer software.

fluorspar mining, but is readily available for gold mining through certification of "mine to market" trading chains.[14]

Local development and income generation also links into the topic of social responsibility, by investing into local social infrastructure. Examples from other SDC projects in countries with weaker presence of the Government at local level (e.g. Peru) have demonstrated the ability and potential of ASM to create sustainable livelihoods.[15]

Sustainable local development of ASM communities can be seen as the main outcome of the SAM Project. To transform outputs produced by all other key topics into local development, SAM needs to promote and support good governance at local level. Project work towards increased productivity and improved product quality contributes to higher income generation and improved livelihoods.

4.2.3. Operative focuses and crosscutting topics

Fair "mine to market" trading chains

The Fair-trade[16] concept emerged in the 1960s for agricultural products and is driven by consumer awareness of development needs. Consumers support producers through the payment of a Fair-trade premium that directly benefits certified small producers. In exchange, producers are required to comply with a set of Standards. An independent third-party certification system assures consumers that the product is produced responsibly and ethically, and that the higher price contributes directly to local development. Recently, Fair-trade markets have been opened for gold from artisanal producers. For more details, see Annex 3.

Fair-trade is compatible to a rights-based empowerment approach, where producers are duty bearer regarding compliance with standards and rights holder by being entitled to receive apart from fair prices an extra premium as reward for their efforts. It empowers producers by extending the control over their products and by participating directly in international markets, obtaining visibility, and gaining prestige.

A Fair-trade focus overlaps with all identified key topics for the development of responsible ASM. *Legal, organizational, social, and environmental responsibilities* are requirements for Fair-trade producers. Fair-trade aims for *capacity building* through producer support; and *local development and income generation* are the main Fair-trade benefits.

In order to lever the outcome of the SAM Project, activities within both components and covering the six priority topics will be oriented towards compliance with the "Fairtrade and Fairmined standard for artisanal gold". This standard reflects a globally consulted consensus of best practice. The expectation to become certified and to receive Fair-trade benefits is a strong incentive for ASM communities and converts the miners' responsibility efforts into a win-win option. Fair-trade contributes to good governance and transparency, as only legally produced and exported gold is admitted as a Fairtrade product.

Sustainable livelihoods

The sustainable livelihoods approach (SLA) is a development framework that aims for increasing livelihoods assets and reducing vulnerabilities trough transforming structures and processes.

[14] E.g. Fairtrade and Fairmined certified artisanal gold has "ethical" qualities for which consumer are willing to pay a higher price as well as a premium. Fairtrade Premium monies are earmarked for use in local development.

[15] Bobadillo et al.: Nosotros construimos los pueblos. SDC (Proyecto GAMA), Lima 2008.

[16] To distinguish between the concept and the label or organization, „Fair-trade" is used for the generic concept of fair trading chains, and „Fairtrade" (in one word) is used in reference to the label of Fairtrade Organizations International (FLO) and aspects related to FLO's Standards based trading scheme. E.g.: a "Fair-trade product" is any product that is traded in a fair manner, while a "Fairtrade product" describes a product covered by a Fairtrade Standard.

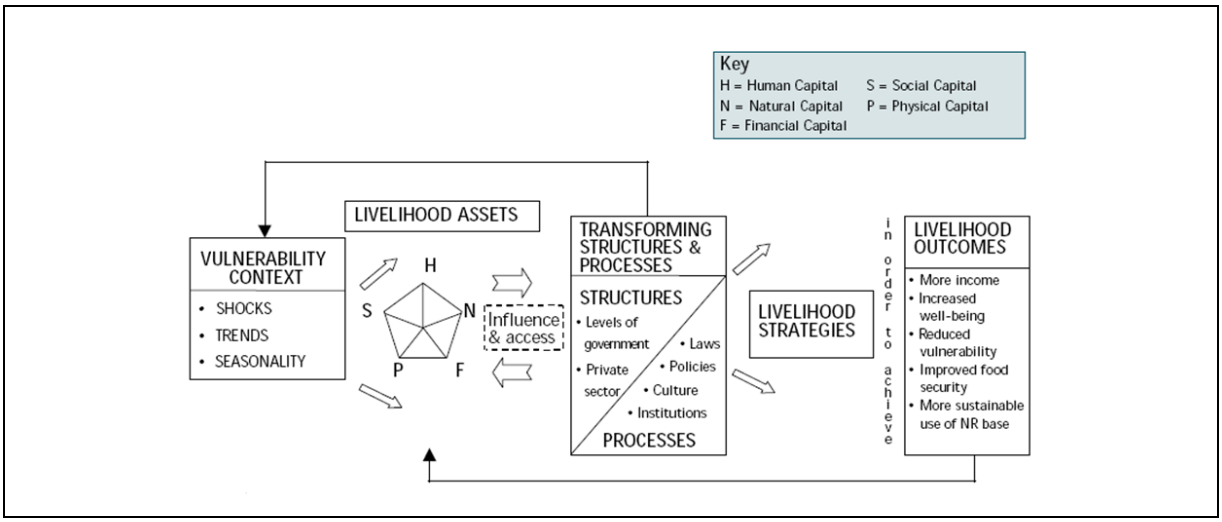


Figure 4: Sustainable livelihoods framework

While the rights based empowerment approach is most appropriate for operational planning of the SAM Project, some elements of SLA can prove extremely useful for monitoring. Livelihoods assessments allow to quantify (using qualitative appreciations) the endowment of ASM communities with livelihoods assets and to document changes over time. The resulting "livelihoods pentagon" of each assessment allows to appreciate the impact of a Project not only through a one-dimensional indicator, but illustrating changes regarding human, social, natural, physical and financial capitals. Annex 5 illustrates the simplicity of this tool.

Periodical qualitative livelihoods assessments of communities where SAM intervenes are useful as a monitoring tool. The particular advantage is the conceptual independency of the monitoring: planning and implementing under a rights-based empowerment approach and monitoring using an SLA tool allows for appreciating the impact of the Project in a most unbiased manner.

Gender balanced development

Technological and community interventions have important gender implications. Gender equality has to do, inter alia, with equal participation of men and women in decision-making, the consideration of double burden of women, as well as gender-specific health problems. The Project needs the capacity to analyse gender implications such as power balances within families by increasing the earning potential of men or women, and facilitate gender-sensitive and gender-equal processes in all aspects of project implementation, especially at the level of grassroots community development.

The Project needs to track how it is impacting on married women partnership members who may be shouldering additional burdens of care work, married women who are not partnership members but live on site and perform care work for their husbands and other members of the partnerships, single women who do not easily fit into family- and friendship-based partnership schemes, and single women with many children who are unable to be fully engaged in mining activities. Such women may need additional and/or targeted support.

Within a focus on gender-balanced development, the Project will look at:

(i) Differential needs, constraints and opportunities of men and women, boys and girls

(ii) Inter-relatedness of gendered division of labour and power relations in both public and private spheres

(iii) The need to recognise unpaid reproductive (cleaning, cooking, washing, looking after children) labour of women as being directly related to productive labour such as mining, and

(iv) The need to ensure equal participation of men and women in decision-making at all levels

4.3. Strategic intervention matrix of the SAM Project

The overall design of the Project, with two mutually reinforcing components and intervening through a rights-based empowerment approach is the result of the lessons learnt during Phases 1 and 2 of the SAM Project.

The focus on six key topics is the result of the participative bottom-up planning process for Phase 3. The six key topics reflect the consensus of all involved Mongolian stakeholder and take into consideration the experiences of like-minded projects and donors, as well as lessons learnt from former SDC projects.

The result is a project strategy which is fully compatible with three mainstream development frameworks (rights based approach, empowerment approach, Fair-trade) and can be cross-validated through a fourth development framework (sustainable livelihoods). All six-priority topics are relevant under each of the four frameworks. Figure 5 illustrates the resulting strategic intervention matrix.

For the reasons outlined in chapter 4.1.6, SAM's project strategy will follow a rights based empowerment approach.

4.4. Risks, Assumptions and Risk Mitigation Strategies

A key achievement of the previous phases has been to bring the ASM issue to the public debate and to facilitate regulation, coordination and cooperation structures, and development and empowerment of mining communities. SAM is so far the first and the only project in Mongolia, which addresses the development needs of and opportunities for the 15% of Mongolia's population. The Project contributes to Mongolia's development priorities and is therefore highly relevant. Risks for its continuation in a second implementation phase (Phase 3) can therefore be considered low.

The main **assumptions** underlying the planning of Phase 3 are:

Effectiveness of the recently enacted ASM Legislation

It has taken Mongolian decision makers about 5 years to agree on a permanent legal framework for ASM; the ASM amendment of the Minerals law was finally however approved with a sound majority of over 80%. The MMRE as the competent sector was a strong driving force in this process and had even before enacted a temporary regulation. It is therefore assumed that MMRE and MRAM will continue its policy towards regulating the ASM sector.

In multiple occasions during project implementation and project planning, the artisanal miners have given evidence of their aspirations to formalize. It is assumed that this trend continues and even evolves into a mainstream movement of artisanal miners to organize and obtain land rights for mining usage.

Topic	Project Components			Development Frameworks				Strategic value	
	Community mining		ASM policy	Empowerment Approach	Rights based Approach	Fair Trade	Sustainable Livelihoods	Community mining	ASM Policy
Legal framework and formalization	Progress from unregistered partnerships towards legal commercial ASM entities qualifying for mineral rights	developing and officializing national best practice standards and instructions for ASM	Facilitate and advise on legal and regulatory framework; Improve public opinion on ASM	Participation and inclusion	Shift from Gov. as rights-holder and "ninjas" without rights towards formal ASM and both as rights-holder and duty bearer	Requirement	Creating and strengthening structures and processes; Reducing vulnerability	Output contributing to outcome	Input at macro level contributing to outputs
Organization and institutional strengthening of ASM	Local NGOs, companies, cooperatives; Regional and National umbrella organizations (e.g. Federation)	Promotion and upscaling of collectively operated technologies (e.g. processing plant)	Support ASM organizations in their advocacy work for an enabling legal framework	Local organization	Formal ASM to become rights-holder; ASM organizations as rights-holder and responsible duty-bearer	Requirement	Creating structures and processes and increasing social capital; Reducing vulnerability	Output contributing to outcome	Output contributing to outcome
Social responsibility, social security and workplace safety	Local social responsibility programs of ASM NGOs; Evolution from informal social safety nets towards social security	Promote workplace security and OSH in general; Strengthen mine rescue service	Address formalization in a wider context, such as tax paying, inclusion in social security, etc.	Accountability	Society as rights-holder ASM as duty-bearer (responsibility) and rights-holder (social security)	Requirement	Increasing social and human capital; Reducing vulnerability	Output contributing to outcome	Output contributing to outcome
Environmental responsibility, eco-efficient technology	Environmental monitoring by communities; self-control of responsible practices	Demonstrate good rehabilitation practices; Promote eco-efficient resource usage (best possible recovery)	Convince authorities of the benefit of enforceable (within the miners' possibilities) environmental regulations or best-practice guidelines	Accountability	Society as rights-holder ASM as duty-bearer	Requirement	Protecting natural capital and increasing physical capital	Output contributing to outcome	Output contributing to outcome
Capacity building and access to information	Inherent in all topics; Knowledge management & info sharing	Inherent in all topics Knowledge management & info sharing	Inherent in all topics Knowledge management & info sharing	Access to information	Trained miners as moral rights-holder (prestige) and duty-bearers (peer ToT)	Tool: Producer support	Increasing human capital	Input contributing to outputs	Input at micro level contributing to outputs
Local development and income generation	Increasing local value generation through "mine to market" trading chains; ASM as motor of local development; alternative income opportunities	Increasing productivity, increasing product quality (e.g. certified)	Promote transparent and equitable land allocation to ASM by regional and local Governments; Support local and regional Governments in decentralization efforts	Participation and inclusion; Local organization	ASM as rights-holder	FT benefit	Increasing financial capital and miners' livelihoods strategy outcome	Outcome	

Figure 5: Strategic intervention matrix

Appropriate regulations for the ASM sector

The implementation the ASM amendment of the Minerals Law is subject to regulation by the competent sector (MMRE). A draft regulation already exists and based on experiences with the temporary legislation it is assumed that the permanent regulation will maintain a promotional character.

Local Governments will be in charge of administrating land rights for mining usage by ASM. The ASM law and its regulation will provide them with a clear framework, but implementation depends largely on the political will of each Government, to either become proactive in motivating ASM to formalize or to remain inert. Perceptions in local Governments regarding ASM vary in a wide range, from extremely positive to extremely negative. It is assumed that a sufficient number of positively inclined local Governments will take the lead, applying the law and regulation. Their experiences will serve changing the mindset of those who remained sceptical.

Mainstreaming ASM formalization requires simple and clearly understandable guidelines for miners, such as e.g. 10-main-issues instructions on mine safety and/or other topics. The elaboration of such guidelines, in cooperation with specialized governmental agencies, is part of the Project's workplan. It is however a unconfirmed assumption that all competent agencies understand that such short guidelines are much more effective than the extensive and exhaustive national standards, and that the agencies will have the courage to enact guidelines which do not adhere fully to existing national standards.

ASM will adopt new clean and safe technologies

Technical proposals of the SAM Project have been well received by artisanal miners, as demonstrated e.g. in the Bornuur processing plant. Mongolian artisanal miners are open-minded to adopt new technologies, as proven by the auto-dissemination of dry washers. Some technological proposal, such as sluices for fine gold recovery in placer mining, have however not yet achieved generalized acceptance. It can therefore be assumed that Mongolian miners are in general willing to accept new technological concepts, which improve environmental performance, productivity, and safety; and it is assumed that appropriate technologic solutions for the still existing problems can be identified and put into practice.

ASM will organize

The need for an ASM umbrella organization has become obvious during the previous phases of the Project and is becoming even more urgent for leading the process of formalization, entering in a dialogue with the Government on eventually required adaptations of the regulatory framework. Organizations are formed by their members and cannot be "created" by external actors like the SAM Project. The same applies for local organizations that need to lead the dialogue with local Governments. The SAM Project can therefore only provide incentives and conceptual guidance to the ASM institution building process, and it is assumed that the miners adopt the recommendations and become the actors of change they are called to be.

Advance towards commercial entities is not hindered

Mongolian artisanal miners are well positioned to engage with global Fair-trade gold markets. For obvious logistical reasons, global Fair-trade buyers are not able to buy from individual miners but are willing to engage with ASM organizations that are stable business partners. ASM organizations, which are willing to engage with Fair-trade markets will therefore need to, strengthen their control over the mining activity of their members and strengthen their commercial capacities. Even without the opportunity of Fair-trade (such as in case of coal or fluorspar ASM), increasing business skills will contribute to increase local income. It is assumed that ASM "champions" supported by the SAM Project will be able to master this challenge and convert into commercial entities. For that purpose, it is also assumed that dependencies from local intermediaries can be overcome.

Inclusion of Mongolia in Fair-trade ASM gold marketing schemes is possible

The possibilities for Mongolian Gold ASM to engage with Fair-trade markets are considered high by experts and the ARM FLO ASM gold partnership has expressed their willingness to work towards the inclusion of Mongolia in its geographical scope, but up to now, no in-depth appraisal of the challenges has been carried out. National key stakeholders, like Mongol Bank, have also expressed their supportive position and the SAM Project has the opportunity to take the lead in linking Mongolian ASM miners with global markets. It is assumed that the envisaged challenges (organizational setup of producers, taxation, and traceability) are of similar magnitude of countries where ASM are already applying for certification and that eventually differences are not affecting core principles of the Fairtrade and Fairmined Standard.

The main **risk mitigation strategies** of the SAM Project are:

- If political will to implement the ASM law lacks behind, SAM shall draw on its advocacy and facilitation experience built up during Phase 2, providing the process with new momentum.
- If the motivation of ASM miners to formalize lacks behind, SAM shall work with the counterparts on a gap analysis identifying the major obstacles and developing complementary public-private win-win options to provide the process with new momentum.

  In both above-mentioned scenarios, SAM shall avoid assuming or substituting (even temporarily) the rights and responsibilities of the national key stakeholders (ASM or Government)!
- If the acceptance of technologic and organizational proposals by ASM lacks behind, SAM shall intensify its efforts to bring external expertise to the table to analyse causes and solutions from an independent and unbiased point of view.
- If some Fair-trade requirements result unachievable in Mongolia, SAM shall work with the Standard setter towards their adaptation to the Mongolian context.
- If – against all probabilities – the public and political opinion turns again sharply against ASM, SAM shall not "panic" but maintain the rights-based pro-poor advocacy position it assumed in Phase 2 and re-assess the driving forces and economic interests behind. Development often consists of two steps forward and one step back. SAM needs to focus on its mission to deliver development to ASM communities and the fact that SAM's main clients are the artisanal miners.

4.5. Sustainability and exit strategy

Some very crucial aspects of the project will need to continue, beyond the project. Advocacy and lobbying for policy formulation and appropriate regulations shall be continued by the ASM Federation and the local ASM Associations through local and national lobbying. Training, capacity building and technical support and field inspections and advice on ASM Community mining operations will be handled by MRAM ASM Unit. This will be a key function to ensure sustainability and replication of best practices established during project implementation. To further enhance miners skills on conducting responsible mining operations, vocational training institutions with government budget shall continue with training and shall transform ASM into an occupation of choice.

Information sharing and best practice communication will be continued by MRAM Unit and ASM NGOs and Federation through ASM database which will be hosted and maintained by MRAM with input from artisanal miners and other relevant parties such as local government officials working with ASM e.g. inspection officials, environment officers and rescue services. Institutional support to the miners' partnerships and NGOs will become responsibility of Local government officials who now have a broader role in working with miners according to the new law amendment. Research on specific mining requirements will be conducted by Research institutions, and former project staff working as consultants for the ASM Federation or MRAM Unit.

Safety training and support at national level will be continued by MRS for a limited time and expect that the local safety teams in soums and mining sites will be strengthened to support miners in safety. Environmental management and monitoring is expected to ne spearheaded by the communities themselves, ASM Associations and local government inspectors.

The rights-based empowerment approach towards responsible ASM is inherently designed to lead towards sustainability. The SAM Project will articulate the relevant rights holder and duty bearer, and empower artisanal miners to access their rights and comply with their social and environmental responsibilities. The organizational dimension of empowerment (e.g. facilitation of an ASM umbrella organization) aims at progressively handing over SAM's role in the policy dialogue to empowered artisanal miners as drivers of change.

A clear distribution of tasks and duties within the close cooperation with the counterpart MRAM ASM Unit (see chapter 7.2) contributes to sustainability. Avoiding the substitution of the mineral authority's duty but strengthening their capacity to cope with the new challenges and handing over the experiences and lessons learnt from the Project will put MRAM in a better position to continue working with the ASM sector beyond the lifespan of the Project.

Close cooperation with Soum and Aimag authorities aims for capacity building at regional and local level. Decentralization of duties (registering ASM partnerships, assigning mining areas to partnerships) has begun through the ASM law amendment, and transfer of capacities within the ongoing decentralization process is much needed. SAM shall support the process of capacity building in local and regional Governments and contribute to better resource governance at local level. This task shall be supported, but only partly be performed, by SDC contracted staff, and needs to draw on MMRE and MRAM counterpart staff seconded to the SAM Project. The active involvement of central Government staff in regional capacity building brings official "authority" to the table, and establishes and strengthens a sustainable process of decentralization.

The current stakeholder landscape reveals several actors from civil society and research institutions interested to perform as service providers to the ASM sector; however, none of the institutions unites currently the qualifications and commitment for outsourcing entire parts of the SAM Project. Civil society and Research institutions shall however be progressively involved in the project implementation as service providers, in order to enhance their capacity and create broader national ownership of the Project.

The major field of project intervention that contains significant subsidy elements (critical for sustainability) is capacity building. Apart from the fact that built capacity is inherently sustainable, the design of capacity building in both components focuses specifically on sustainability:

- For broad, general audience targeted capacity building, the Project will emphasize on the creation of vocational training structures. As such structures are already established for other professions (e.g. tailors, bakers, mechanics, etc.), and are independent of external support, it can be safely assumed that this can be also achieved for the professional career of "artisanal miner".
- For "champions" oriented, specialized capacity building at the top of the pyramid, the linkage of the Project into Fair-trade markets is the key to sustainability. The Fairtrade Premium is not a subsidy but an extra payment from consumers for the higher (ethical) quality of the product, and producer support is financed through licences fees or by the producers themselves.[17] Once a critical mass of Fairtrade and Fairmined certified (or certifiable) ASM organizations is established in Mongolia, producer support becomes a business opportunity and will not any more depend on the SAM Project.

[17] The producer support organizations in Latin America (where the system is currently implemented) are miners' umbrella organizations, national NGOs, and research institutions; not one of them is a subsidized development project.

The main element of sustainability of the Project lies however in the Fair-trade concept, incorporated into the project design of SAM. The key element of Fair-trade is the Premium paid by consumers, which is earmarked for local development and administrated by the ASM producer organizations. The Fairtrade and Fairmined ASM Gold Standards offer currently a Premium of 10% and up to 15% of the gold price, depending how well additional ecological requirements are met. Under conservative gold price estimations, each kilogram of certified ASM generates 3,000 – 4,500 USD of Premium. It would only need an annual certified gold production of about 250 kg (less than 10% of the ASM production and equivalent to 3-4 times the production capacity of the Bornuur processing plant) to generate a permanent Premium revenue stream dedicated to local development in ASM communities equivalent to the annual Swiss contribution to the SAM Project.

Exit strategy

Phase 3 postpones the exit phase by four years and allows consolidating the Project's achievements in the pivotal moment after the enactment of the ASM law. Capacity building and handing over the experiences and lessons learnt from the Project will put all national stakeholders in a better position to continue working with the ASM sector beyond the lifespan of the Project.

Integration in the Fairtrade and Fairmined Partnership's ASM producer support networks assures self-sustained and growth oriented long-term support for artisanal mining communities.

Final handover remains the task of a 2 years' exit phase. The reduction of permanently employed specialist staff in Phase 3 and the outsourcing (handover) to external service providers is part of the exit strategy. Depending on lessons learnt during this process, a possible exit scenario is to implement the Exit Phase exclusively with external service providers under supervision and with guidance from SAM senior experts. Planning of the exit phase should commence with the internal mid-term review and needs to be a central part of the external evaluation towards the end of Phase 3.

5. Logical Framework

5.1. Development goal

The development goal of Phase 3 is the "**Recognition of artisanal mining as a formal sub-sector contributing to Mongolia's economic development."**

5.2. Outcomes and outputs

The table below shows the outputs of Phase 3 and the expected outcomes. Outputs are formulated for all six "key topics for the development of a responsible ASM sector" (see chapter 4.2.2) at Project and at Component level.

Outputs at component level 1 – 4 are mutually cross-referencing between both components. This highlights the required close integration of both components. For Output 5 (capacity building structures, which provide sustainability to the outputs 1 - 4), the policy and the community-mining components target complementary audiences. For Output 6 distinguishes into macro-level and micro-level aspects contributing to income generation and local development.

Indicators are intentionally formulated at Project level and not at Component level. The Project can only contribute significantly to the development goal if it makes simultaneous progress in both components. Outcome and output indicators at individual component level are likely to produce misleading guidance if dependencies between the components are not taken into account (e.g., the number of enabling regulations enacted can be high, but they will not be effective if miners do not adhere to them).

<table>
<tr><th>ASM policy component</th><th>Community mining component</th><th>Indicators</th></tr>
<tr><td colspan="3">Development goal</td></tr>
<tr><td colspan="3">Recognition of artisanal mining as a formal sub-sector contributing to Mongolia’s economic development.</td></tr>
<tr><td colspan="3">Outcomes</td></tr>
<tr><td>Responsible artisanal mining in Mongolia provides secured workplaces.</td><td>Livelihoods, social and environmental responsibility and safety of artisanal mining communities improved.</td><td>[Amount] of Fairtrade premium received by [number] of certified ASM producers

Livelihoods assets assessments</td></tr>
<tr><td colspan="3">Outputs</td></tr>
<tr><td colspan="2">Project Output 1:
An enabling legal and regulatory framework provides the opportunity of formalization of ASM</td><td rowspan="2">Number of formal ASM entities granted the right to exploit local mineral resources</td></tr>
<tr><td>Component Output 1.1

Enabling legal and regulatory framework conditions for ASM allows artisanal miners to formalize their operations</td><td>Component Output 2.1

Artisanal miners formalize their operations according to the existing legal and regulatory framework</td></tr>
<tr><td colspan="2">Project Output 2:
ASM organizations articulate interests of miners and stakeholders</td><td rowspan="2">Existence and performance of a national ASM federation

Number of regional and local ASM NGOs</td></tr>
<tr><td>Component Output 1.2

At national, regional and local level, Governments and other stakeholders interact with the ASM sector through its gremial and producer organizations</td><td>Component Output 2.2

Artisanal miners interact with the Government and other stakeholders through their gremial and producer organizations</td></tr>
<tr><td colspan="2">Project Output 3:
Socially responsible artisanal miners enjoy safer workplaces and social security</td><td rowspan="2">Number of accidents related to workplace safety (OSH negligence)[18]

Number of artisanal miners affiliated to social and health insurance</td></tr>
<tr><td>Component Output 1.3

Public and private services for improving workplace safety and social security for ASM are accessible to responsible artisanal miners</td><td>Component Output 2.3

Responsible artisanal miners make use of affordable services for improving workplace safety and join the social security system</td></tr>
<tr><td colspan="2">Project Output 4:
Responsible artisanal miners implement environmentally sound mining practices and technology</td><td rowspan="2">Amount of land rehabilitated by ASM

Number of Hg-free processing plants</td></tr>
<tr><td>Component Output 1.4

Feasible and enforceable environmental requirements provide ASM communities with clear guidance on responsible and environmentally sound mining practices</td><td>Component Output 2.4

ASM communities are aware of environmental requirements and implement responsible and environmentally sound mining practices and eco-efficient technology</td></tr>
</table>

[18] excludes eventual mayor accidents (single event disaster)

ASM policy component	Community mining component	Indicators
Project Output 5: **Capacity building structures and processes for supporting the ASM sub-sector are in place**		Number of capacity building institutions actively involved Number of "general audience" trainees Number of "specialized audience" ASM communities involved
Component Output 1.5 Capacity building structures and institutions supporting ASM are in place at national level.	Component Output 2.5 Specialized audience targeted capacity building structures and processes for ASM are in place at local level	
Project Output 6: **Increased capacity of local government and artisanal mining communities to manage mineral resources.**		Number of local institutions and staff supporting ASM development Number of technical innovations tested and introduced *Note: Local development monitoring occurs mainly at outcome level (see above)*
Component Output 1.6 Transparent and equitable licensing process and conflict mediation.	Component Output 2.6 Artisanal mining communities increased productivity and improved product quality.	

5.3. Outputs and portfolio of activities

A detailed proposal for a portfolio of activities contributing to each Project Output is outlined below and elaborated in detail in Annex 7. It is important to highlight that this portfolio does NOT represent a rigid "recipe" for the implementation of the Project. One of the MTR findings was that the Project was implemented interpreting the project planning in a too rigid manner ("which made project implementation an apparent straight forward task") and resulted in consequence in a series of "missed opportunities". This mistake shall not be repeated.

The term "Portfolio of Activities" is therefore chosen intentionally, as it is one of the Project Management's main tasks to monitor the context for surfacing opportunities and to adjust the project activities in a dynamic manner. In consequence some of the below activities may not come into action and other new ones may be designed by the management. Conducting the Project in the outlined dynamic manner is a greater challenge than implementing a "recipe" type workplan. It requires expertise, creativity, and sensibility from the Management.[19]

The most important element of the portfolio is therefore its "orientation and guidance" column in Annex 7. Some of the activities in Annex 7 indicate "milestones". The milestones are considered critical to be achieved in order to keep the Project on track. In many cases a milestone can be achieved through the proposed activity or through alternative (and eventually at a given moment more appropriate) activities.[20] Some of the activities indicate special relevance for achieving Fairtrade and Fairmined certification of producers (column FTFM). These are typical activities of producer support organizations.

The tables below summarise the portfolio of activities from Annex 7, sorting activities by components. This complements the presentation of activities by project- and component outputs in the Annex, which aims for emphasising on the integration (e.g. output 1.1 with 2.1) of both

[19] For that purpose the "SAM Project Management" is much stronger dimensioned than in Phase 2 and consists of 2 high level experts: a national Project Director and an international Project Manager (see chapter 7.3).

[20], some milestones are repeated under different activities. Such milestones can be achieved through implementing one or more of the proposed activities.

components. Milestones are summarized below in a separate table, while in the Annex they are assigned to activities.

Component 1: ASM Policy

Output	..)	Activity	FTFM
Project Output 1: An enabling legal and regulatory framework provides the opportunity of formalization of ASM			
1.1 **Enabling legal and regulatory framework conditions for ASM allow artisanal miners to formalize their operations**			
	A)	Facilitate and advise on legal and regulatory framework	
	B)	Improve public opinion on ASM	
	C)	Facilitate Fair-trade export and promote benefits	
Project Output 2: ASM organizations articulate interests of miners and stakeholders			
1.2 **At national, regional and local level, Governments and other stakeholders interact with the ASM sector through its gremial and producer organizations**			
	A)	Strengthen the capacity of ASM organizations of participating in the public and policy dialogue	
	B)	Support ASM organizations in their advocacy work for an enabling legal framework	
Project Output 3: Socially responsible artisanal miners enjoy safer workplaces and social security			
1.3 **Public and private services for improving workplace safety and social security for ASM are accessible to responsible artisanal miners**			
	A)	Facilitate official release of ASM guidelines	
	B)	Elaborate and propose simplified mechanisms for the inclusion of artisanal miners in the formal social security system	
	C)	Improve emergency response in ASM sites by mine rescue services	
Project Output 4: Responsible artisanal miners implement environmentally sound mining practices and technology			
1.4 **Feasible and enforceable environmental requirements provide ASM communities with clear guidance on responsible and environmentally sound mining practices**			
	A)	Promote and facilitate the enactment of simple and enforceable environmental regulations and guidelines for ASM	
	B)	Obtain official recognition of the mercury-free processing plant design as “approved” technology for ASM	
Project Output 5: Capacity building structures and processes for supporting the ASM sub-sector are in place			
1.5 **Capacity building structures and institutions supporting ASM are in place at national level**			
	A)	Establish the framework and structures for professionalization of artisanal mining	
	B)	Establish the curriculum and infrastructures for professionalization of artisanal mining	
	C)	Establishing an “ASM Database”	
	D)	Capacity building through information sharing	
	E)	Establish formal relations with the Fairtrade and Fairmined Gold Partnership of FLO and ARM	
Project Output 6: ***Increased capacity of local governments and artisanal mining communities to manage mineral resources***			
1.6 **. Transparent and equitable licensing process and conflict mediation.**			
	A)	Promote transparent and equitable land allocation to ASM by regional and local Governments	
	B)	Support local and regional Governments in decentralization efforts	
	C)	Create mediation capacity for resolving natural resource conflicts	
	D)	Advocacy towards respecting rights and needs of ASM miners by LSM companies in compliance with their CSR duties.	

Component 2: Community mining

Output	..	Activity	FTFM
Project Output 1: An enabling legal and regulatory framework provides the opportunity of formalization of ASM			
2.1	**Artisanal miners formalize their operations according to the existing legal and regulatory framework**		
	A)	Promote formalization among informal artisanal miners	
	B)	Advise unregistered partnerships in formalization procedures	
	C)	Advise legal commercial ASM entities in formalization procedures	
	D)	Establish trading capacity in ASM organizations	✓
Project Output 2: ASM organizations articulate interests of miners and stakeholders			
2.2	**Artisanal miners interact with the Government, other stakeholders and business partners through their gremial and producer organizations**		
	A)	Support organization building process at local, regional and national level	
	B)	Provide guidance to ASM organizations on their core tasks	
	C)	Facilitate the access of ASM organization to jointly owned and operated technology and production facilities	
	D)	Specific organizational support to ASM organizations with focus on becoming certified Fairtrade gold producers	✓
Project Output 3: Socially responsible artisanal miners enjoy safer workplaces and social security			
2.3	**Responsible artisanal miners make use of affordable services for improving workplace safety and join the social security system**		
	A)	Migrate informal social safety nets into formal social insurance schemes	
	B)	Elaborate ASM guidelines	
	C)	Introduce safer mine technology	
	D)	General capacity building and awareness raising in occupational health and workplace safety (OSH)	
	E)	Implement local rescue services	
	F)	Improve and upgrade workplace safety and labour conditions of gold pilot sites according to FT&FM Standards	✓
	G)	Trigger local social responsibility programs of ASM organizations	
*Project Output 4: **Responsible artisanal miners implement environmentally sound mining practices and technology***			
2.4	**ASM communities are aware of environmental requirements and implement responsible and environmentally sound mining practices and eco-efficient technology**		
	A)	Elaborate simple and enforceable environmental regulations and guidelines for ASM and promote their compliance	
	B)	Mitigate resource conflicts through involvement of local communities in environmental monitoring	
	C)	Up scaling and replication of mercury free Bornuur plant model	
	D)	Continue developing environmental friendly eco-efficient technical solutions for gold mining	
	E)	Improve and upgrade environmental performance of gold pilot sites according to FT&FM Standards	✓
Project Output 5: Capacity building structures and processes for supporting the ASM sub-sector are in place.			
2.5	**Specialized audience targeted capacity building and information sharing structures and processes for ASM are in place at local level**		
	A)	Activities inherent to all topics	
	B)	Capacity building in ASM organizations as structures for capacity building among members	
	C)	Capacity building in local organizations as structures for capacity building among artisanal miners	
	D)	Compiling training materials as a “miners’ toolkit”	
	E)	Specialized training of ASM organizations in pilot sites regarding the Fairtrade system and Gold Standards requirements	✓
*Project Output 6: **Increased capacity of local governments and artisanal mining communities to manage mineral resources.***			
2.6	Artisanal mining communities increased productivity and improved product quality.		

Output			
	..)	Activity	FTFM
	A)	Elevate income through increased productivity	
	B)	Elevate income through increased product quality	
	C)	Enhance money management and business skills in artisanal miners and ASM organizations	
	D)	Provide guidance to the ASM organizations' local community development activities	

Main Milestones

Milestone	Expected in				FTFM
	Year 1	Year 2	Year 3	Year 4	
Permanent Regulation on ASM, based on ASM Amendment of Minerals Law enacted	◆				
An ASM umbrella organization is created by the miners		◆			
Public appearance of the ASM umbrella organization		◆			
Bayankhongor plant (in Phase 2 under construction) finished and operative	◆				
Processing plant technology "officially approved"	◆				
Further replica plants (e.g. Omnugobi and Mandal , currently in planning) finished and operative		◆ ◆			
First ASM organization converted into or established as commercial entity (access to mineral rights)			◆		
ASM Guidelines elaborated, approved and published	◆	◆			
"Miners' toolkit" " (compilation of all SAM recommendations) published				◆	
One additional mobile mine rescue unit established per year (year 2 and 3 depending on performance of MRS)	1◆	+1◆	+1◆		
Social security system open for artisanal miners and accepted			◆		
Survey on existing information on ASM in Mongolia (who knows what?)	◆				
Network of Mongolian institutions improving OSH awareness in ASM established		◆			
Decision taken to establish a formal vocational training career for artisanal miners.		◆			
First vocational training centre or training programme operative			◆		
First artisanal miners certified as professionals				◆	
ASM organizations take the initiative to provide training to their members (applies to each ASM organization)		◆			
Viability and clarity on procedure for Gold export by ASM producers gained	◆				
Applicability of Fairtrade and Fairmined Gold Standard to Mongolia assured		◆			
ASM producer organization Fairtrade and Fairmined certified		1◆	2◆	3◆	
ASM gold exported as Fair-trade			◆		
ASM organizations (Fairtrade Premium Committees) manage local community development projects				◆	

6. Stakeholders, beneficiaries and partners

6.1. Stakeholder mapping

An in-depth stakeholder analysis of relevant actors in Phase 3 was carried out, taking into account the

(i) Stakeholder analysis from previous Project phases,
(ii) Stakeholder analysis from the MTR,
(iii) Appreciations by the project team, and by the external consultant (Annex 10)

Figure 6 reflects the expected contribution of each stakeholder to the Project.

Typical limitations of any stakeholder analysis are their inherently subjective character, because of being based on individual perceptions of the analysts, and institutional positions reflect in most cases the individual opinions of persons in charge of the institutions. Especially the latter is subject to variation over time. Despite the limitations, the resulting stakeholder map, plotting actors with regards of their interest in ASM and their influence on ASM (Figure 7), provides a clear picture[21].

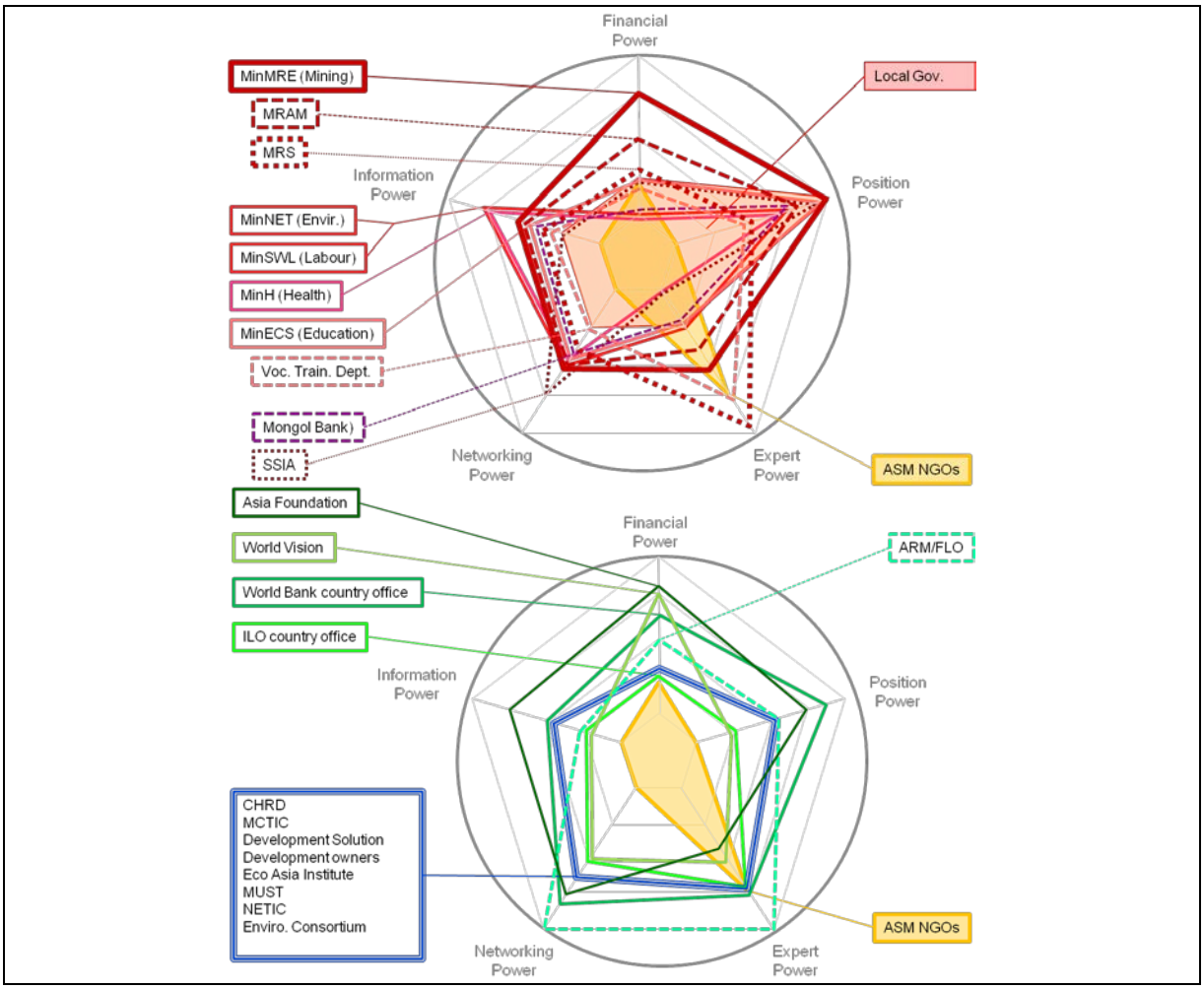


Figure 6: Power contributions of each stakeholder to the Project

[21] Colour of circles indicates the stakeholder group. + and – signs indicate the stakeholder's perception regarding ASM. Size of circles indicate a „Project Relevance Index" (PI) calculated from the anticipated power contribution to the project (see Figure 6), interest and influence; the latter is intentionally recursive to the position of the stakeholder within the map, as it contributes to highlight key stakeholders. Coloured ovals without borders represent groups comprised of various not individually analyzed stakeholders; their size is not quantitative.

Key stakeholders *(dark grey area in Figure 7)*

- The stakeholders with the highest interest in ASM are the artisanal miners.
- The stakeholder most relevant as counterpart for SDC (highest interest and influence) is the mining sector of the Central Government represented by the Ministry MMRE and its agencies MRAM and MRS. Local Governments, in charge of local ASM administration play a similarly prominent role, as well as – obviously – the organizations of the artisanal miners. With exception of some local Governments, the perception of all these stakeholders is in a varying degree positive towards ASM.
- The most important veto player[22] against the development of a formal and responsible ASM sector are economic interests related with extraordinary profit opportunities exploiting uncontrolled, informal, and des-empowered artisanal miners. This black market sector related to the informal trade of gold, which successfully maintained ASM in the informality during 10 years, is likely to be negatively affected by the Project.
- Likeminded external (international) stakeholders like World Bank, Asia Foundation, and the ARM/FLO Partnership can provide significant leverage in different areas.

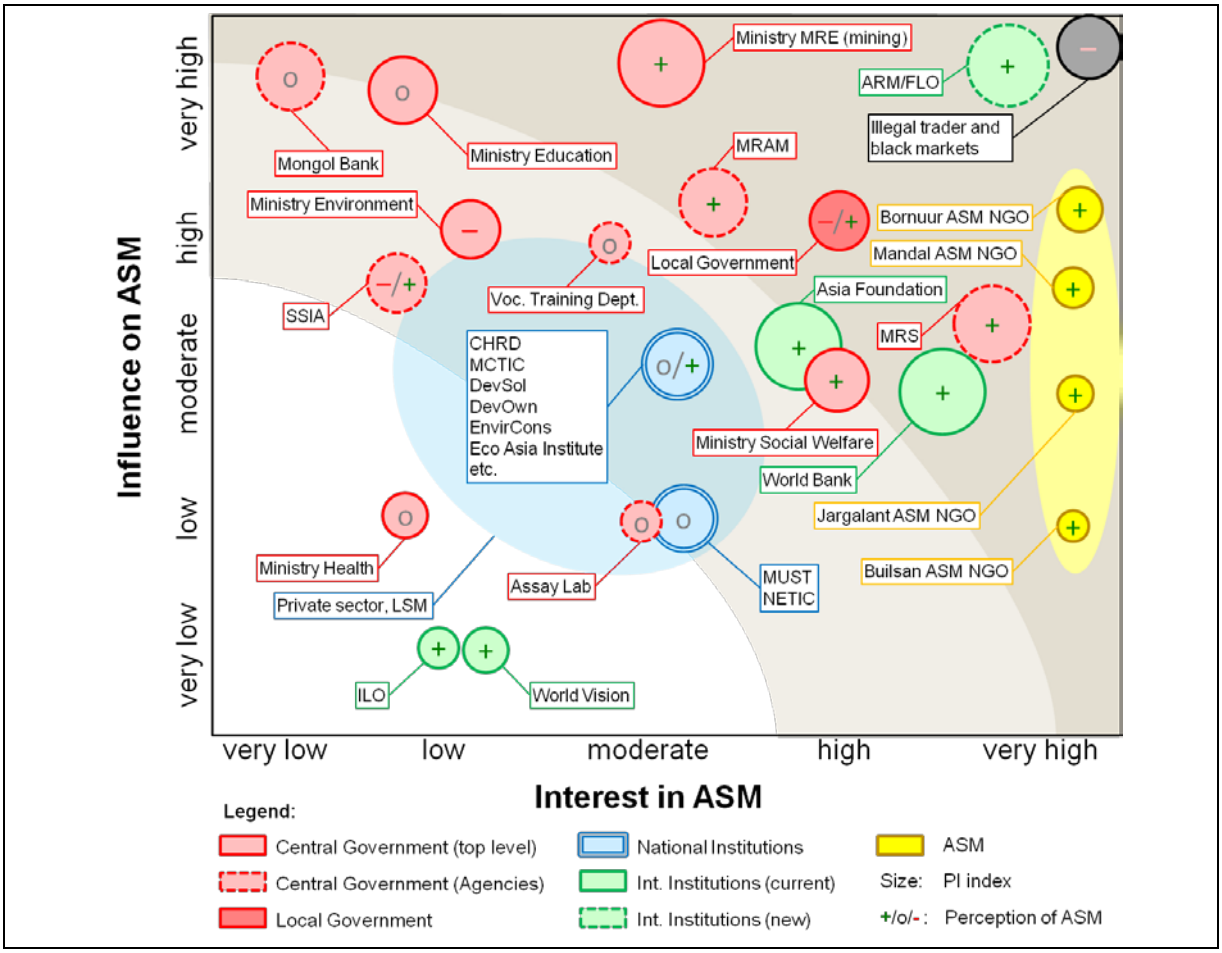


Figure 7: Stakeholder mapping (for abbreviations see Annex 10: Stakeholder Analysis)

Primary stakeholders *(light grey area in Figure 7)*

- A wide portfolio of relevant primary stakeholder exists which is populated by governmental as well as non-governmental organizations and the private sector.

[22] Not included in Annex 10, as not directly attributable to an institution

- Central Government sectors that are primary stakeholder are mainly the Ministries of Environment, Social Welfare and Labour as well as Education, expecting ASM to develop within the recent legal framework into an environmentally and socially responsible professional economic activity. Mongolbank has high interest in legal gold trade. SSIA plays an important role being in charge of the inspection of the ASM operations.
- Civil society (NGOs), research institutions as well as the private sector (large scale mining companies) have low to moderate interest and low to high influence on ASM. NGOs are predominantly not proactive drivers of change (advocacy for or against ASM) but service providers. Private sector LSM companies[23] are mainly interested to stay "unaffected" by ASM, but are in most cases willing to enter agreements with ASM, either in order to maintain good relations with the local Government or as part of their CSR programs.

Other stakeholders

- Only a limited number of "other stakeholders" was covered by the stakeholder analysis, as their roles and possible interactions with the Project are issue- or site-specific. In most cases, their involvement in ASM is coincidentally related with other development issues.

6.2. Beneficiaries

Beneficiaries of the Project are "**responsible artisanal mining communities"**. The enactment of the minerals law amendment at the end of Phase 2, creating a legal framework for ASM, sharpens the focus towards formal, environmentally and socially responsible ASM, which is mainly equivalent to community based mining. The Project will work towards sustainable development in permanent and seasonal ASM communities as well as towards the conversion of shock-push and rush-type miners into stable and responsible community miners.

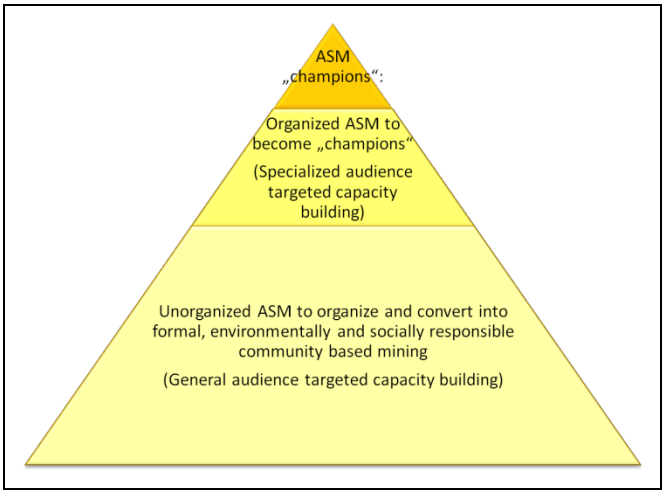


Figure 8: ASM Pyramid

Artisanal miners shall not be perceived as "beneficiaries" but as "drivers of change" and partners of the Project. "Champions" are able to lead the process of ASM development in a sustainable way beyond the lifespan of the Project. SAM will therefore emphasize on collaborating with organized groups of artisanal miners in pilot sites, coaching them to become champions. The development of such champions is a learning experience for miners as well as for the national partner organizations of the Project.

Community mining should gradually develop into a private business, without losing its community roots, and the Project shall support initiatives from community mining groups to become sustainable businesses (e.g. Bornuur).[24]

The task of organization and formalization of unorganized ASM is an issue of governance at local level and therefore mainly to be carried out by the local Governments with support from the central

[23] Not included in Annex 10, as appreciations cannot be generalized among the wide variety of companies. Relevance of individual companies for the SAM project is pilot site specific.

[24] Regarding investment capital which ASM businesses might need, the Project must not substitute financial institutions through providing loans or rotational funds (this is not the task of the Project!) but shall facilitate access to sources of financing. Own capital of miners (e.g. accumulated through savings groups) is the most easily accessible money for miners, which creates the least dependencies.

Government (e.g. MRAM ASM Unit). In shock-push and rush-type ASM sites, SAM will work mainly through its governmental counterparts.

In terms of numbers, it can be expected that SAM can outreach – over the additional 4 years of Phase 3 - to 7,500 (± 2,500) artisanal miners at "champion level" and to 15,000 (± 5,000) artisanal miners at "general audience level". This corresponds to coverage of about 60% of the officially admitted 38,000 miners, or coverage of more than 20% of the unofficially estimated 100,000 artisanal miners.

6.3. National Counterpart

The pivotal role of the mining sector at central Government level (MMRE and competent agencies) is clearly visible in the stakeholder map. The MMRE is the counterpart of Phase 2, and has expressed during the planning of Phase 3 its interest to continue the cooperation agreement with SDC, in order to regulate and develop the artisanal mining sector.

Mongolia is a mineral rich country and the main priority of the mining sector is the development of large scale mining, with increasing priority to public-private partnership projects and expecting sustainable public revenues. However, with officially 38,000 artisanal miners, ASM provides employment for many workers as the industrialized mining sector (46,500). Due to its importance for poverty reduction and employment generation in rural areas, ASM is increasingly becoming another priority topic for the MMRE.

As ASM is, with only about 10 years history, a relatively new issue in Mongolia, and a series of tasks lies ahead after the enactment of the ASM amendment to the minerals law in 2010, MMRE requests the continued support of SDC through another Phase of the SAM Project.

- Formal Counterparts of the SAM Project will be the **Ministry of Mineral Resources and Energy** (MMRE) on behalf of the Government of Mongolia and the Swiss Embassy / SDC on behalf of the Government of the Switzerland.
- At operational level, the SAM Project will cooperate closely with the **Mineral Resources Authority of Mongolia** (MRAM). MRAM is the Agency of the Mongolian Government under the MMRE in charge of basic geological and mining surveys, research and the registering and issuing of licenses.
- MRAM is planning to re-establish an **ASM Unit**, which will follow-up the former but lately abandoned SAMU. The ASM Unit will be tasked to offer legal, technical, environmental, business and community development related support to artisanal miners.
- At implementation level, especially for fieldwork within the community-mining component of the Project, very close cooperation between the SAM Project and MRAM's ASM Unit will be pursued. SAM's task will be to strengthen MRAM and its ASM Unit, empowering staff to understand ASM logic and bridge it with professionalism in order to become able to regulate and develop the sector.

Further details on the institutional setup of the Project are elaborated in chapter 7.1, especially Figure 9.

6.4. Partners

To work with partners is crucial for the SAM. Capacity building in Governmental institutions, local and national NGOs, and research and academic institutions, and the creation of national ownership of the solutions developed within the implementation of the Project will ensure long-term sustainability.

National key stakeholders

Aimag and Soum Governments are the key stakeholders for formalization of ASM and local development. Transparent and equitable land allocation to ASM by regional and local Governments will play an important role for unleashing the local development potential of ASM. Regional and local

Governments however lack mineral resource management expertise and need support in assuming their duties within the ongoing decentralization process.

At implementation level and especially for fieldwork within the community-mining component, local Governments are crucial partners of the Project. Strengthening local governments in their efforts to improve mineral resources governance shall take place within the ASM policy component.

The **Mine Rescue Service** (MRS) is the agency under the MMRE responsible for ensuring mine safety compliance within the mining sector. Apart from carrying out mine inspections and approve mine plans in LSM, MRS also conducts safety training and is responsible for mine rescue operations throughout Mongolia and including ASM. MRS is highly motivated to cooperate with SAM on extending safety training and rescue services closer to ASM sites.

National primary stakeholders

Formalization of ASM goes beyond addressing rights and obligations related to mineral extraction and access to mining areas. Urgent issues of environmentally and socially responsible professional ASM overlap with the competencies of other sector ministries such as **Ministry of Nature, Environment and Tourism**, **Ministry of Social Welfare and Labour**, **Ministry of Education, Culture and Science**, and **Ministry of Health**. Wherever possible, these Ministries and their agencies need to be involved in the SAM Project implementation. It is of special importance to involve the Environmental Ministry in the development of eco-friendly technical solutions, cooperate with the Social Welfare Ministry on the inclusion of ASM in formal social insurance systems, and elaborate together with the Ministry of Education the curriculum and logistical infrastructure for vocational training.

Mongol Bank and the **Precious Metal Assay Laboratory** are important partners for granting formal ASM organizations access to Fair-trade markets.

The **State Specialized Inspection Agency** (SSIA) and especially SSIA- and environmental **inspectors at Aimag and Soum level** need to be involved in the formulation of short, easily understandable but highly effective guidelines for ASM. Clear guidelines help miners and inspectors. Cooperation with the German funded BGR project is improvable.

Most **National NGOs representing Civil Society**, and private and public **Research Institutions** do not count on a clearly established own ASM agenda as in some other countries. They act mostly on demand as service providers. Nevertheless, many of them count on specific expertise that can be activated in favour of ASM by involving them in the implementation of the Project. Involving external service providers also allows for dynamically adjusting project capacities. Home-grown (Mongolian) solutions will be promoted, as they may be cheaper, easy to replicate and well understood within the local setting. Research institutions will be engaged for research in technological improvements, community engagement, advocacy, and environmental management.

Many mineral occurrences suitable for ASM (small, high grade) are located within existing exploration and mining concessions of private sector **mining companies** interested in industrially exploitable deposits (large, low grade). SAM can contribute articulating mining companies, artisanal miners, and local Government and should especially address ICMM member companies regarding their CRS commitments.[25]

International primary stakeholders

Although not counting on a specific ASM Project in Mongolia, but being the host organization of the global Communities and ASM initiative CASM and maintaining a country office with a mining specialist in Mongolia, the **World Bank** (WB) is an important ally for SAM. The WB country office committed to support the dialogue with Mongol Bank regarding export mechanisms for Fairtrade and Fairmined certified gold.

[25] ICMM Publication „Working together: How large-scale mining can engage with artisanal and small-scale miners“ , http://www.icmm.com/document/789 accessible from http://www.icmm.com/page/236

Asia Foundation is preparing the project "Engaging Stakeholders in Environmental Conservation" (ESEC) with anticipated Dutch funding, addressing responsible development of the minerals sector and sound environmental practices in Mongolia. Synergies with its four components (*Advance responsible mining principles into practice, engage stakeholders in responsible resource use at the local level, Strengthen environmental advocacy and conservation efforts, Institutionalize environmental and water quality monitoring*) exist. The ESEC project can make an important contribution to the development goal of the SAM Project if it contributes to a learning process in the public and political opinion (especially among some stakeholders of ESEC) regarding the feasibility of responsible artisanal mining and its potential for Mongolia's development. ESEC could focus on responsible environmental self-regulation of ASM communities with emphasis on mitigating resource conflicts within the communities. Asia Foundation is preparing a concept note to SDC/SCO on extending the scope of the ESEC project into ASM with an adjusted approach.

In March 2010, the **Alliance for Responsible Mining** (ARM) and **Fairtrade Labelling Organizations International** (FLO) announced their **Fairtrade and Fairmined Partnership** (FT&FM) and published the "Fairtrade and Fairmined Standard for Gold from Artisanal and Small-scale Mining". The Standard is currently opened for Latin America. Work towards including Africa in the medium term has already commenced and outreach to Asia is planned by the partnership in the long term. The FLO and ARM partnership has however expressed to SDC/SCO its openness to prioritize work towards advancing the inclusion of Mongolia in its geographical scope.

Other stakeholders and networking in general

Partnering with likeminded and complementary national and international institutions and initiatives is not limited to the above-mentioned key- and primary stakeholders. Other and more possible partners will probably surface during the four years of Phase 3 and the Project needs to be able to engage with them with appropriate flexibility.

In general, the Project shall re-establish the networking capacity it had in its early years, when SAM brought the Annual CASM Meeting to Mongolia. Networking is the most effective and least costly way to bring international experience to the table. The project management has to be aware that external networking can only be as effective as internal networking, and encourage and support the entire project team to engage with networks. Knowledge sharing networks are "social capital". Social capital is the only capital, which increases by being used!

7. Project Organization and Management

Figure 9 on page 44 illustrates the institutional setup and management structure of the SAM Project.

7.1. Institutional setup of the Project

Project Agreement

The SAM Project is a bilateral cooperation between the Governments of Switzerland and Mongolia and a Project Agreement is to be signed by the competent bodies.

- The **Government of Mongolia** is represented by the Ministry of Mineral Resources and Energy (MMRE), as the competent sector.
- The **Government of Switzerland** is represented by the Swiss Cooperation Office (SCO) at the Swiss Embassy in Mongolia.

Operational Level

- **Mongolia**

  The **Mineral Resources Authority of Mongolia** (MRAM) is the agency of the Mongolian Government under the MMRE in charge of the minerals and mining sector. MRAM will act as the implementing agency of the Mongolian Government's contribution to the SAM Project.

- **Switzerland**

  Different project implementation modes are possible within Swiss funded development projects, distinguishing mainly between "mandated" projects (mandated to external national or international implementing entities) or "self-implemented" projects, where SDC itself acts as the implementing agency. The different options were analyzed during project planning, with the result that

  (i) Mandating the project implementation to a specialized international entity was discarded due to Mongolian perceptions and reactions regarding the internationally mandated preparation phase (Phase 1) of the SAM Project
  (ii) Mandating the project implementation to a national entity was discarded due to the lack of national entities with a sustained track record of implementing ASM projects
  (iii) Self-implementation of the Phase 2 (2007-2010) has not been entirely "smooth" but has produced satisfactory results and foremost the required expertise in SDC staff which promises a successful implementation of Phase 3.

  The **Swiss Agency for Development** (SDC) will act in "self-implementation" mode as the implementing agency of the Swiss Government's contribution to the SAM Project. For this purpose, SDC will establish a SAM Project Team (as in Phase 2).

7.2. Project Organization

Project Structure

A wide spectrum of project setups are possible within Swiss funded development projects, varying according to the circumstances from projects actuating as almost completely independent entities to projects completely and physically inserted in the national counterpart as part of its organizational structure. The different options were analyzed during project planning, with the result that

(i) The Project must not act in an isolated independent manner, because ASM is not a "temporary phenomenon" and capacity building in the counterpart and partner institutions is an important element of sustainability
(ii) The Project cannot merge physically into existing counterpart structures, as such structures (the former SAMU) have ceased to exist and will recently be re-created through the envisaged ASM Unit in MRAM
(iii) Physically merging with a MRAM Unit in process of being created (the ASM Unit) carries the inherent risk of substituting the creation of the unit or encouraging the establishment of the unit as a temporary project instead of a structure
(iv) The still informal condition of most artisanal miners, at a moment when the ASM amendment of the minerals law has recently been enacted, represents for many miners a strong emotional barrier to directly approach the premises of a Governmental entity
(v) Maintaining separate workspaces, both physically (different offices) as logically (control function of MRAM vs. support function of SAM) but to work in very close cooperation (joint activities and joint field visits where applicable) appears to be the most promising project setup.

In consequence, a project structure that consists of a SAM Team closely cooperating with MRAM and its ASM Unit is chosen for the implementation of the Project.

This structure, which is in principle quite similar to the structure of Phase 2, allows for continuity, but emphasizes on a much closer cooperation between the operational counterparts SDC and MRAM, which will become possible once MRAM has established its ASM Unit.

- The **SAM Project** shall see MRAM as its institutional "home" and the SAM Project as an extension of the MRAM ASM Unit with specific objectives and activities, which enhance and complement the activities and the mission of the MRAM ASM Unit. Through capacity building and knowledge transfer, MRAM and its ASM Unit shall be progressively put in a better position to deal with all kind of ASM issues. The SAM Team shall avoid substituting MRAM'S tasks in order to avoid a vacuum when the Project comes to its end.

- The **MRAM ASM Unit** (and other MRAM and MMRE divisions) shall see the SAM Project as a temporary enhancement, covering tasks, which MRAM cannot cover on its own. MRAM will progressively incorporate the experiences and lessons learnt of the SAM Project in its own work, as far as they are relevant to MRAM's mission and duty, giving way to other stakeholders, which may draw on SAM experiences relevant for their work. By incorporating SAM experiences, without externalizing own duties to the SAM Team, MRAM will build its capacity to be at the exit of the SAM Team in a better position to deal with ASM issues.

For that purpose, SDC and the SAM Project will maintain close links:

- with MMRE at political level,
- with MRAM at operational level, and
- with the MRAM ASM Unit at implementation and day-to-day project work level.

Project Board

The issues to be addressed within the SAM Project, for "*Recognition of artisanal mining as a formal sub-sector contributing to Mongolia's economic development*" and to put MRAM in better position to deal with ASM require the inter-institutional coordination with a series of stakeholders. The rights-based empowerment approach of the Project also demands to align the project strategy with the development visions of the artisanal miners.

A Project Board serves the purpose of strategic decision-making, approving Project plans and reports, and inter-institutional coordination.

The Project Board shall be representative and inclusive regarding all stakeholders of the SAM Project. Core members are the Counterparts who signed the Project Agreement and, apart of the Project Management, the following **members** shall be invited:

- At least 1 Central Government entity (ministries, agencies) from other sectors
- At least 1 representative from Regional or Local Governments
- At least 2 (preferably 3) ASM organizations (NGOs, community based companies)
- At least 1 stakeholder from non-governmental sectors (civil society, academics, mining companies)

As soon as feasible, representatives from the ASM sector shall be democratically elected or nominated by the ASM umbrella organization.

The number of Board members is not limited and the Board meets at least once a year. The Board decides which **number of members and frequency of meetings** serves its purpose best, and will operate according to Terms of Reference, established and approved by the Board itself.

7.3. Management structure of the Project

SAM Management

Different management structures were analyzed during project planning. The most appropriate one is a Project Management lead by a **National Project Director** (PD) who represents the Project vis-à-vis the external partners, is the "public face" of the SAM and has a strong position in the public and policy dialogue. The PD shall be supported by an international **Project Manager** (PM) who leads the Project team, brings international experiences to the table, and focuses on implementation, administration, planning and monitoring.

The PD and PM report collectively, as "*SAM Project Management*", as well as individually to SDC and the Project Board.

SAM Team

The SAM Team is led by the Project Manager (PM) with the support of senior experts in both project components. Summarized Job descriptions for all senior staff are contained in Annex 8.

A **Senior Expert on ASM policy and Formalization** is responsible for tasks related with the ASM Policy Component, as well as for legal advice to miners within the Community Mining Component. Within the ASM Policy Component, the senior expert emphasizes on collaborating with the PD who represents the Project in the public policy dialogue. For that purpose, the senior expert teams up with the policy and communications advisor under the PD.

A **Senior Expert on Community Mining** is responsible for tasks related to the Community Mining Component, as well as for providing technical and socio-cultural advice to the PD within the ASM Policy Component.[26]

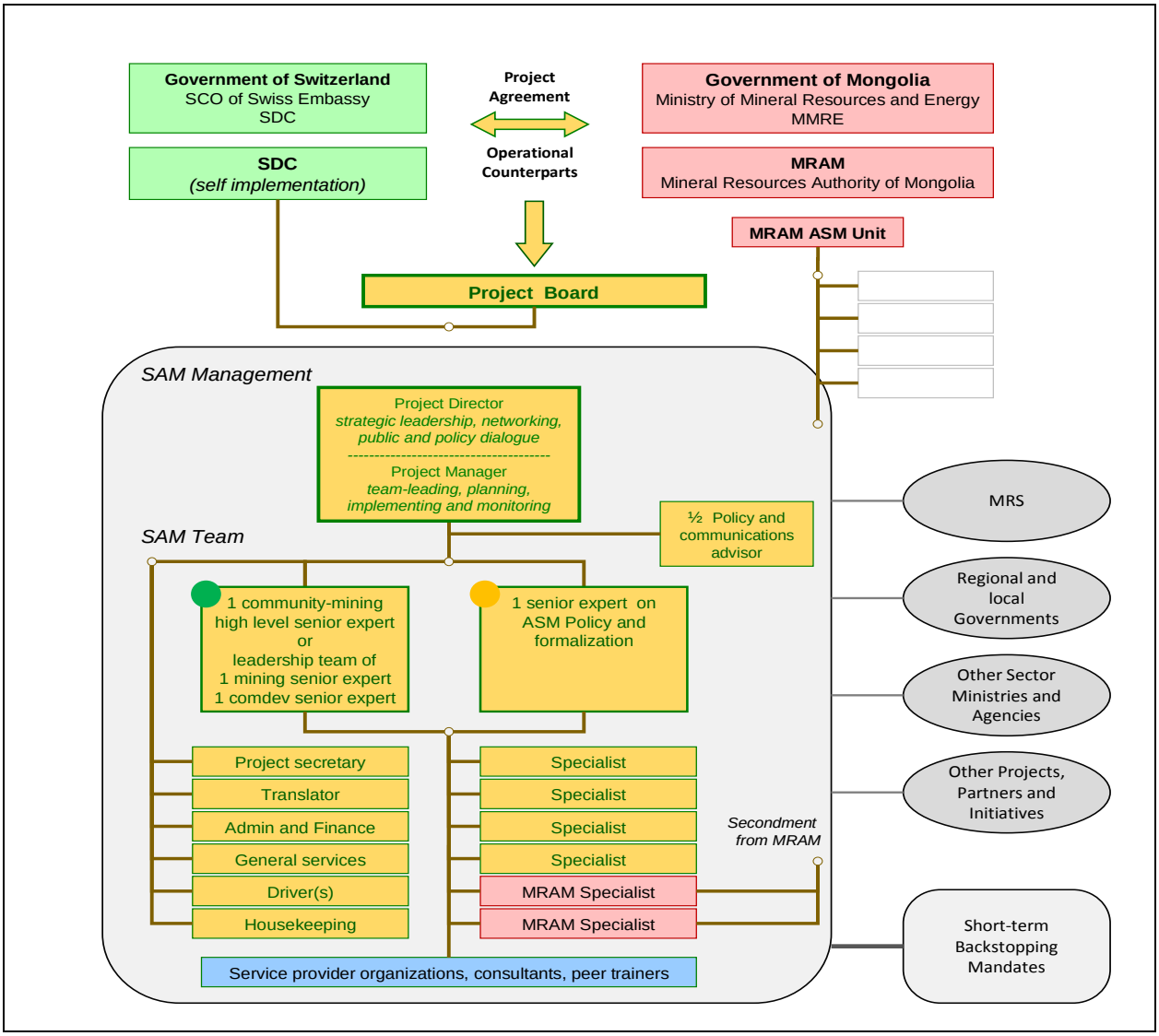


Figure 9: Institutional setup and management structure of the SAM Project

The more implementation oriented skill requirements of the Senior Expert for ASM policy and Formalization suggest complementing this expertise with a part-time **Policy and Communications Advisor**, directly subordinated to and working with the PD.

Experienced implementation **Specialists** for both components need to be recruited in a composition according to the respective needs of the Project. The **core operational team** consists of 4 specialists contracted by SDC and 2 specialists assigned to the Project through **secondment from MRAM**. The

[26] "Community mining experts" are not easy to identify, as this qualification is the outcome of years of practical field experience with artisanal miners, which results in interdisciplinary technical and social expertise. The Project needs therefore the flexibility either to contract one high-level Senior Community Mining Expert, or to join the expertise of a Community development- and a Mining and environment expert.

profiles of the specialists contracted by SDC need to be complementary to the expertise brought into the Project through the secondment of MRAM specialists.

Depending on the level of support in resource governance provided by the MRAM ASM Unit to local and regional Governments, between 1 and 2 specialists for formalization and legal aspects will be needed. Their main tasks are to support artisanal miners and local Governments in the formalization process of ASM operations. Between 4 and 5 specialists are required to cover technical, environmental and socio-organizational aspects of capacity building in ASM miners and organizations. This distribution is indicative only, and the Project needs the flexibility to annually adjust the composition of the core operational team according to changing needs. During an early formalization stage (following the recent ASM law amendment) more legal and technical implementation power may be needed, while at a later moment formalized ASM organizations may require more support in local development aspects.

The core operational team will be extended through extensive **outsourcing**. Additional specialist staff, as required to implement the ambitious workplan, will be contracted in a flexible manner through result oriented short-term contracts and according to operational needs:

- **Service provider organizations** (such as national NGOs from the civil society sector, private and public Academic and Research organisations, and Consulting companies from the private sector): Although their competence and commitment resulted weak on average in the stakeholder analysis, some of these organizations can bring specific national know-how and specialized services to the table[27]. Their involvement in the Project is also to be seen as a capacity building process through learning by doing, and an important step towards strong national ownership of the Project.
- Individual **Consultants**: Individual consultants have demonstrated in many other projects to be able offer affordable quality services to miners. Consultants are mostly used to work result-oriented and towards "deliverables". Different from some service provider organizations, which see the projects or the donor agencies behind the projects as their "clients", ASM is for individual consultants an attractive future market segment. Work with individual consultants can be creatively integrated in capacity building and empowerment of artisanal miners, if service contracts are "channelled" through the ASM organizations: Wherever possible, TOR writing, selection of consultants, contracting, commissioning of deliverables and payments should be delegated to miners' organizations, under the supervision, and with support and advice from the Project. Such "direct implementations by the beneficiaries" are unique learning experiences.

  Outsourcing tasks to individual consultants also allows drawing on the capacities built in numerous project staff of Phase 1 and 2. Former project staff is in many cases familiar with the conditions and stakeholders of SAM intervention sites. This comparative advantage shall not be considered a "conflict of interests" but an opportunity to maintain these qualified specialists at service of the ASM sector.

- **Peer trainers**: The demographic composition of the ASM sector is extremely diverse. While most artisanal miners are ex-herders, it is no contradiction to find economists, engineers, lawyers and other academics among groups of artisanal miners. Even persons, who are "just" miners, often count on surprisingly profound knowledge and experience. Wherever possible, SAM shall draw on their expertise as peer trainers. Peer trainers are most credible trainers, as they deliver knowledge and practical experience.

Administrative staff comprises secretariat, accounting, general services, driver and housekeeping.

The **translator** occupies a dual function, being part of the administrative staff to facilitate external communication and links with SDC administration and being part of the core operational team facilitating access to international experiences.

[27] See outcomes of the planning workshop in Annex 11: "Offers" from the NGO and Academics group.

Backstopping

For specific tasks exceeding the SAM Team's in-house expertise, the Management can dispose on resources for contracting **national and international short-term experts**.

Backstopping through national short-term experts has to be clearly distinguished from outsourcing specialist capacity under the series of options outlined above. Outsourcing pursues incrementing the implementation capacity (whereby additional expertise is a positive side effect); backstopping increments specialized expertise or fills existing gaps. Consultants for national backstopping mandates are procured by the Project Management.

Specialized international expertise is procured through SDC, either on demand of the Project Management, or on initiative of SDC, where Project Management or Senior Expert staffs need to be supported through backstopping mandates. International consultants brought to Mongolia should not only build capacity for SAM but should interact closely, according to their field of specialization, with beneficiaries, MMRE, MRAM and it's ASM Unit, and/or local and regional Governments, so that capacity enhancement and creation of an appropriate mindset about ASM is uniform.

Counterpart Staff

At operational level, and apart from MRAM staff seconded to the Project, **counterpart staff** from MMRE and MRAM will be tightly involved, but also staff from Soum and Aimag Governments, MRS, other Sector Ministries and Agencies as well as staff from other projects, partners and initiatives.[28] In some instances, these specialists may be temporarily seconded to the SAM Project.

- Counterpart staff from the **MRAM ASM Unit** will be tasked by MRAM to offer legal, technical, environmental, business and community development related support to artisanal miners. Applying the subsidiary principle and intervening where possible through existing institutions and avoiding substitution or replacement of existing responsibilities, SAM will support the ASM Unit in their tasks. Through capacity building in the counterpart, it is expected to achieve a timely handover of activities to the counterpart.
- **MRS** is the specialized agency for mine safety and rescue. Collaboration with MRS will also follow the subsidiary principle. The focus within SAM's capacity building efforts will be focus especially on existing gaps related to ASM and on how to bridge them.
- **Soum and Aimag Governments** are, since the enactment of the ASM law, the entities in direct control over the mineral resources accessible to legal ASM. Decentralization of duties (registering ASM partnerships, assigning mining areas to partnerships) has begun and transfer of capacities needs to take place. SAM will support the process of capacity building in local and regional Governments and contribute to better resource governance at local level. Following the subsidiary principle, this task shall be supported, but only partly be performed, by SDC contracted staff, and needs to draw on MMRE and MRAM counterpart staff for official "authority".

Modalities of cooperation with **other Ministries and their agencies** need to be case-specifically designed by the Project Management. Their active involvement in topics of their institutional competence is mandatory for achieving solid national ownership of the solutions elaborated by the Project.[29]

Communication levels

The envisaged close cooperation with the counterpart can only be put in practice, if each management and staff level is not only free to communicate and cooperate with the corresponding

[28] Counterpart staff from MRAM, MRS and local and regional Government was already tightly integrated in the planning of Phase 3, accompanying and supporting all fieldwork of the external consultant.

[29] E.g. Ministry of Environment, which demands „green technology"needs to participate actively in technological fieldwork. If Ministry staff claims that solutions are not green enough, staff should be given an opportunity to demonstrate how it can be done better.

level of the counterpart but being encouraged to do so in an enabling, creative and participatory atmosphere which appreciates each individual collaborators' pro-active initiative.

- The Project Director has clearance to communicate at own initiative with all political and operative levels of MMRE and MRAM. (e.g. Minister and below)
- The Project Manager has clearance to communicate at own initiative with all high-level operational staff of MMRE and MRAM and below. (e.g. MRAM Chair and below)
- Senior Experts have clearance to communicate at own initiative with all senior level operational staff of MMRE and MRAM and below (e.g. MRAM ASM Unit and other division heads and below)
- Specialists have clearance to communicate at own initiative with operational staff of MMRE and MRAM (e.g. MRAM ASM Unit and other division staff)

7.4. Cooperation and coordination with likeminded initiatives

ESEC – Asia Foundation

In August 2010, The Asia Foundation will begin implementation of a three-year program aimed at promoting environmental conservation and responsible resource use, called Engaging Stakeholders for Environmental Conservation (ESEC). ESEC is designed around the assumption that governance and civic action play a critical role in Mongolia's long-term and broad-based prosperity. The program is divided into four integrated components, including: 1) advancing responsible mining principles into practice; 2) engaging stakeholders in responsible resource use at the local level; 3) strengthening environmental advocacy and conservation efforts; and 4) institutionalizing environmental and water quality monitoring.

Asia Foundation and SDC see several synergies between the ESEC program and the SAM Project. For example, the ESEC program will include initiatives to advance responsible mining, particularly by engaging stakeholders in responsible resource use at the local level, and environmental advocacy and conservation. These will complement SAM initiatives that aim to improve responsible artisanal mining, reduce environmental damage and conflict, and introduce participatory monitoring tools of natural resource use at the local level.

Cooperation with the ESEC Project is considered as a **Partial Action** of the SAM Project. A detailed proposal will be elaborated by Asia Foundation and be proposed to SDC.

Vocational Education and Training (VET) Project – SDC

In October 2010, SDC will begin with the planning of the Vocational Education and Training Project (VET), which focuses on the creation of alternative employment opportunities to livestock herding for young rural women and men. The SAM Project considers formal vocational training as an important element of capacity building through professionalization of ASM, and ASM is the most readily available alternative employment opportunities to herders in rural areas.

Future synergies between the SAM and VET projects will be explored in detail during the planning process of the VET project. While the SAM Project could contribute specific expertise regarding the creation of an ASM vocational training curriculum, the VET Project may be in a better position to implement the career in vocational training centres and institutions. Both Projects need to establish a common policy, in order to avoid that VET stakeholder consider mining a priority alternative employment opportunity for herders, while some SAM stakeholder insist in herding as the preferable alternative employment opportunity for artisanal miners. It would be extremely counterproductive to confuse the same population by sending them forth and back.

Fairtrade and Fairmined ASM Gold – ARM and FLO

Incorporation of the Fair-Trade concept is a central part of SAM's intervention strategy. The Fairtrade and Fairmined Partnership for ASM Gold of ARM and FLO have expressed their commitment "to work towards advancing the inclusion of Mongolia in its geographical scope" (Annex 3).

By insertion in the existing producer support networks, SAM can draw on experiences from other already participating regions and countries, which are currently Colombia, Ecuador, Peru and Bolivia in South America (already in process of certification) and Tanzania, Uganda, Ghana in Africa (currently in process of testing the Standard and initial producer support). Insertion in the producer support network is mainly a matter of coordination and networking; there are no "membership fee" strings attached. Vice-verse the ARM-FLO Partnership is not in a position to support activities in Mongolia financially, and all Fair-trade related Project activities have to be part of SAM's own budget. Specific support in Mongolia, from the Fairtrade and Fairmined Partnership or from the independent certification body, if required, would need to be contracted by SAM.

Private-Public Partnerships are possible within the related project activities. Eventually similar to the project "projet-pilote d'or éthique" (ethical gold project) which SDC supports in the Peruvian Amazon in cooperation with *Terre des Hommes Suisse* and the jewellery company *Transparence SA*, ethically motivated private companies might be brought to the table to support artisanal miners. Transparence SA is already sourcing part of the gold for its collections from ASM communities in Colombia (Oro Verde®) which are currently in process of being Fairtrade and Fairmined certified.

8. Monitoring and Evaluation

Monitoring

Project progress at activity level will be documented in semi-annual reporting periods, with stronger focus at the output and outcome level in annual reports as the basis for the annual planning cycles of the Project. Semi-annual reports shall be submitted to the Project Board; the more comprehensive annual reports shall be approved by the Project Board.

Data collection for monitoring in general should not produce significant extra workload and consume valuable resources. Activities should therefore be mainly monitored by milestones, which allow for easy appreciation of "reached" or "not reached" status. Similarly, it was attempted to formulate output indicators that allow for easy assessment but provide meaningful insights.

Exceptions to the above approach of simplification of the monitoring task are the project's priority pilot sites (such as Bornuur, Bumbugur, Jargalant, Mandal during Phase 2), where the monitoring function needs to outreach into operational work. It is realistic to expect that changes in priority pilot sites will be tangible and visible at outcome level. For measuring these changes, it is important to count on baseline studies of all pilot sites and to monitor the changes regularly, using the same methodology. A useful tool for undertaking such baseline studies is the "livelihoods assets assessment" as outlined in chapter 4.2.3. At the start of Phase 3 a baseline assessment of all existing pilot sites, which the Project considers appropriate for continuation, should be carried out; whenever a new site is identified for becoming a SAM pilot site, a baseline study should be carried out. Updates of the livelihoods assets assessment should be carried out annually as part of the annual planning cycle, and are the basis for decisions regarding further involvement in the particular site.

The incorporation of the Fair-trade focus in the Project strategy and the Project's work towards Fairtrade and Fairmined certification of ASM organizations adds a monitoring dimension of its own, at the borderline to evaluation. The Fairtrade and Fairmined ASM Gold Standard is a global social performance standard which allows an objective comparison of the Mongolian miners' and the Project's achievement with the best of ASM worldwide. Certification against the Standard is carried out by a specialized independent third party certification body (FLO-CERT GmbH, an ISO 65 accredited certifier). Other tools developed by ARM and FLO for producer support of ASM organizations aiming for certification can be incorporated into monitoring as well.

Evaluation

An internal mid-term review shall take place at the end of the second implementation year (end 2013) and allow for eventually necessary adjustments of the phase's operational plan.

An external review should be part of the planning process for the phasing out of the Project and its exit and handover after 2014.

9. Budget and Resources

The Mongolian contribution to the Project is administrated by the Mongolian partners (Counterpart, Partners, and Beneficiaries). The Swiss contribution to the Project is administrated by SDC. All parties administrate their contribution conforming to their internal administrative procedures.

9.1. Swiss contribution

SDC's contribution is in cash and amounts to 4.5 million Swiss Franks (CHF) over the four years duration of Phase 3.

The Project delivers mainly advisory services and capacity building to the beneficiaries, counterpart, partners, and draws for this purpose mainly on human resources. Delivery of hardware components such as equipment and infrastructure are a minor priority and covered by the budget only as far as needed for building the capacities in the Mongolian stakeholders.

The budget is for the entire Swiss contribution to the Project. The distribution per component is indicative only.[30] This strengthens the approach of close integration of both components. The detailed budget is attached below. Administrative costs at the SDC Headquarter in Switzerland and SCO Ulaanbaatar are contributed in kind and are not included in the Project Budget.

[30] Most cost items serve both components and some even cover administrative components. E.g., the Project Manager oversees both components and the Project administration. In consequence, the attribution of budget items in percentages to components is subject to subjective criteria and therefore not binding.

Total and indicative per component

Pos	Description		**Total**	*C1*	*C2*	*Admin*
1.1	Remuneration operational project staff		**1'326'000**	*527'800*	*675'480*	*122'720*
1.2	International + local consultants		**552'200**	*220'880*	*331'320*	*-*
1.3	Remuneration local administrative staff		**244'400**	*-*	*-*	*244'400*
1.4	Traveling costs staff + consultants		**643'000**	*165'180*	*267'520*	*210'300*
1.5	Purchase of project equipment		**458'800**	*26'000*	*405'000*	*27'800*
1.6	Running costs project		**975'600**	*257'500*	*542'000*	*176'100*
2.1	Running costs partial action 3		**300'000**	*150'000*	*150'000*	*-*
		TOTAL	**4'500'000**	*30%*	*53%*	*17%*

Total and indicative per year

Pos	Description		year 1	year 2	year 3	year 4	**Total**
1.1	Remuneration operational project staff		325'455	329'485	333'515	337'545	**1'326'000**
1.2	International + local consultants		110'440	165'660	165'660	110'440	**552'200**
1.3	Remuneration local administrative staff		59'267	60'489	61'711	62'933	**244'400**
1.4	Traveling costs staff + consultants		143'900	179'400	180'000	139'700	**643'000**
1.5	Purchase of project equipment		133'460	144'720	109'320	71'300	**458'800**
1.6	Running costs project		285'133	223'311	234'489	232'667	**975'600**
2.1	Running costs partial action 3		100'000	100'000	100'000	-	**300'000**
		TOTAL	**1'157'655**	**1'203'065**	**1'184'695**	**954'585**	**4'500'000**
			26%	27%	26%	21%	100%

9.2. Mongolian contribution

Counterpart contributions from MMRE and its Agencies

The SAM Project responds to the expressed offers and demands of the Mongolian Government as indicated during the Planning Workshop (Annex 11) and as expressed to SDC by the Ministry of Mineral Resources and Energy (MMRE).

Mongolian contribution is in-kind and amounts to 700,800 USD. The Counterpart, 200,000 USD from regional and Local Governments, 100,800 USD and beneficiaries will contribute 400,000 USD. The beneficiaries' contribution reflects their time, travel expenses, communication and other associated costs. All project partners administrate their contribution according to their own administrative procedures. The Project has the potential to generate additional resources in form of Fairtrade Premium for ASM communities in the order of 1.0 Mio USD/year.

Note: (₮-Mongolian currency-Tugrug)

Description	2011	2012	2013	2014	Total
Salary of staff	19,000,000	19,500,000	20,000,000	20,500,000	79,000,000
Capital/goods	46,415,000	22,000,000	5,650,000	0	74,065,000
Field trip expenditure	9,000,000	9,500,000	10,000,000	10,500,000	39,000,000
Office renting	35,000,000	38,500,000	42,435,000	46,500,000	162,435,000
Discount/Freeing	10,000,000	11,000,000	12,000,000	12,500,000	45,500,000
TOTAL Mongolian Contribution	119,415,000	100,500,000	90,085,000	90,000,000	400,000,000 ₮ (equal to 300,800 USD by the date)
TOTAL Swiss Contribution					4.5 Mio CHF

10. Overall Assessment

The MMRE assures that its budget allocations to the MRAM ASM Unit and to MRS will not suffer reductions at end of the implementation period of the SAM Project.

Total counterpart contribution by MMRE is therefore expected in the range of **USD 200,000** USD. Administrative costs of the MMRE and its agencies are contributed in kind and are not included in the Project Budget.

Counterpart contributions from local and regional Governments

The SAM Project builds on strong national ownership. Soum and Aimag Governments are primary stakeholders and tightly involved in Project implementation. As local and regional Governments are not part of the bilateral project Agreement between SDC and MMRE, their contribution is in principle indicative only.

However, as local and regional Governments are primary stakeholder, cooperation and support through the SAM project will be conditioned to (at least in kind -) contributions. Each Soum or Aimag Government where the project intervenes should provide office space for the Project as well as one part time liaison officer in charge of local coordination of capacity building activities.

Total counterpart contribution by Soum and Aimag Governments is therefore expected in the range of **USD 100,800** USD. (USD 25,200 per year).

Local / regional Government	**Annual cost (USD)**	**Annual Subtotal (USD)**	**Total (USD)**
Bornuur		**5,040**	**20,160**

Office space	3,040		
Liaison officer	2,000		
Bayanhongkor		**5,040**	**20,160**
Office space	3,040		
Liaison officer	2,000		
Jargalant		**5,040**	**20,160**
Office space	3,040		
Liaison officer	2,000		
Airag / Naleigh		**5,040**	**20,160**
Office space	3,040		
Liaison officer	2,000		
Gov 5		**5,040**	**20,160**
Office space	3,040		
Liaison officer	2,000		
Total (USD)			**100,800**

Counterpart contributions from Beneficiaries

The SAM Project responds to the "qualified demands"[31] and **offers** of the Beneficiaries (ASM communities) as expressed during the Planning Workshop (Annex 11). **Contributions of beneficiaries** will be provided in kind.

As the ASM sector is only partially organized at local level, no umbrella organization is in place for expressing a formal commitment. Contributions of responsible ASM organizations to local development are estimated in the order of 1% of their production value and participation in project activities amounts in average 2.5 days per miner and year (1% of work time)[32]. Even if SAM only manages to outreach to 5,000 artisanal miners (5%) at "champion level", the miners' contribution can be valuated as at least **400,000 USD**.

Value of ASM gold production	Outreach	Contribution to local development	Value in USD/year	4 years total
USD 100 million	5% of ASM gold production	1%	50,000	USD 200,000
Value of ASM gold production	Total number of miners and outreach	Value of one workday based on 250 workdays per year	Value in USD of 2.5 days per year of 5000 miners (outreach 5%)	
USD 100 million	100,000 miners; outreach to 5%	4 USD / day	50,000	USD 200,000
			TOTAL	**USD 400,000**

Total Mongolian contribution to the SAM Project is therefore in the range of **700,800 USD**.

Other indirect contributions

The potential of ASM organizations to contribute to local development can increase dramatically by Fairtrade and Fairmined certification. As elaborated in chapter 4.5, it would only need an annual certified ASM gold production of about 250 kg to generate a permanent Premium revenue stream

[31] A "qualified demand" is characterized by an accompanied offer.

[32] Participation in Project activities benefits artisanal miners, but is at the same time their in-kind contribution, to be valuated as the opportunity cost of not dedicating this time to minerals extraction. The resulting opportunity cost of 4 USD/day is based on the very conservative estimation of an ASM gold production value of 100 million USD; the real cost is probably considerably higher (Footnote 4).

dedicated to local development in ASM communities, equivalent to the annual Swiss contribution to the SAM Project.

The SAM Project and its partners will benefit from international knowledge transfer and sharing through networking with the ARM/FLO producer support network, as well as from marketing expertise that can be contributed by the Fairtrade and Fairmined ASM Gold Partnership. SAM can build upon internationally consulted and accepted Standards for benchmarking and monitoring the Project's and the miners' performance and count on several producer support tools offered by the Partnership.

As Fair-trade is an ethical business based concept, interested companies usually take at a more advanced stage the initiative to build business relations with miners. These direct contacts with international markets bring additional expertise to the table from which all involved stakeholders benefit.

These indirect contributions are all in kind and impossible to quantify.

Project Document

Sustainable Artisanal Mining Project (SAM)

Phase 3, 2011 - 2014

ANNEXES

Annex 1: List of abbreviations and colour codes

Aimag	Province, Canton
ARM	Alliance for Responsible Mining
ASM	Artisanal and Small Scale Mining – or simply: Artisanal Mining
BASMA	Bornuur Artisanal Miners' Association
CASM	Communities and Artisanal Small Scale Mining
CHF	Swiss Franc
CSR	Corporate Social Responsibility
ESEC	Engaging Stakeholders in Environmental Conservation Project
FLO	Fairtrade Labelling Organization International
FT	Fair-trade
FT&FM	Fairtrade and Fairmined
HAMO	formal Artisanal Miner (from Mongolian "XAMO")
Hg	Mercury
ILO	International Labour organization
LSM	Large-scale Mining
MCTIC	Mongolian cooperatives training and information centre
MDG	Millennium Development Goals
MMRE	*Ministry of Mineral Resources and Energy*
MRAM	Mineral Resources Authority, Mongolia
MRS	Mining Rescue Service
MTR	Mid Term Review
NGO	Non-government Organization
NSO	National Statistics Office
OSH	occupational health and workplace safety
PD	Project Director
PM	Project manager
PIU	Program Implementation Unit
SAM	Sustainable Artisanal Mining Project
SDC	Swiss Agency for Development and Cooperation
SCO	SDC Coordination Office
SCS	Swiss Country Strategy
Soum	County, Municipality, subdivision of Aimag
TOR	Terms of Reference
USD	United States Dollar
VET	Vocational Education and Training project
WB	World Bank

Colour codes in figures and tables:

Institutions:

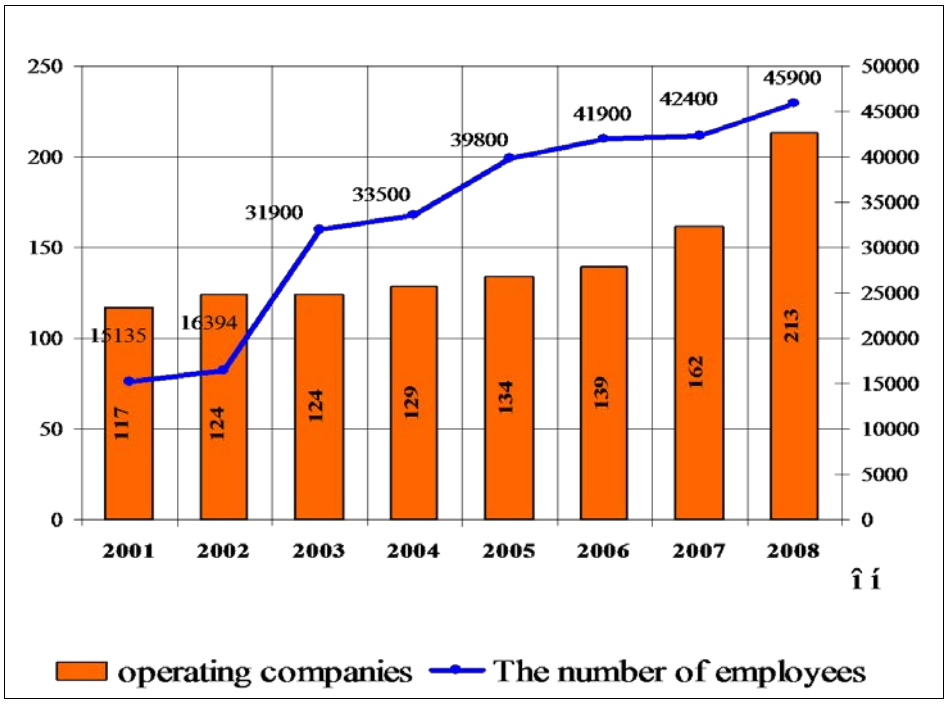
- Government
- Artisanal miners
- NGOs, civil society, research institutions
- International Cooperation

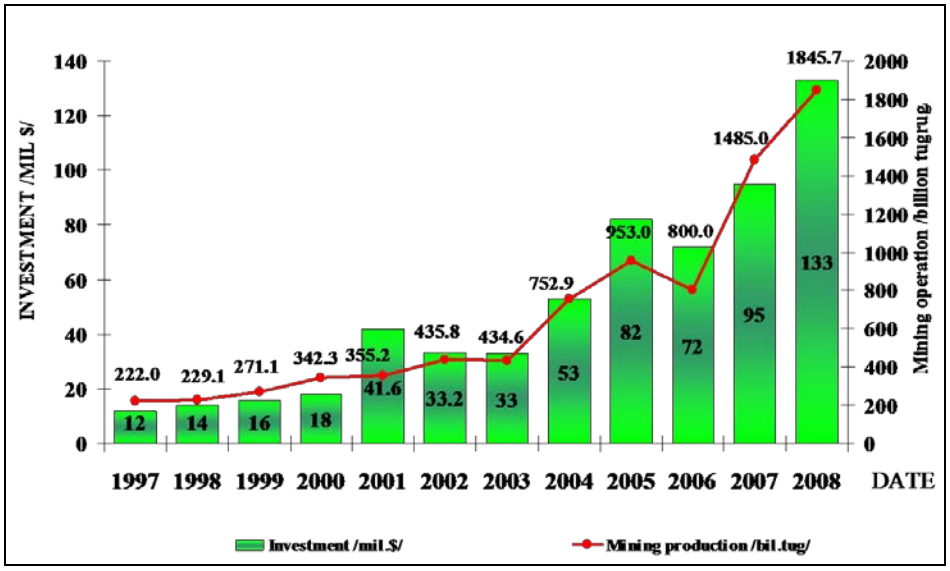
Components:

- ASM Policy Component
- Community Mining Component

Text SAM Project

Annex 2: Industrial mining sector statistics





Source: The introduction to Mongolian Mining Industry for the international mining conference in Toronto, Canada, MMRE 2008

Workforce 2001: 15,100
Workforce 2008: 45,900
Workplaces created 2001 – 2008: **30,800**

Investment 2001 – 2008: 41.6 + 33.2 + 33 + 53 + 82 + 72 + 95 + 133 = **542.8 Mio USD**

Investment per workplace = 543 Mio / 30,800 = **17,600 USD**

Annex 3: Overview on "Fairtrade and Fairmined artisanal gold"

In March 2010 the Alliance for Responsible Mining (ARM) and Fairtrade Labelling Organizations International (FLO) announced their Fairtrade and Fairmined Partnership (FT&FM) and published the "Fairtrade and Fairmined Standard for Gold from Artisanal and Small-scale Mining, including associated precious metals" (FT&FM Standard). The FT&FM Standard is for artisanal and small-scale miners only, not for medium and large operators.

The Fair-trade concept emerged in the 1960s for agricultural products. It is driven by consumer awareness of development needs, demonstrated by supporting producers through the payment of a Fair-trade premium, which directly benefits certified small producers. Fair-trade Certification empowers small producers and workers to lift themselves out of poverty by investing in their operations and communities, protecting the environment, and developing the business skills necessary to compete in the global marketplace. Fair-trade principles include:

- Fair price: Democratically organized producer groups receive a guaranteed minimum floor price and an additional premium for certified products. Producer organizations are also eligible for pre-financing by buyers.
- Fair labour conditions: Fair-trade Workers enjoy freedom of association, social security, safe working conditions, and living wages. Child labour is strictly prohibited.
- Direct trade: Fair-trade can only occur through formal trade relations providing transparency and traceability. Importers purchase from Fair-trade producers as directly as possible, developing the business capacity necessary to compete in the global marketplace.
- Democratic and transparent organizations: Fair-trade producers and workers decide democratically how to invest Fair-trade revenues.
- Community development: Fair-trade producers and workers invest Fair-trade premiums in local social and business development projects.
- Environmental sustainability: Fair-trade producers engage in environmentally sustainable production methods that protect human health and preserve valuable ecosystems for future generations.

Fair-trade requires that producer organizations always abide by national legislation unless that legislation sets standards, which are below internationally recognized standards, and conventions, in which case the international standards prevail. The FT&FM Standard for artisanal gold additionally adheres additionally to ARM's principles for responsible ASM and all herein mentioned references as published by ARM and included in Annex 4. Where national legislation sets higher requirements on a specific issue than the FT&FM Standard, national legislation applies.

Fair-trade incorporates an independent ISO certified third-party certification system, mandated to FLO-CERT. Periodical auditing of producers assures consumers the ethical quality of the product for which they are willing to pay a premium.

Fairtrade and Fairmined within the context of the SAM Project

The FT&FM Standard covers all relevant aspects of the SAM Project's development goal for "Recognition of artisanal mining as a formal sub-sector contributing to Mongolia's economic development". Community based ASM producers can only be certified as "FAIRTRADE® and FAIRMINED™" if they are carrying out their mining activity in an organized, safe, environmentally and socially responsible manner, and entirely within the existing national legal framework.

The fair price and the Fairtrade Premium offered through the Fair-trade scheme are strong incentives, with the potential to offset and reward the efforts of ASM producers to carry out responsible artisanal mining. The Fairtrade Premium paid by importers to producers is currently set by the joint FLO/ARM Standards Committee at 10% of the London Gold Price (LBMA Fix) for ordinary

gold and 15% for gold produced without mercury and cyanide (which applies to Mongolia) and under strict requirements for rehabilitation of the native ecosystem.

Even more rewarding than the Premium is the social prestige, which ASM producers gain by complying not only with national legislation but also with an internationally recognized best practice standard.

The SAM Project facilitates an enabling legal and regulatory framework and carries out capacity building of community based ASM producers. Project work towards Standard compliance of Mongolian ASM producers fits seamlessly into SAM's capacity building community-mining component. Project work towards an enabling legal framework allows producers to formalize and become eligible for certification. On political level, independent and ISO-compliant third-party certification of responsible ASM operations is a strong credibility argument and a reputational asset for all involved stakeholders.

The FT&FM Standard provides the SAM Project with clear and internationally recognized benchmarks for responsible artisanal gold mining. The standards are high, but achievable. ASM producers in Ecuador, Peru, and Bolivia, which have been partners and cooperation sites in former SDC-supported ASM Projects in these countries, are currently applying for certification.

Mongol Bank buys and trades gold volumes superior to 300 gram[33]. The widespread opinion among most stakeholders is that only gold sales to Mongol Bank are legal gold sales; Mongol Bank itself indicates that it only acts as a gold trader and refers to the free internal gold market since 2002. According to Mongol Bank, legal gold owners (e.g. legal producers) are allowed to export the gold if the corresponding taxes are paid. Although a more in-depth analysis is needed, the conditions for the mandatorily required traceability and transparency of Fair-trade transactions appear to be favourable.

"The Partnership of ARM and FLO for Artisanal Gold has become aware of the eventual possibility to include a strategy towards Fairtrade and Fairmined certification of artisanal gold producers in Mongolia, within a future phase of the Sustainable Artisanal Mining Project supported by the Swiss Government through SDC. The Partnership welcomes this approach and, if SDC decides to engage in such approach, the partnership is committed to work towards advancing the inclusion of Mongolia in its geographical scope."[34]

Within the sector-wide commodity scope of SAM, the Fair-trade approach is only applicable for the 90% ASM gold miners. FT&FM Standards for other commodities are currently not in preparation. Certain benchmarks and principles from the FT&FM Standard are however also applicable to ASM on other commodities.

Contribution of Fair-trade to sustainability

Fair-trade as a business model for small, empowered producers has an almost 50-year long track record and Fair-trade markets are rapidly growing.

The Fair-trade business model for ASM producers (trade relations with Fair-trade buyers) is as such independent from the SAM Project and, once established, will continue long after termination of the Project. A permanent producer support organization will however be required as even certified producers may face certification issues in case of non-compliances detected during audits. Such (self-sustaining) national or regional producer support organizations exist for other Fairtrade commodities, and will need to be established as private sector service providers by the SAM Project.

As soon as the Fair-trade system starts to show its benefits, it can be expected from experiences in other sectors that more ASM producers will follow the example and replicate with minor support of the private sector support organization.

[33] Information obtained from Mongol Bank. Sellers report that sometimes quantities above 1 kg are put as threshold.

[34] Source: FLO/ARM ASM Gold Partnership communication from June 04.

Fairtrade Premium payments continue as long as ASM producers remain Standards-compliant. These Fairtrade revenues are dedicated to local social and business development projects, administrated by the ASM producers. At a conservative estimation of the gold price, it would need about 250 kg/year certified ASM gold production to generate a permanent flow of development money into ASM communities, which is in the range of SAM's annual budget.[35]

[35] At 1000 USD/oz (approx 32,000 USD/kg), each kg of certified gold generates 3,200 to 4,800 USD Premium. Estimating conservatively 50% normal and 50% ecological (chemicals free and strict ecological restoration) certified gold, at an average premium of 4000 USD/oz, an annual certified production of 250 kg generates premium monies in the range of SAM's annual budget.

Annex 4: Principles for Responsible ASM

The "**Fairtrade and Fairmined Standard for Gold from Artisanal and Small-scale Mining, including associated precious metals**" adheres to ARM's principles for responsible ASM and all herein mentioned references, as published by ARM and included below:

(Source: The Golden Vein: A Guide to Responsible Artisanal and Small-scale Mining. ARM Series on Responsible ASM, 2008)

1. The Millennium Development Goals and Declaration on Sustainable Development
We declare our commitment to the Millennium Development Goals and the Johannesburg Declaration on Sustainable Development and to the following specific principles for Responsible Artisanal and Small-scale Mining:

2. Legality
Responsible Artisanal and Small-scale Mining (ASM) complies with the national legal frameworks. Where national legislation does not recognize the legal rights of community-based artisanal and small-scale miners, despite their legitimate efforts towards legalization, we will, as far as possible, work with organized ASM and national governments, to lobby for improved public policies for responsible ASM organizations interested in committing to the principles. The STANDARD will not support organizations involved with armed conflict in any way, including financing conflict or the use of revenue to engage in activities that facilitate the purchasing of arms.

3. Human Rights
Responsible ASM is based on the Universal Declaration of Human Rights and on UN declarations regarding the cultural, social, and economic rights of individuals. The rights of artisanal and small-scale miners must be respected, and their violation, denounced. Responsible community based artisanal and small-scale miners organizations respect the human rights, as well as the social, economic, cultural, and labour rights of every person involved and of the local community, as fundamental principles. The rights of women, disadvantaged groups and individuals, including migrant workers, are specifically included.

4. Decent Work
Responsible ASM is decent work in line with the ILO Conventions. Work in Responsible Artisanal and Small-scale Mining is performed in conditions of freedom, equality, safety, and human dignity, free from child labour, allowing the access of small-scale minerals producers, workers and their families to a decent standard of living.

5. Quality of Life and Sustainable Human Development for ASM communities
Responsible ASM contributes to the sustainable human development of their communities. Responsible Artisanal and Small-scale Mining improves the quality of life of men and women miners, their families, and the community that hosts ASM endeavours, respecting the conceptions and priorities of each community.

6. Environmental Stewardship
Responsible ASM actively encourages better preventive and restorative environmental practices and the application of responsible methods of production. Responsible miners abide by the environmental laws in their countries, contribute to environmental protection, human health, and ecological restoration in its operations and communities, and mitigate negative impacts. Respecting protected areas, avoiding damaging important biodiversity, minimizing the ecological footprint of mining, and, where possible restoring or replacing biodiversity, and where this is not possible, compensating for that residual loss, are principles for environmental protection.

7. Gender Equality

Women's work is properly valued and rewarded. In the organizations and initiatives of responsible ASM, equality should exist among men and women in all rights, including access to resources, the use of earnings, and participation and impact on decision-making processes. Women are always paid for their contribution to the production process and are empowered in their organizations. The miners' organization ensures equal pay for equal labour regardless of the labourer's gender. In organizations, processes, and activities where there is marginalisation of women, measures and actions shall be taken in order to improve equality.

8. Multicultural Nature

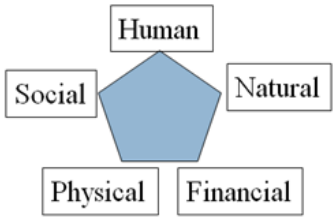
Artisanal and Small-scale Mining often develops in contexts of ethnic and cultural diversity. Where indigenous peoples or other ethnic groups are owners of the territory and are different from the miners themselves, responsible ASM organizations will undertake consultations based on the spirit of ILO Convention 169, with respect for local cultural practices in order to reach agreements with the local traditional authority and community, with regards to the impacts and benefits of mining operations and trading in that indigenous or ethnic territory.

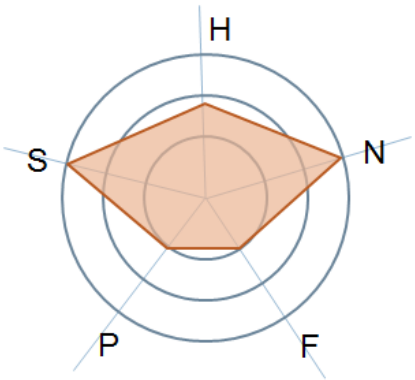
9. Armed Conflicts

The STANDARD strengthens the rights and activities of artisanal and small-scale miners who work under the difficult and dangerous conditions of internal armed conflicts. In order to improve the working and living conditions of small-scale miners, their families and communities in conflict zones, the STANDARD is based on the spirit of International Humanitarian Law which tries to widen the range of activities of civilians in the situation of an internal armed conflict, and to delimitate the action of the armed parties. Community based Artisanal and Small-scale Mining Organizations strengthen the possibilities of small-scale miners as a vulnerable social group, so that they cannot be extorted or forced to collaboration by armed groups or armed individuals (e.g. financial contributions, delivering of information etc.).

Annex 5: Livelihoods assets endowment as a monitoring tool

The figures below show how different ASM sites can be characterized by their endowment with livelihoods assets and how impacts (in the below cases vulnerability due to resource depletion) can be graphically visualized. In a similar manner, positive impacts (project outcomes) can be documented for monitoring purpose.



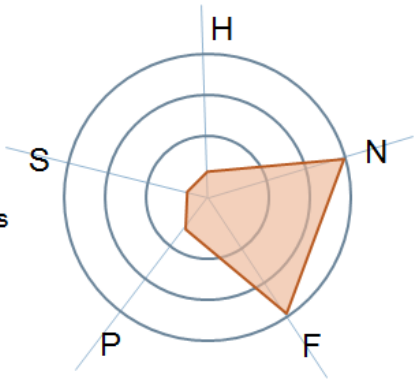


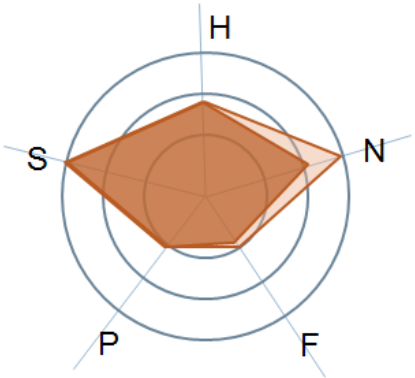
Example: Community mining (e.g. Huacaschuque)

reasonable mineral deposit, agriculture and low environmental impact, Low knowledge level, well established social networks, lack of infrastructure and mining equipment, low income level

Example: Rush type ASM (e.g. Serra Pelada)

Exceptional mineral deposit despite of high environmental impact, Low educational level, serious health problems; disfunctional social networks, lack of infrastructure and mining equipment, high income level (or at least expectancy)

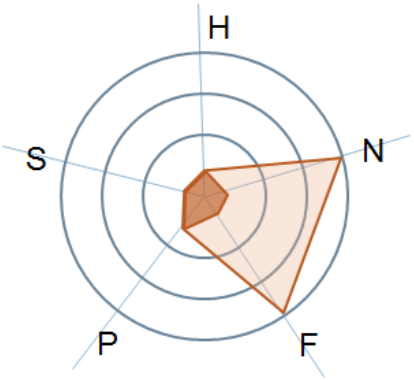




Example: Community mining (e.g. Huacaschuque)

Possible scenario if deposit gets depleted or if communty loses the right to mine

Low vulnerability: Community still has agriculture and solid social structures; income will be reduced but community will continue



Example: Rush type ASM (e.g. Serra Pelada)

Possible scenario if deposit gets depleted or if communty loses the right to mine

High vulnerability: No mining = no income
Community will be abandoned

Annex 6: Logical Framework according to SDC Logical Framework Guidance

Hierarchy of objectives Strategy of Intervention	Key Indicators [Baseline]	Data Sources Means of Verification	
Impact (Overall Goal)	**Impact Indicators**		
Recognition of artisanal mining as a formal sub-sector contributing to Mongolia's economic development	Stakeholder confidence in the development potential of ASM [2010: Parliament majority voted for formalization; public opinion unfavourable] Economic contribution of ASM to GDP [2010: 0 USD; Bornuur appr. 3 Mio. USD]	Key informant discussions with media professionals, experts, Government Statistics, estimates	
Outcomes	**Outcome Indicators**		**External Factors (Assumptions & Risks)**
Outcome 1: Responsible artisanal mining in Mongolia provides legal and secured workplaces	10'000 men and women with legal and secured workplaces [2010: 2000 men and 1000 women have workplaces secured only provisionally in SAM target areas] Amount of Fairtrade premium received by # of certified ASM producers [2010: 0/0] Enabling legal and regulatory framework [2010: Amendment of Mining and Land laws]	Statististical data Independent ISO 65 accredited third party certification against international ASM Fairtrade and Fairmined Standards Laws, regulations adopted	The recently enacted ASM Legislation proves to be effective and enabling Appropriate regulations for the ASM sector will be enacted Inclusion of Mongolia in Fair-trade ASM gold marketing schemes is possible
Outcome 2: Livelihoods, social and environmental responsibility and safety of artisanal mining communities improved	Livelihoods assets endowment increased [2011: to be established in survey] Increase of ASM household income [2009: 250 USD per month in target	Annual livelihoods endowment survey in selected sites Sample surveys	ASM will adopt new clean and safe technologies ASM will organize Advance of ASM towards commercial entities is not hindered

Hierarchy of objectives Strategy of Intervention		Key Indicators [Baseline]	Data Sources Means of Verification	
		areas] Decreased use of child labor in ASM [baseline to be established in 2011] Proportion of men, women and children with access to basic social services (education, health and social welfare) [2009: 62% of ASM in target sites receive health services; school drop-out rate 5%] Incidence of crime, violence, prostitution, alcoholism [baseline to be established in 2011] Rehabilitation of mining land by ASM [2009: 2 ha] # of Mercury-free processing plants [2010: 3 licences issues, 1 operating]	 Sample surveys Sample surveys Focus group discussions and media reporting Record keeping by Project	Gold price has to be monitored
Outputs (per outcome) and costs		**Output Indicators**		
For outcome1 and outcome 2: *(Note: Project Components for Outcome 1 and Outcome 2 are tightly integrated)*				
Output 1	An enabling legal and regulatory framework provides the opportunity of formalization of ASM ➢ *Component 1: Enabling legal and regulatory framework conditions for ASM allows artisanal miners to formalize their operations* ➢ *Component 2: Artisanal miners formalize their operations according to the existing legal and regulatory framework*	Min 5 formal ASM entities granted the right to exploit local mineral resources [2010: Members of 3 NGOs have provisional exploitation rights]	Government statistics by MRAM and local Governments	It is yet undecided which entity to grant mineral rights (possibly NGOs or unregistered partnerships)

Hierarchy of objectives Strategy of Intervention		Key Indicators [Baseline]	Data Sources Means of Verification	
Output 2	ASM organizations articulate interests of miners and stakeholders ➢ *Component 1: At national, regional and local level, Governments and other stakeholders interact with the ASM sector through its gremial and producer organizations* ➢ *Component 2: Artisanal miners interact with the Government and other stakeholders through their gremial and producer organizations*	Existence and performance of at least 1 national ASM federation [2010: 0] Increased number of regional and local ASM NGOs and membership [2010: 7 ASM NGOs; 2000 members]	Data From ASM Federation	
Output 3	Socially responsible artisanal miners enjoy safer workplaces and social security ➢ *Component 1: Public and private services for improving workplace safety and social security for ASM are accessible to responsible artisanal miners* ➢ *Component 2: Responsible artisanal miners make use of affordable services for improving workplace safety and join the social security system*	Number of accidents related to workplace safety (OSH negligence) [2009: 63.3% of the surveyed ASMs involved in workplace accidents] Increased number of artisanal miners affiliated to social and to health insurance [2009: 68% of ASM affiliated with health insurance, 45% with social insurance]	Government statistics by MRS (Mine rescue Service) and Ministry of Social Welfare	
Output 4	Responsible artisanal miners implement environmentally sound mining practices and technology ➢ *Component 1: Feasible and enforceable environmental requirements provide ASM communities with clear guidance on responsible and environmentally sound mining practices* ➢ *Component 2: ASM communities are aware of environmental requirements and implement responsible and environmentally sound mining practices and eco-efficient technology*	Implementation of environmental regulation [2010: regulations not available] Guidelines for the implementation of environmental standards Official recognition of mercury-free processing plant design	Government statistics by MRAM and local Governments (tbd) Record keeping by project Record keeping by project	
Output 5	Capacity building structures and processes for supporting the ASM sub-sector are in place ➢ *Capacity building structures and institutions supporting ASM are in place at national level* ➢ *Component 2: Specialized audience targeted*	Number of capacity building and support institutions involved with ASM (plus min 1 University, 1 Vocational School) [2010: 2 – MRAM 3 officials, MRS]	Record keeping by Project Records of capacity building organizations	

Hierarchy of objectives Strategy of Intervention		Key Indicators [Baseline]	Data Sources Means of Verification	
	capacity building structures and processes for ASM are in place at local level	Number of ASM Organisations working as service providers to their members. [2010: 3] National organisation for fairmined and fair-trade producer support established Formal relation with the fairmined and fair-trade Gold Partnership of FLO and ARM established	FLO and ARM reports FLO and ARM reports	
Output 6	Increased capacity of local governments and artisanal mining communities to manage mineral resources ➢ *Component 1: Transparent and equitable licensing process and conflict mediation* ➢ *Component 2:Artisanal mining communities increased productivity and improved product quality*	Number of local government institutions and staff supporting responsible ASM development [2010: 0] Min 3 technical innovations tested and introduced	Record keeping by Project, Livelihoods assessments Certification of producers Project records	
Costs of outputs for outcome 1 and outcome 2: CHF 4,500,000 *(Note: Project Components for Outcome 1 and Outcome 2 are tightly integrated)*				

Activities (per output)	Inputs		
List of activities for output 1: ➢ Facilitate and *advise on legal and regulatory framework* ➢ *Improve public opinion on ASM* ➢ *Advance from unregistered partnerships towards legal commercial ASM entities qualifying for mineral rights* ➢ *Develop and officialise national best practice standards and instructions for ASM*	See portfolio of activities in the Project Document. The Project Management's task is to monitor the context for arising opportunities and to adjust activities dynamically.	Project reports	
List of activities for output 2: ➢ Support ASM *organizations in their advocacy work for an*	See portfolio of activities in the Project Document.	Project reports	

enabling legal framework ➢ *Support local ASM NGOs, companies, cooperatives; Regional and National umbrella organizations (e.g. Federation)* ➢ *Promote and up-scale of collectively operated technologies (e.g. processing plant)*	The Project Management's task is to monitor the context for arising opportunities and to adjust activities dynamically.		
List of activities for output 3: ➢ Address *formalization in a wider context, such as tax paying, inclusion in social security, etc.* ➢ *Implement local social responsibility programs of ASM NGOs; Evolution from informal social safety nets towards social security* ➢ *Promote workplace security and OSH in general* ➢ *Strengthen mine rescue service*	See portfolio of activities in the Project Document. The Project Management's task is to monitor the context for arising opportunities and to adjust activities dynamically.	Project reports	
List of activities for output 4: ➢ Convince *authorities of the benefit of enforceable (within the miners' possibilities) environmental regulations or best-practice guidelines* ➢ *Promote environmental monitoring by communities; self-control of responsible practices* ➢ *Demonstrate good rehabilitation practices; Promote eco-efficient resource usage (best possible recovery)*	See portfolio of activities in the Project Document. The Project Management's task is to monitor the context for arising opportunities and to adjust activities dynamically.	Project reports	
List of activities for output 5: ➢ Establish *general audience targeted capacity building structures and processes for ASM (such as vocational training) at national level* ➢ *Support ASM communities with potential to become "champions" through specialized capacity building structures and processes (such as qualifying them for Fairtrade certification)*	See portfolio of activities in the Project Document. The Project Management's task is to monitor the context for arising opportunities and to adjust activities dynamically.	Project reports	
List of activities for output 6: ➢ Promote *transparent and equitable land allocation to ASM by regional and local Governments;* ➢ *Support local and regional Governments in decentralization efforts* ➢ *Increasing local value generation through "mine to market" trading chains;*	See portfolio of activities in the Project Document. The Project Management's task is to monitor the context for arising opportunities and to adjust activities dynamically.	Project reports	

➢ *Focus on ASM as motor of local development* ➢ *Increasing productivity and product quality (e.g. certified)*			

Annex 7: Portfolio of Activities

Project Output 1:
An enabling legal and regulatory framework provides the opportunity of formalization of ASM

Portfolio of activities, Milestones		Orientation and Guidance
ASM Policy Component **1.1 Enabling legal and regulatory framework conditions for ASM allow artisanal miners to formalize their operations.** *The core component of an enabling legal and regulatory framework for ASM is to recognize the right of local communities to carry out mining activities within their territory. The details are to be addressed in a permanent regulation by the Mongolian Government.* *Once the amendment of the law and the regulation is enacted, further work on the legal and regulatory framework is required. Formalization of ASM goes beyond the aspects of the mineral resource. It covers social, labour, environmental, tributary, and many other aspects.*		
A)	**Facilitate and advise on legal and regulatory framework** Offering and providing advice regarding practical enforceability and impact of laws and regulations to the relevant authorities, drawing from field experience in Mongolia as well as from international expertise. ☑ Milestone: Permanent Regulation on ASM enacted	The interaction between the Project and the authorities has to be guided by the following principles: 1. Respect for Mongolian sovereignty: SDC's role is limited to contributing international experiences. 2. Balance of creativity and feasibility: SAM's role is to identify bottlenecks in practice, to act as a "think tank" and to propose proactively innovative solutions; the authority's role is to decide on their political feasibility. 3. Non-partisan confidentiality: The interaction between SAM and the relevant authorities have to be built on trust relationships.
B)	**Improve public opinion on ASM** Informing objectively on ASM as an opportunity for escaping poverty and the local development potential of community mining (permanent and seasonal ASM). Informing objectively on the driving forces behind shock-push ASM (extreme poverty due to natural disasters) and rush type ASM (temporary elevated income opportunity) as development issues.	The public opinion of ASM has changed favourably but the image of the "wild ninja" miner is still omnipresent. This is detrimental to the policy dialogue as it hinders distinguishing the different types ASM and taking appropriate development decisions. *Community based (permanent and seasonal) ASM is a long-term economic activity that contributes to local development and the creation of sustainable livelihoods.* *Shock-push ASM is a symptom of severe vulnerability of the involved population. It needs to be addressed at its roots in the affected sectors (e.g. protection of livestock against dzud).* *Rush type ASM is temporary, but will only cease if alternative stable income opportunities are created.* *SAM can support the development of community mining as a stable livelihoods opportunity.*

Portfolio of activities, Milestones		Orientation and Guidance
		Creating income opportunities in other sectors is the task of other sector-specific projects.
C)	**Facilitate Fair-trade export and promote benefits** Investigate viability and enable export of certified gold from ASM producer organizations ☑ Milestone 1: Viability and clarity on procedure for Gold export by ASM producers gained ☑ Milestone 2: ASM gold exported as Fairtrade	Opening Mongolia's access to Fair-trade markets for artisanal gold will require close coordination with the authorities responsible for taxation and export of gold.[36] Legal, transparent, and traceable gold export from ASM can serve as a strong argument in the political and public debate.
Community-mining Component **2.1 Artisanal miners formalize their operations according to the existing legal and regulatory framework** *Artisanal miners will need to comply with the existing legislation, requesting and obtaining mining land permission as unregistered partnerships. The best of them have potential to develop into higher-level legal commercial entities qualified to obtain mineral rights (exploitation licence).*		
A)	**Promote formalization among informal artisanal miners** Support governmental authorities (state agencies, local and regional Governments) in their efforts to identify and apply best practice in formalizing rush type ASM. Promote the replication of successful formalization efforts *(e.g. publish formalization guide for miners and local governments)*	The "wild ninja" image originates from and portraits the informal rush-type miner. The Amendment of the Minerals Law allows now for formalization of ASM. The project promotes stable and responsible community mining and should therefore support the competent governmental authorities in their effort to formalize rush-type situations. Best practice shall be identified and promoted. Note: It is not SAM's role to formalize all ASM miners in the entire Mongolian territory. This is the task of the Government. SAM can accompany and support the formalization process of typical cases, systematise the experiences and promote the lessons learnt for replication.
B)	**Advise unregistered partnerships in formalization procedures** SAM's role, especially during an initial period - until capacity building structures and processes are in place - is to fill the gap of legal advisory services and provide coaching to ASM partnerships.	The enactment of the amendment to the minerals law and its regulation will require ASM to adapt to the newly created legal situation.
C)	**Advise legal commercial ASM entities in formalization procedures** Support ASM organizations in their efforts to convert into legal commercial entities through advisory services.	Organizationally advanced groups of artisanal miners have expressed (in the workshop) their interest to convert into legal commercial entities and to apply for regular exploration or mining licenses. As these efforts will constitute pioneering experiences in the ASM sector, SAM needs to support such pilot initiatives.

[36] Exploratory conversations with the Central Bank of Mongolia have taken place during project planning and the Bank's opinion has been very favourable.

Portfolio of activities, Milestones		Orientation and Guidance
	☑ Milestone: First ASM organization converted into or established as commercial entity (with potential access to mineral rights)	Only member based community miners' organizations qualify for such support, not private investors. *Note: When ASM entities become commercial, they cease to operate under ASM regulation but General Minerals Regulation. Shifting ASM into higher-level companies or registered partnerships is open by Mongolian legislation to everyone; the Project will support ASM Community based entities who want to grow and acquire mineral rights.*
C)	**Establish trading capacity in ASM organizations** Support ASM organizations in their efforts to engage in the legal commercialization of their members' production volumes, strengthening business skills and - especially for the initial pilot cases - providing legal advice.	Only legal member-based miners' organizations with a trade function can participate in Fair-trade. This requires to be entitled to carry out gold trading operations, emitting invoices, receive payments, pay taxes and fees, etc. Under specific conditions, this trade function can be delegated. The most suitable setup within the Mongolian legal framework needs to be determined.

Project Output 2:
ASM organizations articulate interests of miners and stakeholders

Portfolio of activities, Milestones		Orientation and Guidance
ASM Policy Component **1.2 At national, regional and local level, Governments and other stakeholders interact with the ASM sector through its gremial and producer organizations** *Unorganized artisanal miners have no voice and if no ASM organisation represents the ASM sector, Governments and other stakeholder have no counterpart for dialogue. Organization of the ASM sector is crucial at local and at national level.*		
A)	**Strengthen the capacity of ASM organizations of participating in the public and policy dialogue** Articulate ASM umbrella organizations with decision makers and opinion leaders at national, Aimag and Soum level, by supporting ASM leaders through policy, negotiation and media coaching or training. ☑ Milestone: Public appearance of the ASM umbrella organization	In order to enable the Government to enter into a dialogue with the ASM sector, ASM umbrella organizations need to be in place. ASM umbrella organizations (e.g. ASM Federation) need to have the capacity to dialogue with the Government. The Project intervenes through the community-mining component strengthening the miners understanding for the need of an umbrella NGO and through the ASM policy component coaching the umbrella NGO in becoming a reliable and respected partner in the policy dialogue.
B)	**Support ASM organizations in their advocacy work for an enabling legal framework** Support ASM organizations in their advocacy work for an enabling legal and regulatory framework at national level and legal stability at regional and local	ASM organizations (e.g. miner's federation) are the voice of artisanal miners. Miners will need a step-by-step advocacy capacity coaching. Key areas will include organization and mobilization, negotiation, leadership identification, oral and written communication, engaging political leaders, psychology, etc. The aim is to have a focal point

Portfolio of activities, Milestones		Orientation and Guidance
	level	among ASM for future reference, projects, ASM sector negotiation, and policy formulation.
Community-mining Component **2.2 Artisanal miners interact with the Government, other stakeholders and business partners through their gremial and producer organizations** *Individual unorganized artisanal miners may have the dream of stumbling across the "big nugget", but all odds are against them. In order to unleash the development potential of ASM, miners need to become organized. Only organized miners can formalize their mines, can express their demands in a dialogue with other stakeholders, and can afford and maintain higher-level technology to improve their workplaces. Local ASM organizations (NGOs) need to play a stronger role in mine operation and administration in their mining area. Miners' organizations have to become clear on their need to form a national umbrella organization.*		
A)	**Support organization building process at local, regional and national level** At local level (producer organizations): • From individual miners towards partnerships • From partnerships towards ASM NGOs • From ASM NGOs towards community based commercial entities At regional or national level (gremial organizations): • From ASM NGOs and commercial entities towards regional organizations at Aimag level • From local or Aimag level towards a national umbrella organisation representing Mongolian ASM ☑ Milestone: An ASM umbrella organization is created by the miners.	ASM organizations' capacity needs to be strengthened and ASM needs to have strong sustainable institutions with financial well being, visionary leadership, and clear-cut mission. SAM cannot "create" a national umbrella organization. This has to be the initiative of the miners. SAM can facilitate such process by supporting miners with sufficient opportunities to engage in such a process, strengthen leaders and support common activities.
B)	**Provide guidance to ASM organizations on their core tasks** Support local ASM organizations to become service providers to their members.	The local level ASM organizations' core task is to support members with mining related services (governance, planning and monitoring, mining, financial management, operational safety and health, advocacy, community development, environmental management etc). Community based ASM organizations may also engage also in non-mining related activities of "general" community development. This is their autonomous and legitimate decision, but has to be seen clearly separated from the SAM Project. SAM needs to focus its support on mining related issues.
C)	**Facilitate the access of ASM organization to jointly owned and operated technology and production facilities** Identify ASM organizations able to implement jointly owned and operated best available technology (identification of potential technological leader organizations or "champions") Advice and support on organizational setups best suited to acquire, own and operate jointly owned	Ownership of advanced technology such as mercury free mineral processing plants, earthmoving equipment for rehabilitation, mechanized shafts, mine ventilation systems, etc. is in most cases only feasible based on joint ownership, as it exceeds the financial capacity of individuals. SAM demonstrates best available technology in different strategic sites (gold, coal, and fluorspar) working with organized artisanal miners who have grasped the concept of mineral rights ("champions"). Efficient ASM producer

Portfolio of activities, Milestones		Orientation and Guidance
	technology	organizations need to be in place to operate such extraction and processing technologies. SAM needs to be careful when working with individual investors, supporting miners to become investors but not vice versa.[37]
D)	**Specific organizational support to ASM organizations with focus on becoming certified Fair-trade gold producers** Obtain guidance and draw on experiences of certified producer organizations in other countries Coordination with ARM and FLO on applicability of producer setups outlined in the ASM gold standard to the particular Mongolian situation Provide Fair-trade producer support to ASM organizations ☑ Milestone: Applicability of Fairtrade and Fairmined Gold Standard to Mongolia assured	Fair-trade makes special emphasis in democratically governed member based producer organizations. Fair-trade certified gold producers ("ASMOs") need to be in charge of controlling the mining activities in their legal mining area and to be able to engage in trading activities on behalf of their members and partnerships. SAM can obtain guidance on "producer support" and draw on experiences from other countries where ASM organizations are already Fairtrade and Fairmined certified.

Project Output 3:
Socially responsible artisanal miners enjoy safer workplaces and social security

Portfolio of activities, Milestones		Orientation and Guidance
ASM Policy Component **1.3 Public and private services for improving work place safety and social security for ASM are accessible to responsible artisanal miners** All stakeholders agree on the priority of improving the operational safety and health (OSH) conditions in ASM. Accidents are frequent and rescue services need to outreach to ASM areas. Social responsibility is also associated with a shift from informal social safety nets based on solidarity towards inclusion of artisanal miners into the formal social security system.		
A)	**Facilitate official release of ASM guidelines** Seek the official endorsement and release of simple straightforward safety and operational guidelines and standards for ASM. ☑ Milestone: ASM Guidelines elaborated, approved and published	A broad consensus exists among officials of fieldwork oriented governmental institutions (inspectors, mine rescuers, etc.) that low-tech low-literacy artisanal miners are in urgent need for simple straightforward technical guidelines. Such ASM standards also serve as objective criteria for local inspectors. Close cooperation of national authorities is required.

[37] The difference may be gradual and drawing the line may be difficult in some cases. The Project needs a clear understanding regarding the "business case" of ASM, which is an income generating (therefore „for profit") activity and requires investment! Even in pure community based ASM, each individual member "invests" in the mining operation and the level of financial commitment may differ among members. The project needs to be able to distinguish such ASM investors who intent to "exploit the mine" (and who deserve the support of SAM) from investors who intent to "exploit the miners".

Portfolio of activities, Milestones		Orientation and Guidance
B)	**Elaborate and propose simplified mechanisms for the inclusion of artisanal miners in the formal social security system** Elaborate, propose, and facilitate the incorporation of artisanal miners in formal health and accident insurance schemes and especially into public social insurance that covers pension and retirement. ☑ Milestone: Social security system open for artisanal miners	Artisanal mining is hard work and many miners can carry out this activity only for a limited period. The number of artisanal miners currently covered by formal health and retirement insurance is minimal. The Ministry of Social Welfare and Labour is currently working on a proposal for social insurance of herders and self-employed workers. SAM should not miss this opportunity for extending the legal framework for ASM into social matters. Mechanisms for affiliation to social insurances and provision of services need to involve relevant Aimag and Soum authorities.
C)	**Improve emergency response in ASM sites by mine rescue services** Support of MRS's outreach to artisanal miners through mobile rescue teams located in strategically sites. ☑ Annual Milestones: One additional mobile mine rescue unit established per year – depending on performance of MRS *(if existing mobile teams can be maintained by MRS, up-scaling can continue on a yearly basis)*	Increasing workplace safety in artisanal mines is considered an upmost priority by all stakeholders. Although frequency of fatal accidents appears to be in the same range as in large-scale mining, the absolute number of accidents – due to the elevated number of artisanal miners – is considered alarming. MRS is proposing to establish mobile mine rescue teams in three strategic locations throughout Mongolia, to serve artisanal miners better. MRS shall be supported in its effort to outreach to ASM sites but MRS has to prove in practice that mobile rescue units can be sustained by MRS without external support.
Community-mining Component **2.3 Responsible artisanal miners make use of affordable services for improving workplace safety and join the social security system**. The process to change the mindset of artisanal miners from uncontrolled and uncontrollable wild "ninja" miners towards responsible "Hamo citizen" needs to continue and to be strengthened. ASM workplaces need to become safer by raising safety awareness and promoting the use of safety equipment among miners, and miners need to be better prepared for to prepare better for accidents. Social security needs to cover ASM as a self-employed rural activity, but miners have to be convinced to join formal social security systems.		
A)	**Migrate informal social safety nets into formal social insurance schemes** Inform artisanal miners about existing formal social security schemes and promote affiliation to formal health and social insurances. ☑ Milestone 1: Social security system open for artisanal miners and accepted	Artisanal miners, due on their predominant past as ex-herders, rely mainly on informal safety nets based on mutual help within their extended family or groups. At policy level, attractive and accessible mechanisms for including miners in formal social insurance schemes need to be created. Miners need to be informed about costs and benefits of existing and newly created available formal insurance schemes.
B)	**Elaborate ASM guidelines** Elaborate simple, straightforward safety and operational guidelines for artisanal miners.	Low-tech, low-literacy artisanal miners are usually not capable to read, understand, and follow engineer-level national technical standards designed for large-scale mining. They need simple and straightforward rules (e.g., max. 10 rules per

Portfolio of activities, Milestones		Orientation and Guidance
	Possible topics are: • Use of safety equipment • General mine ventilation and gas detection • Coal mine ventilation and gas detection • Rock fall and mine stability • Windlasses and head frames • Rehabilitation of mine sites • Mineral processing guidelines • etc ☑ Milestone: ASM Guidelines elaborated, approved and published	topic, the shorter the better). Such ASM standards are needed to provide clear guidance to miners. Especially if officially released, simple rules have good probability to be implemented.
C)	**Introduce safer mine technology** Organize mining activities for efficient and safe extraction and promote appropriate equipment at an appropriate mechanical level. Introduce safer mining equipment and methods with potential of auto-dissemination	Deficient mine safety is strongly related with lack of technologic knowledge. Organization in small partnerships and uncoordinated work of partnerships creates additional difficulties and hazards. The ASM sector in Mongolia counts on a history of only 10 years and has developed in a relatively isolated manner. Technologic solutions are mostly "home grown" and do not draw on transfer of best available ASM technology. Exceptions (e.g. dry washer) demonstrate that miners are ready to accept technological innovations. Introduction of more appropriate equipment needs to follow a bottom-up approach: demands from miners for improvements have to be taken into account and miners have to be part of technologic innovation.
D)	**General capacity building and awareness raising in occupational health and workplace safety (OSH)** Establish an institutional OSH network of trainers of trainers with local outreach to ASM mine sites Involve all concerned institutions in the OSH network *(concerned institutions have the duty to contribute to contribute improving the situation)* Support the OSH network with training material based on simple guidelines ☑ Milestone: Network of Mongolian institutions improving OSH awareness in ASM established	Improving mine safety in ASM needs an integrated, inter-institutional effort involving miners, private and public institutions. The current capacity in OSH related institutions is insufficient to reach a significant number of miners. The existing capacity needs to be employed as trainers of trainers to create local capacity building capacity, in ASM organizations and local governmental institutions. All governmental institutions have expressed their concern about OSH in ASM. SAM needs to capitalize on these demands and convert them into action.
E)	**Implement local rescue services** Support ASM organizations to engage with mobile rescue teams of MRS and serve as local extension Support and build rescue capacity within Aimag emergency services.	MRS plans to scale-up its coverage serving ASM, through mobile rescue teams strategically co-located in large-scale mining companies. These mobile rescue units need to outreach to ASM mine sites. Aimag Emergency services already have general emergency and rescue infrastructure, and in some

Portfolio of activities, Milestones		Orientation and Guidance
		cases participate in mine rescue. MRS also plans to work with the Aimag emergency services to build their capacity on mine rescue, and will offer backup support when required. Operation and maintenance of mobile rescue teams has to be MRS's duty. SAM can and shall support ASM organizations and Aimag emergency services to engage with MRS.
F)	**Improve and upgrade workplace safety and labour conditions of gold pilot sites according to FT&FM Standards** Work with ASM organizations at gold mining pilot sites towards compliance with workplace safety and labour condition requirements in accordance with the Fairtrade and Fairmined Gold Standard ☑ Milestone: ASM organization Fairtrade and Fairmined certified	Compliance with workplace safety and labour conditions is a core requirement of the Fairtrade and Fairmined Gold Standard. Gold pilot sites of the SAM project should demonstrate international best ASM practice and therefore comply with such international standards. By improving the ASM organizations' performance, SAM simultaneously supports the organizations in their efforts towards certification. The win-win option of benefitting from improved workplace conditions as well as from Fair-trade benefits serves as a strong incentive for ASM organizations. Pilot sites extracting other commodities (and therefore without the FT incentive) should be able to replicate at least the most safety relevant requirements
G)	**Trigger local social responsibility programs of ASM organizations** Provide advice to ASM organizations on prioritizing of community development projects and during their planning and implementation	Community mining is mineral extraction by the local community benefitting the local community development. Fairtrade and Fairmined certified ASM organizations are required to use part of the FT Premium for community development; not certified community mining ASM organizations can be expected to invest in community development. The SAM project shall trigger community development projects carried out by ASM organizations, as part of their contribution to local development and may provide advice. It is however not the role of the SAM project to support, finance or carry out non-mining community projects!

Project Output 4:
Responsible artisanal miners implement environmentally sound mining practices and technology

Portfolio of activities, Milestones	Orientation and Guidance
ASM Policy Component **1.4 Feasible and enforceable environmental requirements provide ASM communities with clear guidance on responsible and environmentally sound mining practices** Environmental impacts from ASM, especially from alluvial mining, are a general concern. Stakeholders should not only excel in highlighting problems but also be able to identify and contribute to the implementation of practical solutions. Regulations need to take into account the	

Portfolio of activities, Milestones		Orientation and Guidance
size of the operations and be enforceable.		
A)	**Promote and facilitate the enactment of simple and enforceable environmental regulations and guidelines for ASM** Seek the official endorsement and release of simple straightforward environmental guidelines and standards for ASM. ☑ Milestone: ASM Guidelines elaborated, approved and published	Mining in general and ASM in particular are subject to critics due to environmental impacts caused. While the specific ecological footprint of ASM (m3 rock/gr gold) is extremely small and emission of greenhouse gases is practically zero, rehabilitation work is often deficient or even missing. Artisanal miners are in urgent need for simple, straightforward environmental guidelines, prescribing the work to be carried out for adequate but feasible site rehabilitation and mitigation of other environmental impacts. Such in practice enforceable ASM standards also serve as objective criteria for local inspectors. Close cooperation with national authorities is required.
B)	**Obtain official recognition of the mercury-free processing plant design as "approved" technology for ASM** Document the mercury-free processing plant model developed by SAM and release the design into "public domain" (*Note: in any case, the plant design consists of known components in usual combination*) Work towards a regulation which allows anybody in possession of the required authorizations to replicate the plant design Work towards a regulation that stipulates transparent and open requirements for obtaining the authorization to replicate the plant design. ☑ Milestone: Processing plant technology "officially approved"	For processing of hard rock gold ores from ASM, the design of the Bornuur plant has proven to be efficient and is widely accepted by artisanal miners. The Government Order No 28 only allows for limited replication, unable to satisfy the existing demand. The consequence is that illegal clandestine amalgamation continues to exist. In order to provide sufficient legal processing capacity for hard rock ores, the design needs to become officially approved and released for replication. Regulations need to allow for unrestricted replication (obviously after obtaining all required authorizations), and avoid any creation of artificially controlled monopoly positions. *Note: As long as the number of processing plants is limited within the temporary regulation and operation is only allowed in "pilot" mode, financial support of SAM for plant replication is justified in order to prove the viability of the design (Bayankhongor case).* *Once the design is "approved", eventual financial or hardware support needs to be closely linked to institutional strengthening of ASM organizations*
Community-mining Component **2.4 ASM communities are aware of environmental requirements and implement responsible and environmentally sound mining practices and eco-efficient technology** Clear, simple, and realistic environmental requirements for ASM need to be in place. Environmentally friendly ASM technology exists, but has to be made accessible to artisanal miners; some advanced eco-efficient technologies (e.g. processing plants, light earth moving equipment for extraction according to a systematic mining plan, and proper rehabilitation) are only accessible and affordable for organized groups. Existing solutions need to be "opened" for unrestricted replication.		
A)	**Elaborate simple and enforceable environmental regulations and guidelines for ASM and promote**	Artisanal miners are in urgent need for simple, straightforward environmental guidelines, prescribing the work to be carried out for

Portfolio of activities, Milestones		Orientation and Guidance
	their compliance Systematize successful rehabilitation efforts by ASM miners and formulate generally applicable guidelines. Elaborate simple guidelines on environmental impact mitigation measures, such as: • Waste rock and tailings dumps • Acid mine drainage • Surface- and groundwater protection • Waste disposal • Etc. Cooperate with Soum environmental inspectors to promote compliance with environmental ASM guidelines ☑ Milestone: ASM Guidelines elaborated, approved and published	adequate site rehabilitation and mitigation of other environmental impacts. In order to be enforceable, measures have to be proven in practice and have to feasible to implement with artisanal technology.
B)	**Mitigate resource conflicts through involvement of local communities in environmental monitoring** Implement conflict mitigation and self-regulation of ASM activities through community based environmental monitoring in cooperation with the ESEC project.	ASM activities have to coexist with traditional herding or other land use by the local community within the same area. Lack of knowledge and understanding of the extractive activity and distrust are the most frequent sources of local resource conflicts. The ESEC project of Asia Foundation, funded by the Dutch Agency for Development, focuses on environmental monitoring of mining activities by local communities. While applying an advocacy approach regarding LSM, the project will use a conflict mitigation approach towards community mining ASM. A close cooperation of both projects is feasible. Voluntary environmental compliance through community self-regulation is considered more sustainable than enforcement of requirements.
C)	**Up scaling and replication of mercury free Bornuur plant model** Support all parties interested in replication of the Bornuur processing plant design, either through advice (investors) of direct support (ASM organizations). ☑ Milestones: • Bayankhongor plant (currently under construction) finished and operative • Further replica plants (e.g. Omnugobi and Mandal , currently in planning) finished and operative	Despite the ban of mercury, illegal and clandestine amalgamation is still widespread and can only be overcome through sufficient mercury free processing capacity. Processing plants like Bornuur are “state of the art” in many countries and has high potential to be replicated in Mongolia after official approval of the technology. The operation of a processing plant can be a business opportunity for private investors or a community development opportunity for ASM organizations. Processing fees for miners in a free market tend towards zero, as plants cover their costs through the sale of tailings. SAM shall support the replication of processing plants, either through technical advice to investors (assuring quality of service) or through direct support to ASM organizations, which plan installing their own mineral processing, centre.

Portfolio of activities, Milestones		Orientation and Guidance
		Community owned processing plants have to be managed observing all requirements of the Fairtrade and Fairmined Gold Standard, in order to qualify for certification as part of the ASM organizations' facilities or as certified operator.
D)	**Continue developing environmental friendly eco-efficient technical solutions for gold mining** Mobilize national and international know-how to cooperate with artisanal miners on improving fine gold recovery from wet and dry alluvial deposits Support and improve technical and biological rehabilitation in different sites and under different conditions.	Fine gold losses in alluvial mining operations were found to be considerable. Some of the solutions developed during Phase 2 have limited acceptance as the main underground placer mining season is during winter in frozen ground but sufficient water for sluice operation is only available during summer. Lack of fine gold recovery corresponds to a loss of mineral resources or will cause re-mining of rehabilitated areas at a later moment. Another area for possible technical improvement is the up scaling and improvement of dry washers in dry placer mining to achieve better recovery and less scattered mineral extraction. Further work may be needed to investigate and improve technical and biological rehabilitation with artisanal technology under different conditions.
E)	**Improve and upgrade environmental performance of gold pilot sites according to FT&FM Standards** Work with ASM organizations at gold mining pilot sites towards compliance with environmental requirements in accordance with the Fairtrade and Fairmined Gold Standard ☑ Milestone: ASM producer organizations Fairtrade and Fairmined certified	Environmental responsibility of ASM activity is a core requirement of the Fairtrade and Fairmined Gold Standard. Gold pilot sites of the SAM project should demonstrate international best ASM practice and therefore comply with such international standards. By improving the ASM organizations' performance, SAM simultaneously supports the organizations in their efforts towards certification. The win-win option of protecting the environment and receiving apart from the Fairtrade Premium the additional Ecological Premium (as Mongolia's ASM is already mercury and cyanide free) serves as a strong incentive for ASM organizations.

Project Output 5:
Capacity building structures and processes for supporting the ASM sub-sector are in place

Portfolio of activities, Milestones	Orientation and Guidance
ASM Policy Component ➢ **1.5** **Capacity building structures and institutions supporting ASM are in place at national level.** Capacity building is inherent to all above-mentioned topics 1-4, but special emphasis needs to be given to building sustainable capacity building structures and processes, such as vocational training opportunities in order to professionalize ASM. These structured should aim for outreaching to all	

Portfolio of activities, Milestones		Orientation and Guidance
Mongolian ASM miners.		
A)	**Establish the framework and structures for professionalization of artisanal mining** work with Ministry of Education for curriculum development and introduction of artisanal mining training modules in the portfolio of vocational training programmes ☑ Milestone: Decision taken to establish a formal vocational training career for artisanal miners	ASM is in the public opinion and among many stakeholders considered a transitory activity but not a profession. Some stakeholders even refer to artisanal miners as "unemployed people". In practice however, ASM requires skills in all mining related activities from prospection, extraction, processing to marketing. Community mining, which has become a permanent stable activity in Mongolia requires professionalization of miners, by acquiring craftsmanship and being recognized as professionals (specialists). Artisanal mining as a profession needs to be included in existing vocational training structures.
B)	**Establish the curriculum and infrastructures for professionalization of artisanal mining** Work with Ministry of Education on curriculum development and capacity building in vocational training centres *Topics should cover: Basic geology, underground and surface mining, mineral processing, mine safety and health, environment, rights and obligations as formal artisanal miner, etc.* Evaluate with vocational training institutions the most effective training modalities: training in specialized training centres, training in general-purpose training centres, mobile training centres, privatization, and delegation of training authority to ASM organizations, etc. ☑ Milestone: First vocational training centre or training program operative ☑ Milestone: First artisanal miners certified as professionals.	ASM as a profession is a new career in Mongolia. The curriculum for vocational training needs to be developed and training of trainers in vocational training centres needs to take place. Ideally, experienced senior level artisanal miners should become trainers. Important to consider the existence of artisanal miners with university degrees; it would be a fundamental error to train teachers as ASM trainers – ASM miners have to be trained to become vocational teachers! Practical experience counts! Trained miners shall be awarded the corresponding professional certificate of the training institution, identifying them as specialists.
C)	**Establishing an "ASM Database"** Carry out or update a survey on which data or information is held by which institution and feed back of the results to all participating institutions. Establish inter-institutional commitments for internal networking (sharing maintained information among network partners) and agree on rules for access to shared information by third parties. Eventual (utopia?) ultimate step: create a permanent inter-institutional task force in charge of coordination of information gathering and knowledge sharing. Mirroring and linking of information held by each institution to a joint public	Miners as well as public and private institutions express the demand for an "ASM Database" … with the inherent assumption that this database will provide the information they require. For obvious reasons information requirements vary widely and no single "database" can serve all purposes. The term "database" has therefore to be understood as a generic system that collects structured and unstructured data, converts data into information, and generates knowledge that serves for decision-making. Due to the vast variety of data to be collected and decisions to be made, such a system is only feasible through a decentralized "network" linking digital and paper "data", held and maintained by different institutions.

Portfolio of activities, Milestones		Orientation and Guidance
	knowledge management Internet platform. ☑ Milestone: survey on existing information on ASM in Mongolia (who knows what?)	The "database" as such is the structure of an inter-institutional knowledge management system or inventory, which indicates where certain information can be obtained.
D)	**Capacity building through information sharing** Organize learning events and information sharing platforms on ASM, exposing Mongolian stakeholders to national and international best practice. Participate in international learning events and information sharing platforms like CASM	International best practices will be put on the table as a way of strengthening and introducing best practices in different ASM issues. The government institutions and the ASM institutions should be exposed as much as possible to international best practices for replication in policy formulation and implementation, miners' organization and service providers to ASM, best practice technologies, Fair-trade, and environmental management.
E)	**Establish formal relations with the Fairtrade and Fairmined Gold Partnership of FLO and ARM** Establish formal relations with the FLO-ARM Partnership and participate in joint capacity building activities of the Partnership *(for producer support mainly the ARM support organizations' network; on certification topics and access to Fairtrade markets mainly FLO).* Learn how the Fair-trade system works. ☑ Milestone: Applicability of Fairtrade and Fairmined Gold Standard to Mongolia assured	The Fairtrade and Fairmined Gold Partnership of FLO (Fairtrade Labelling Organization) and ARM (Alliance for Responsible Mining) was formally established in 2009. ASM producers in all countries currently covered by the geographical scope of the Gold Standard count on producer support organizations. All producer support organizations are linked through ARM's support organizations network. The partnership has expressed its availability to work towards including Mongolia in its geographical scope. It is upon the Project to establish formal relations with the Partnership in order to participate in the existing network and draw on existing experience.
Community-mining Component **2.5 Specialized audience targeted capacity building and information sharing structures and processes for ASM are in place at local level** Capacity building is inherent to all above-mentioned topics 1-4, but special emphasis needs to be given to establish "champions" which serve as examples to follow for other ASM miners and demonstrate with tangible results that responsible ASM is possible.		
A)	**Activities inherent to all topics**	Within the community mining component, capacity building through the SAM Project is an inherent activity of all other topics
B)	**Capacity building in ASM organizations as structures for capacity building among members** Create the awareness in ASM organizations to be the responsible entity for capacity building among members and member partnerships. ☑ Milestone: ASM organization takes the initiative to provide training to their members *(applies to each ASM organization)*	ASM organizations need to evolve into the primary service providers for their members. Through legal, organizational and technical (incl. OSH and environment) services provided to members and member partnerships, ASM organizations are the main structure that builds capacity among their members. ASM organizations need to understand capacity building as one of the core tasks of their institutional mission, providing training to their members and campaigning for permanent improvement of knowledge. ASM organizations are responsible for providing

Portfolio of activities, Milestones		Orientation and Guidance
		training (through own staff and by obtaining external trainers) to their members.
C)	**Capacity building in local organizations as structures for capacity building among artisanal miners** Create the awareness in local authorities, government organizations, and agencies of being the duty bearers for providing capacity building in local artisanal miners. Enable local authorities and institutions through seminars, workshops, and on-site training to comply with their role as capacity builders of artisanal miners. *(training of local authorities should be provided mainly through counterpart staff, being the national authority)*	Local Soum and Aimag governments and local technical institutions (inspectors, etc.) are rights-holders (assigning land usage rights to artisanal miners, charging local royalties, taxes and fees, etc.) but at the same time duty bearers to artisanal miners, responsible for their capacity building. Requirements and guidelines to be followed by artisanal miners have to be explained to them by local authorities. Local authorities need therefore to start building their own capacity for providing quality services. Note: MRAM plans to establish an ASM unit, which will be in charge of coordinating ASM activity and capacity building regarding minerals administration in local governmental organizations. SAM can strengthen this ASM unit through training of trainers by specialists.
D)	**Compiling training materials as a "miners' toolkit"** Compile training and information materials produced within the SAM project into a "miners' toolkit" in printed (and if sustainability is given) in online format, which will outlive the Project. ☑ Milestone: "Miners' toolkit" (compilation of all SAM recommendations) published	Training, information and capacity building materials produced within the project shall be compiled and made accessible as a "miners' toolkit". This shall cover all related ASM topics (legal framework, mining, processing, rehabilitation, management, investment, community development). This toolkit may be made available both in print and online media. This toolkit will outlive the project and will form the foundations of the body of knowledge on ASM in the long term. An online version may combine the toolkit with elements of the ASM database and can become a useful tool to connect miners, share information, share current trends in ASM, mineral prices, successes in other countries to empower miners and link them with other like minded bodies both local and external . Special care has to be given to develop an eventual online version in close cooperation with national counterparts and as part of their own permanent web services. Experience has shown that independently developed web portals face frequently sustainability problems at the moment of handover.
E)	**Specialized training of ASM organizations in pilot sites regarding the Fair-trade system and Gold Standards requirements** Acquire know how on the Fair-trade system through participation of SAM in the producer support organizations' network of the Fairtrade and Fairmined Gold Partnership. Provide information on the Fair-trade system to	Efforts of ASM organization of working towards Fairtrade and Fairmined certification need to be supported through building knowledge of the Fair-trade system in the ASM organization. Sound understanding of the system is crucial as certification is carried out by independent third party auditors. The first producers aiming for certification will need to "pilot" the system for Mongolia and will therefore require dedicated

Portfolio of activities, Milestones		Orientation and Guidance
	gold producing ASM organizations with potential for certification Test the applicability of the Fairtrade and Fairmined Gold Standard for Mongolia and provide feedback to the Fairtrade and Fairmined Gold Partnership[38]. Provide producer support to ASM organizations, supporting them for achieving Standards compliance, certification, and setting up the traceable trading chain. ☑ Milestone: ASM producer organizations Fairtrade and Fairmined certified	support. As Mongolia is not a traditional Fair-trade export country (most traditional Fair-trade certifiable products are not produced in Mongolia), the SAM Project needs to substitute initially the role, which FLO or ARM producer support organizations usually occupy. Producer support is to a certain extent a permanent task within the Fair-trade system and is usually performed by umbrella ASM organizations, NGOs or private consultants, know-how can be either built within the Project (and later transferred) or be outsourced right from the beginning.

Project Output 6:
Increased capacity of local government and artisanal mining communities to manage mineral resources

Portfolio of activities, Milestones		Orientation and Guidance
ASM Policy Component **1.6. Transparent and equitable licensing process and conflict mediation** Transparent and equitable land allocation to ASM by regional and local Governments will play an important role for tapping into the local development potential of ASM but often have little mineral resource management expertise and need support in assuming their duties within the ongoing decentralization process.		
A)	**Promote transparent and equitable land allocation to ASM by regional and local Governments** Elaborate and promote a set of objective criteria for land allocation which provides legal stability to ASM operations Facilitate the implementation of transparent procedures for land allocation to ASM by local Governments	Formalization of ASM is based on allocation of land usage rights to Partnerships under the Authority of the local and regional Government. Flexibility through subjective criteria for land allocation by the local Government is needed to respect the local context. Objective criteria are needed to assure that land allocation is handled in a transparent, equitable, and non-discriminative manner. Clear criteria will provide legal stability to Partnerships and ASM organizations and allow for investment improving productivity, workplace safety, and environmental sustainability.
B)	**Support local and regional Governments in decentralization efforts** Support local and regional Governments in identifying needs for decentralization Advise local and regional Governments on how to convert benefits from ASM into sustainable local development	ASM is administrated at local and regional level, where allocation of mining land to partnerships and inspection takes place. In order to comply with the duty of ASM administration, decentralization through delegation of rights and assignment of resources is required. As the counterpart of SAM is the central Government and SAM will work at ASM sites with regional and local Governments, SAM is in a

[38] Contextualization of the Standard can be proposed to the ARM-FLO Standards Sub-Committee. As long as the required modifications do not affect fundamental Fair-trade and Fairmined principles, adaptations are likely.

Portfolio of activities, Milestones		Orientation and Guidance
	Support local and regional Governments in the formulation of ASM master plans (identification of ASM suitable deposits based on existing geologic data, long term planning of mining areas and rehabilitation sequences, services to be provided to ASM miners, resources needed, etc.)	privileged position for identifying decentralization needs and mediate between central, regional and local Governments
C)	**Create mediation capacity for resolving natural resource conflicts** Mediators should be trained. Special attention should be given for training of trainers of mediators.	Artisanal miners, local Governments and the local communities need to be well prepared to jointly draw on common benefits from ASM and have clear positions for negotiations with the central Government and large mining companies. SAM's role in this regard is instrumental as this kind of process is new in Mongolia and the project is among the first who will deal with conflicts around the natural resources.
D)	**Advocacy towards respecting rights and needs of ASM miners by LSM companies in compliance with their CSR duties.** Support ASM organizations and local Governments in their efforts of negotiating co-existence agreements with LSM companies. Advocacy towards compliance with CSR best practice of LSM companies, demanding respect of artisanal miners' right to work. Mediation of eventual resource conflicts between LSM and ASM.	Most prospective areas suitable for ASM are already covered by existing exploration or mining licenses, as Mongolia's mining policy apparently favours (mostly) foreign investment over local employment and wealth generation. International trends towards CSR (corporate social responsibility) requirements of co-existence of LSM and ASM are a good starting point for demanding assignation of mining land to local ASM producers. Non-compliance with CSR best practice can become a serious reputational risk for international LSM companies. SAM's role of supporting responsible ASM includes inherently the mandate for advocacy towards LSM respecting the needs and rights of ASM according to CSR best practice.
Community-mining Component **2.6 Artisanal mining communities increased productivity and improved product quality.** Community based ASM has the potential to contribute significantly to local development, as revenues from the extractive activity start to circulate at local level and enable upstream, downstream and alternative businesses.		
A)	**Elevate income through increased productivity** Upgrade existing artisanal mines through technical advisory services provided by the Project or (better) through qualified external service providers under supervision of the Project. Establish a micro-credit facility for small, productivity enhancing and safety improving mining equipment *(Ideally and for sustainability, such an ASM micro credit fund should be established through or in cooperation with a rural development oriented financial institution. Other options are the creation of an ASM miner's savings cooperative)*	Although income opportunities in ASM are higher than in alternative rural occupations, the majority of artisanal miners are poor. This applies for coal and fluorspar miners even more than to gold miners. Low income leaves little resources for investment in the mine and obsolete mining technology is a major cause for unsecure workplaces. Low income also leaves little resources for local development. Increasing productivity is the most direct way to higher income.
B)		Control of physical product quality as a means for

Portfolio of activities, Milestones		Orientation and Guidance
	Elevate income through increased product quality Upgrade existing artisanal mines and determine revenue maximizing product quality through technical and economical advisory services provided by the Project or (better) through qualified external service providers under supervision of the Project. Provide producer support to ASM organizations with potential to become Fairtrade and Fairmined certified and establish legal, traceable, and certified trading chains until point of export. *Existing local gold traders ("changers") may become part of the system, if they provide a real service to the miners (and are not just middlemen) and if they are ready to become certified operators carrying out legal and traceable transactions.*	increasing income is possible mainly for bulk commodities like coal and fluorspar. Different qualities of the product have different prices and miners need to be able to supply the quality that returns the highest revenues. Ethical product quality is a new quality category that applies increasingly for gold mining. Demand for "ethical jewellery" is growing and ASM can supply into this market by becoming Fairtrade and Fairmined certified. While gold prices paid to miners are reportedly in a usual range of 70-80%, certified miners are guaranteed a 95% minimum price and on top of this a Fairtrade Premium in the range of additional 10-15% for use in local development. Both ways for increasing quality require efforts from the miners and external support.
C)	**Enhance money management and business skills in artisanal miners and ASM organizations** Provide theoretical and practical training in money management and business skills to artisanal miners and ASM organizations. Promote ASM miners savings groups Support ASM organizations in their long term planning and in economic evaluation of technical choices Strengthen ASM miners negotiation capacity through improved economic knowledge *Practical training opportunities can be integrated in other training topics, e.g. by empowering miners to administrate their own training events and activities.*	Proper money management skills of individual miners and of ASM organizations are crucial. It is typical for miners to confuse revenues and income as well as costs and investment; in consequence, revenues are spent and no resources are left to invest in mine improvement. Capacity building in money management and business skills are needed to shape sustainable local economies.
D)	**Provide guidance to the ASM organizations' local community development activities** Provide advisory services to ASM organizations regarding the selection and implementation of their own, self-financed community development projects Provide producer support to Fairtrade and Fairmined certified ASM organizations regarding the setup and operation of their Fairtrade Premium Committee and administration of Fairtrade Premium money designated for local development programs. ☑ Milestone: Fairtrade Premium Committees are installed and manage community development projects	Community based ASM contributes to local development. This occurs "unintentional" through the financial resources generated by ASM, which start to circulate in the community, and this happens "intentional" through local community development activities carried out by the ASM organizations. In order to maximize the impact of local community development projects, SAM shall provide guidance and orientation to ASM organizations. Local development projects by ASM organizations may also cover the creation of alternative income opportunities. In most cases however, projects oriented towards improving social infrastructure or education may have a higher impact. The issue of local community projects needs special attention in communities with Fairtrade and Fairmined certified ASM organizations. These organizations will receive considerable amounts of Fairtrade Premium money that needs to be

Portfolio of activities, Milestones		Orientation and Guidance
		invested in local development. *Note: It is not the role of SAM to invest its resources in alternative income projects. This is the task of other projects specialized in this area!*

Annex 8: Summarized job descriptions of senior and specialist staff

Position	Job Description
Project Director (PD)	The PD is responsible for the strategic implementation of the Project according to the Project Document, decisions of the Project Board and instructions from SDC. The PD brings in-depth expertise on the national stakeholder landscape at central, regional and local Government level to the table and represents the Project vis-à-vis all external partners and in the Project Board and is the "public face" of SAM, leading on ASM policy and communications. The PD shall have a strong vocation for institutional networking and a firm position in the public and policy dialogue.
Project Manager (PM)	The PM is responsible for the management and operative implementation of the Project according to the Project Document, decisions of the Project Board and instructions from SDC. The PM leads, motivates and integrates the interdisciplinary Project team, brings international experiences to the table, and focuses on implementation, administration, planning and monitoring. Leadership, conceptual capacity, and expertise in Community Mining aspects complement the PD's leadership in ASM Policy. The PM shall have a strong vocation for efficient and effective project management, achieving objectives and milestones and building capacity in staff and institutions.
Senior Expert on ASM policy and Formalization (SE)	The SE is responsible for tasks related with the ASM Policy Component, as well as for legal advice to miners within the Community Mining Component. Within the ASM Policy Component, the SE emphasizes on collaborating with the PD who represents the Project in the public policy dialogue. For that purpose, the SE teams up with the policy and communications advisor under the PD. The SE shall have sound knowledge on ASM policy and mining related legislations and be able to support the policy dialogue. The legal expertise of the SE shall emphasize on Project implementation by building capacities and support ASM miners and local Governments in their efforts of ASM organization and formalization.
Senior Expert(s) on Community Mining (SE) *Note: depending on availability of suitable multidisciplinary professionals, the SE position can be covered by one single expert or by a leadership team of two experts (SEs).*	The SE(s) is/are responsible for tasks related to the Community Mining Component, as well as for providing technical and socio-cultural advice to the ASM Policy Component. The SE(s) count/s on sound expertise in mine safety and eco-efficient mining, mineral processing and rehabilitation technology for alluvial and hard-rock ASM operations and is/are able to guide the technical specialists with focus on capacity building. The SE(s) count/s on sound expertise in ASM community development, local economic development, knowledge transfer and capacity building. The SE(s) will focus on supporting miners to perform responsible ASM within the existing legal framework for (subsistence) ASM and

	supporting miners to grow and become business entities dealing with full rights and responsibilities of formal mining operations. The SE(s) will support the process of technical and organizational capacity building for compliance of ASM gold producers with the Fairtrade and Fairmined Standards.
Policy and Communications Advisor (PCA)	The PCA is responsible for advising and supporting the PD in policy facilitation and strategies towards creation of favourable public opinion towards ASM (communications). The PCA shall complement the more implementation oriented skill requirements of the ASM Policy SE with visionary and conceptual creativity. The PCA shall bring the expertise to the table on how, when and where to communicate the agenda of the Project in order to maximize the empowerment of miners.
Specialist staff	Experienced implementation **Specialists** for both components need to be recruited in a composition according to the respective needs of the Project. The **core operational team** consists of 4 specialists contracted by SDC and 2 specialists assigned to the Project through **secondment from MRAM**. The profiles of the specialists contracted by SDC need to be complementary to the expertise brought into the Project through the secondment of MRAM specialists. The Project needs specialist expertise in the following fields: • Community organization and organization building • Organizational strengthening • Formalization of ASM operations • Mineral resource governance and advisory to local and regional Governments • Legal advisory services to ASM miners • Negotiation and consensus building • Occupational safety and health, mine safety • Open pit and underground mining • Mineral processing • Environmental protection and site rehabilitation • Capacity building • Local social and economic development • Fair-trade supply chains

Annex 9: Detailed Budget

Total and indicative per component

Pos	Description		**Total**	*C1*	*C2*	*Admin*
1.1	Remuneration operational project staff		**1'326'000**	*527'800*	*675'480*	*122'720*
1.2	International + local consultants		**552'200**	*220'880*	*331'320*	-
1.3	Remuneration local administrative staff		**244'400**	-	-	*244'400*
1.4	Traveling costs staff + consultants		**643'000**	*165'180*	*267'520*	*210'300*
1.5	Purchase of project equipment		**458'800**	*26'000*	*405'000*	*27'800*
1.6	Running costs project		**975'600**	*257'500*	*542'000*	*176'100*
2.1	Running costs partial action 3		**300'000**	*150'000*	*150'000*	-
		TOTAL	**4'500'000**	*30%*	*53%*	*17%*

Total and indicative per year

Pos	Description		year 1	year 2	year 3	year 4	**Total**
1.1	Remuneration operational project staff		325'455	329'485	333'515	337'545	**1'326'000**
1.2	International + local consultants		110'440	165'660	165'660	110'440	**552'200**

1.3	Remuneration local administrative staff		59'267	60'489	61'711	62'933	**244'400**
1.4	Traveling costs staff + consultants		143'900	179'400	180'000	139'700	**643'000**
1.5	Purchase of project equipment		133'460	144'720	109'320	71'300	**458'800**
1.6	Running costs project		285'133	223'311	234'489	232'667	**975'600**
2.1	Running costs partial action 3		100'000	100'000	100'000	-	**300'000**
		TOTAL	**1'157'655**	**1'203'065**	**1'184'695**	**954'585**	**4'500'000**
			26%	27%	26%	21%	100%

Mongolian Counterpart Contribution (estimate)

Note: (₮-Mongolian currency-Tugrug)

Description	2011	2012	2013	2014	Total
Salary of staff	19,000,000	19,500,000	20,000,000	20,500,000	79,000,000
Capital/goods	46,415,000	22,000,000	5,650,000	0	74,065,000
Field trip expenditure	9,000,000	9,500,000	10,000,000	10,500,000	39,000,000
Office rentals	35,000,000	38,500,000	42,435,000	46,500,000	162,435,000
Discounts	10,000,000	11,000,000	12,000,000	12,500,000	45,500,000
TOTAL Mongolian Contribution	119,415,000	100,500,000	90,085,000	90,000,000	400,000,000 ₮
					Total USD 300,800 (at current exchange rate)
TOTAL Swiss Contribution					4.5 Mio CHF