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**Petroleum Authority**  
**of Mongolia**

Project document on the

## **Support for Artisanal Mining Project**

in the framework of Sustainable Natural Resources Management  
for Poverty Alleviation in rural Mongolia

1/7/2005 – 31/12/2006

Ulaanbaatar, Bad Vilbel

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### **List of Abbreviations:**

ASM	artisanal and small-scale mining
BGR	Bundesanstalt für Geowissenschaften und Rohstoffe / Hannover (German Geological Survey)
BMBF	Federal Ministry for Education and Research, Germany
CASM	Communities and Small-Scale Mining (platform hosted by World Bank)
CIDA	Canadian International Development Agency
GAMA	Gestión Ambiental en la Minería Artesanal (SDC supported ASM project in Peru)
GDP	Gross domestic product
GEP	Global Environment Programme
GEUS	Danmarks og Grønlands Geologiske Undersøgelse (Danish Geological Survey)
GOM	Government of Mongolia
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit GmbH
ILO	International Labour Office / Geneva
IPEC	International programme for the Elimination of Child Labour
JICA	Japanese International Cooperation Agency
LA	Latin America
LSM	Large Scale Mining
MEDMIN	Medio Ambiente y Minería (SDC supported ASM project in Bolivia)
MMSD	Mining, Minerals and Sustainable Development
MoE	Ministry of Environment
MONEF	Mongolian Employers Federation
MRPAM	Mineral Resources and Petroleum Authority of Mongolia
NGO	Non Governmental Organisation
PMSC	Proyecto Minería Sin Contaminación (SDC supported ASM project in Ecuador)
PMU	Project Management Unit
PSC	Project Steering Committee
SDC	Swiss Agency for Development and Cooperation
SNRM	Sustainable Natural Resources Management
SAMU	Small and Artisanal Mining Unit
SSIA	Specialised State Inspection Agency
USAID	US Agency for International Development
WB	World Bank
YPO	Yearly Plan of Operation

## **1. Executive Summary**

During the months of April and May 2005 an appraisal mission for a Sustainable Natural Resources Management Project in Mongolia was held. Thematically the mission focussed on the artisanal mining sector.

Artisanal mining is a poverty driven informal and artisanal mining activity exploiting gold and to a lesser extent coal and fluorspar which emerged during the last 5 years. Nowadays it provides the income for an estimated 100,000 miners in rural areas. Due to a lack of legal and policy instruments these miners are marginalized and living at the border of the society.

In order to convert the artisanal mining activities in a motor of rural development and sustainable livelihood the mission assessed the opportunities to support Mongolia in the management of the sector.

Until now the artisanal mining has been extensively studied but no assistance project has been started. Along the lines of the appraisal mission proposals a long-term intervention starting with an Preparatory Phase of 1.5 years has been adopted. This intervention focuses during this phase on assistance for the moderated development of a law to formalise the artisanal miners, the establishment of an organisational framework allowing the efficient sector management and transfer of knowledge. For the last mentioned focus extensive experiences from the SDC supported artisanal mining projects in Latin America are available and promise important synergies for the Mongolian intervention.

For the implementation a partnership with the Mineral Resources and Petroleum Authority of Mongolia (MRPAM) is agreed. Partners are the Mining Rescue Service, aimag and soum administration, the formal and informal mining industry as well as Mongolian academic institutions. Further cooperation is envisaged with Mongolian NGO for the development of organisational structures of the artisanal miners.

## **2. Introduction**

The outline of the present project bases upon a mission in April 2005, commissioned by SDC Bern to assess the opportunities and options for small-scale mining assistance in the framework of Sustainable Natural Resources Management in Mongolia. Thereby SDC wanted to validate the experiences gained from 3 SDC supported actions targeted on integrated environmental management of the ASM in Latin America (Ecuador, Bolivia and Peru). Therefore the mission was composed of a joint team from Projekt-Consult GmbH, the German consultancy company entitled with the implementation of the 3 Latin American projects as well as from the Foundation MEDMIN, the local Bolivian consultancy organisation established with the SDC project and a local consultant.

The mission was performed between April, 17<sup>th</sup> and May 15<sup>th</sup> of 2005 in Mongolia<sup>1</sup>. A South-South Cooperation workshop was held on April 29<sup>th</sup> in Chinggis Khan Hotel in Ulaanbaatar.

Subsequent coordination within SDC headquarter in Bern and Ulaanbaatar led to the decision of implementing the proposed project. Following the lines of the entry proposal SDC earmarked funds of 8 Mio CHF over a period of about 8 years. The project shall start with the Preparatory Phase of 1 ½ years, a main implementation phase of 4 years and an exit phase.

### **3. Context in Mongolia; general social, cultural, economic, environmental conditions and policy framework**

#### **3.1. *Geographical***

Mongolia is a landlocked country in Central Asia occupying a territory of 1.564 thousand square km mainly represented by deserts and desert-steppes (40% of the total territory), steppes (26%), forested steppes (8%), boreal forests (4%) and mountains (22%). The population of the country is 2 million 504 thousand (December, 2004) and the population density is 1.6 inhabitants per square km ranking one of the lowest in the world in this term. The literacy rate of the population is 96.2%.

The country has abundant grazing lands and vast reserves of minerals which have important implications to the country's economic growth and development. The key to the country's economy is still pastoral herding and presently, it occupies about over 30% of GDP in Mongolia. Since the 1990s the mining sector has emerged offering another potential for the economic gains of the country.

#### **3.2. *Economic***

The mining sector in Mongolia undergoes a strong boom period since about 5-10 years. Currently (2004) it provides for 17% of GDP (1995: 6.1%; 2001: 9.6%), 65% of industrial value added, 58 % of the total exports and one third of the foreign investment in Mongolia. Besides copper and molybdenum, gold, coal and fluorspar are the most important commodities. In gold, coal and fluorspar mining, informal/illegal 'artisanal' miners contribute notably to the national production. Gold with a current annual production of 18 t (official data not including artisanal miners) has estimated reserves of about 1600 t under comparatively promising geological conditions and will in the long term remain an important economically exploited natural resource for both artisanal miners as well as for the formal mining industry.

There are more than 130 mining companies engaged in exploration and mining by employing 20000 persons. Besides, there has been burst out of the informal mining in rural areas offering alternative income and employment sources for the people who lost their jobs during the massive restructuring or deprived from their herd during the consecutive *zuds* (severe climate conditions in winter depriving the herd from pasture

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<sup>1</sup> Felix Carrillo from Bolivia stayed only until May 1st of 2005

and grass). Unofficial estimate says the informal mining gives the employment opportunities for 100,000 people at least.

### **3.3.     *Social***

Irrespective of the modest growth and prospect in the formal economic sectors, poverty (36.1% of the population) and unemployment (14.1% of the population) have remained a serious concern since the 1990s when the country broke away with the socialist bloc and chose the path of free market development. Lack of income and employment opportunities and de-industrialization in the 1990s brought up the survival strategy – uncontrollably tapping on “the commons” of the nature at its expense causing the overgrazing, depletion of biodiversity, land and water degradation, pollution, and landscape destruction.

### **3.4.     *Environmental***

Within the difficult framework regarding environmental management in Mongolia (loss of biodiversity, degradation of ecosystems, difficult environmental conditions in combination with a focus on economic growth and competition with global markets), the conclusion of appraisal missions was to focus on a thematic cluster which is economically promising, where there is a lot of momentum, where the focus is on the vulnerable and poor, and where there is a niche to fit in with our comparative advantages. It was decided to go onto small scale mining, a field where SDC GEP has more than 10 years experience in different countries in Latin America.

### **3.5.     *Institutional***

The institution in charge for the mineral resources management is the Mineral Resources and Petroleum Authority of Mongolia (MRPAM) under the Ministry of Industry and Trade. Even though MRPAM is generating a large amount of revenues from license fees the institution is under financed and lacking instruments and resources to effectively deal with the artisanal mining sector. Rural extension is not developed. In rural areas Soum and Aimag administration play a mayor role in the management of the resources but analogously lack resources and skills. The environmental inspection is covered by soum based inspectors under the Specialised State Inspection Agency.

### **3.6.     *Policy***

At the moment the political will to change the situation in favour of the artisanal miners is very prominent: the parliament is discussing changes in the general mining law and requesting the development of an upgraded artisanal mining draft law, livelihood issues of the artisanal miners are discussed broadly and recent conflicts between formal mining industry and artisanal miners have led to attempts to solve the problems without repressive action.

#### **4. Relevance in terms of development policy, relation to current situation, particularly contribution towards poverty reduction, reference to the Millennium Development Goal**

Taking into account the mentioned above, the country's main development policy and strategy guideline has been formulated towards the ensuring accelerated pro-poor growth and sustainable livelihood. One of the means to achieve this goal is promoting the sustainable management and rational use of natural resources. National documents such as Economic Growth and Poverty Reduction Strategy Paper, Millenium Development Goals, Government Agenda are concurrently spelling out this mainstream of strategies.

On the basis of the situation the goal of the Medium-Term Concept of SDC is to contribute to improve and secure livelihoods of the poor and vulnerable people in Mongolia. SDC has complemented its initial activities of disaster relief with development activities, focusing on the poor and vulnerable, with the cross cutting themes of governance, institutional capacity building and income generation, with the main thematic focus on rural areas and related natural resource management.

In 2004 a decision was taken at SDC Headoffice that GEP shall get involved in Mongolia with a project in Natural Resource Management with an annual budget of 1 Mio CHF.

##### ***4.1. Mongolian artisanal mining compared to the South American experience***

During the last 10 year the artisanal mining phenomenon has been comprehensively studied by various donors and initiatives (CIDA, CASM, ILO, JICA, USAID, WB, GEUS etc.). Except from an ILO/IPEC project on the elimination of child labour no implementation measure has ever been started or prepared in order to assist the artisanal mining sector. Nevertheless without any doubt the artisanal mining sector provides important opportunities from both the macro- and socio-economic point of view. The following table summarizes the dimension:

<b>Number of artisanal miners</b>	<b>50.000 - 100.000</b>
<b>Gold production of artisanal miners</b>	<b>5 to 10 tons/year</b>
<b>Annual production value</b>	<b>60 – 120 mio US\$</b>
<b>Compares to cashmere production value (2003)</b>	<b>36,5 mio US\$</b>

The mining and processing techniques of artisanal gold mining in Mongolia are similar to those applied in South America. Even the ways in which labour is organized and production carried out are similar. However, there are also a number of distinguishing characteristics which inform the particular challenges and possibilities which are now faced<sup>2</sup>:

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<sup>2</sup> according to review of artisanal mining by Worldbank (Jeffrey Davison)

***Recent emergence and lack of ASM tradition.*** It started in 1991 at the gold recovery plant on the Boroo river (mercury and gold), then spread to hard rock gold areas in the Boroo district (1996), and only began in some of the commercial placer mining areas in 1997, taking off with the *dzuds* of 1999-2002.

***Few independent “professional” miners.*** The vast majority are miners by necessity, not by choice, unlike in many other countries where a long tradition of independent mining as a principal livelihood and way of life exists.

***Self renewing ore reserve*** in the placer areas, related to the inefficiency of commercial mining methods and technologies.

***Locational concentration of majority of activity on already licensed and mined lands.*** Activity is concentrated in the commercial placer mining areas, within the leaseholds of the commercial mining companies and typically on land that has already been disturbed and mined. This has recently changed when the first ASM activities in virgin areas have been observed.

***Sanctioned limitation of activity to already disturbed areas.*** The government has purposefully tried to restrict artisanal mining activity to already disturbed sites, in order to prevent new environmental damage and exploitation of resources that might otherwise be amenable to commercial scale mining.

***In Mongolia, artisanal miners have been the followers.*** In almost all of the mining areas, commercial operations preceded artisanal mining. In many other countries, the situation is reversed, with commercial miners following the activities of artisanal miners, who as “barefoot prospectors” are the main indicators of prospective ground. This is changing at the moment (see above), i.e. in Gobi area.

***Seasonal nature.*** The height of mining activity is during the summer in the placer areas; with a growing year round component in both placer and hard rock areas

***Multiple objectives, multiple results - poverty alleviation, entrepreneurship and education.*** In a very short period of time, this activity became a significant force for poverty alleviation in both urban and rural areas and a key component of a diversified livelihood strategy for sedentary agricultural communities; it has fostered commercial entrepreneurship and SMEs both in mining and more distant urban areas, and provided critical financial support enabling the education of urban youth, at all levels. It has also resulted in a variety of important economic and social benefits within the mining areas.

***Family focus.*** More so than in many other artisanal mining areas, the family is the self-selected regulatory mechanism for work and social organization and interaction. Work brigades are most often formed by members of an extended family, including children at certain times of the year and in certain capacities. The family basis of production lends social and economic stability to the venture, as work is centred on securing and improving the economic well-being of the family, including those not present or directly involved in the mining activity.

***Adaptability, ingenuity, and ability to integrate new ideas.*** These relative newcomers to mining have shown an uncanny ability to adapt to changing circumstances, to try out and adopt new or modified technologies which are seen to improve their own productivity, or to solve problems that would otherwise limit their ability to produce.

***Involvement of adolescents and children in the handling of mercury.*** This practice is thus far limited to the hard rock gold mining area, where mercury is used for the recovery of fine gold; while adolescents are often involved in the amalgamation process, some, especially younger ones, are also responsible for the roasting of the amalgam, which if not carefully managed will expose the child to toxic mercury fumes.



*Excessive and sustained use of intimidation and force against miners* This is mainly by the privately hired security forces of the commercial mining companies, whose job is to protect the assets of the company. With increasing frequency, protection has transformed into verbally and physically abusing miners, destroying their property and stealing their gold, including on areas outside of the company's license.

## 4.2. Available information on the artisanal mining in Mongolia

As mentioned earlier during the last 10 year the artisanal mining phenomenon has been comprehensively studied by various donors and initiatives.

### 4.2.1. List of important documents

Nr.	Title of document	Author	Funding agency
1.	Mongolia Mining Sector: Managing the Future, (2004)	Husband, Songwe, Davidson	Worldbank
2.	Self-Midterm Evaluation of the ILO/IPEC program to Eliminate child labour in mining (March 2001)		ILO/IPEC
3.	Mongolia; Child labour in the Small-Scale Mining; presentation at CASM in Washington (2004)	Mongolmaa	ILO/IPEC
4.	Evaluation of the ILO/IPEC project on the elimination of child labour in Mongolia, Phase 1 (November 2001)	Aschmoneit, Munkhjargal	ILO/IPEC
5.	Small-scale mining in Mongolia – A survey carried out in 2004	Peter W. Uitterdijk Appel	GEUS
6.	Overview of artisanal mining activity in Mongolia (April 2003)	Murray & Grayson	Canadian Fund
7.	Artisanal Gold Miners of Mongolia (September 2003)	MDBA, Eco-minex, Murray-Harrison Ltd. (Robin Grayson)	Canadian Fund
8.	Presentation during CASM AGM in Sri Lanka (2004)	Delgertsoo	CASM
9.	Presentation during CASM AGM in Sri Lanka (2004)	Baatar	CASM
10.	Presentation during CASM AGM in Sri Lanka (2004)	Peter Appel	CASM
11.	Law of Mongolia ON ARTISANAL MINING OF MINERALS	GOM	
12.	Minerals Law of Mongolia	GOM	
13.	Improving the Legislative Framework for the Informal Mining Sub-sector in Mongolia	GOM	
14.	Action Research on Mercury Pollution in Boroo Area, Mongolia (2005)	Tumenbayar	JICA
15.	Mongolia: Exploring Next Mineral Frontier (2005)	MRPAM / GOM	
16.	Review of the Environmental and Social Policies and Practices for Mining in Mongolia (October 2003)	Rheinbraun Engineering; Ruhrmann, Becker	Worldbank
17.	Mongolian Mining Sector Competitiveness And The Use Of Stability Agreements (April 2004)	William Arnold	USAID
18.	The living conditions of informal gold miners in Zaamar-soum of Mongolia (2005)	Mohamed Nawaz	Fredskorpset

### 4.3. *Artisanal mining related donor activities*

Until now no donor agency started any implementation measure to tackle the artisanal mining problem in an integrated manner. The following table summarizes the donor activities and planned involvements in the sector:

Donor	Past interventions in mining sector	Planned future involvement in the sector
SDC	Organisation of workshop on artisanal mining, provision of specific artisanal miners related documents in Mongolian, assessment of intervention opportunities	Project on sustainable natural resources management with focus on artisanal mining as motor for rural development and upgrade of sustainable livelihood
BGR	First appraisal of ASM project demand	Project starting 8/2005 on assistance to the mines inspections in partnership with the State Inspection Authority. Identification mission for further project on environmentally sound mining in 6/ 2005
GTZ	Co-funding the workshop on artisanal mining	Interest in coordinating action and / or intervening in the artisanal mining sector: no strategies or target areas defined
GEUS	Execution of a review of artisanal mining regarding environmental impacts in Gobi and Northern Mongolia: development of 2 project proposals; during the mission training courses held on use of retorts and retorts disseminated	Plans to implement the two projects (one on site cleaning in Boroo river spill site, another on training of artisanal miners in the use of retorts)
ILO/IPEC	Implementation of various child labour elimination project phases in the coal and gold mining sector in partnership with MONEF	Continuation with action against child labour in mining
Canadian	Funding of the first detailed study on artisanal mining in Mongolia (led by Robin Grayson)	No further intervention planned
JICA	Implementation of an environmental study on mercury pollution and poisoning of miners and their families	No further intervention planned
Worldbank	Studied Mongolian mining sector summarized in the report: Mongolia Mining Sector: Managing the future which includes a chapter on artisanal mining by Jeffrey Davidson	No further intervention planned
US embassy	USAID studied the competitiveness of the Mongolian Mining Industry	US embassy is willing to raise funds from USEPA for action with regard to mercury use of artisanal mining (uncertain)
BMBF (Federal Ministry for Education and Research, Germany)	Academic research project and cooperation between the Institute of Aquatic Resources Research and Management at the University Kassel / Germany and the National University of Mongolia on environmental impact of mining in North-East Mongolia	Continuation of research until end of 2006 with focus on dissemination of results and management and monitoring practices
Konrad-Adenauer Foundation	Establishment of community based organisations against large scale mining	Further organisation of basis democratic organisations linked to rural affairs and mining
Norwegian Government	Funding of a socio-economic and –cultural study of artisanal mining in the Zaamar-area	No follow-up envisaged

Donor	Past interventions in mining sector	Planned future involvement in the sector
World Vision	Funding in kind contributions to artisanal miners such as shovels, cheap equipment (no integration into a comprehensive assistance approach)	
St. Mary's University of Halifax		Cooperation with the Institute for Geology on the training of professors to upgrade skills for ASM (2004 – 2009)

## 5. Coherence with the agreed PPP and the strategic orientation of SDC, including the MDG and the EGSPRS

## 6. Outline of the project

### 6.1. Results of the multi-stakeholder workshop

During the mission “Assessment of options for small-scale mining assistance in the framework of Sustainable Natural Resources Management” a multi-stakeholder workshop was held in Chinggis Khaan Hotel, Ulaanbaatar on April 29th 2005. The workshop had been attended by around 100 persons.

After the presentation of the South American experiences (with a focus on legislation and the environmental management,) the Mongolian perspective was presented. Based upon the presentation four working groups have been formed working on 4 questions each regarding the problems, potential solutions, and applicability of Latin American experiences and on elements desired within the framework of the assistance project. The results of the workshop have considerably enriched the planning process for the project.

### 6.2. Problem analysis

Based upon the results of the working group as well as on the field trips and interviews with key stakeholders a problem tree for the artisanal mining sector has been developed. As main problems the reduced contribution of artisanal mining to the sustainable rural development has been identified. This is seen as a result of:

1. The Government of Mongolia is currently not able to efficiently manage the exploitation of mineral resources with respect to the artisanal mining (knowledge and skills are not yet developed, the organisational structures to ensure an efficient management are not in place and the legal and policy instruments are missing)
2. The applied mining practice causes severe environmental damage, social problems and conflicts and unacceptable livelihood conditions for the artisanal miners and their families (inefficient technology, informality etc.)
3. The public opinion on artisanal mining is not recognising the potential of the artisanal miners for the country.

### ***6.3. Preparatory actions taken during and after the appraisal mission***

In addition to the systematic design of measures during and after the appraisal mission the following actions have been taken for the preparation of the intervention:

- Development of a preliminary project design together with the potential partners from the Mongolian and Swiss side
- Presentation of the proposal to delegates of the relevant ministries and endorsement of the project proposal during a meeting at MRPAM on May 13<sup>th</sup>
- MRPAM has started to establish and staff a small mining unit to assume leadership in dealing with artisanal mining in Mongolia
- Provision of the Mongolian partners with comments on the artisanal mining draft law, a master of a recently enacted well developed artisanal mining law (from Peru) in Mongolian language as well as background information on challenges and opportunities of artisanal mining (book in Mongolian)
- An entry proposal has been finalised in cooperation with SDC Bern and SDC Mongolia for its submission to the relevant bodies at SDC Bern.
- Formal endorsement of the Swiss Government for the strategic decision to engage in the Sustainable Natural Resources Management in Mongolia based upon the entry proposal
- Decision to commission the implementation of the Preparatory Phase to the German consultancy company Projekt-Consult GmbH
- Approval of funds to start up the Preparatory Phase on 1<sup>st</sup> of July 2005

### ***6.4. Applicability of experiences from SDC-supported projects in Latin America***

During the discussions held with key stakeholders from the artisanal mining sector and its administration in Mongolia it became evident that for the implementation of such a project SDC has a lot to offer:

- SDC offers its environmental competence, its commitment and its support (human, material and financial) over an extended period of time.
- SDC offers good relations with the Mongolian government and other donor programs in Mongolia
- SDC can offer the experiences gained from 12 years involvement in the implementation of practical measures to support the artisanal miners in Ecuador, Peru and Bolivia.
- SDC furthermore offers the strong ties with and access to key global players in the strategy development of artisanal mining related issues.

The following table summarizes the expected synergies in relation to the matching of the Latin American experiences with the Mongolian project.

	Relevant elements / mechanisms	Kind of involvement in project
<b>Legislation for ASM (law and regulations)</b>	<ul style="list-style-type: none"> <li>• Multi stakeholder platform to discuss law project,</li> <li>• Evaluation of Latin American experiences with ASM legislation,</li> <li>• Enacted law as example for straight forward ASM law,</li> <li>• Regulations as example</li> </ul>	Provision of Mongolian translation of Peruvian documents and comments based on the experiences from Peru
<b>Legalisation campaigns</b>	<ul style="list-style-type: none"> <li>• Step-by-step assistance of ASM operators to legalise operations</li> </ul>	Similar assistance of ASM operators according to the legal frame provided
<b>Mediation of conflicts</b>	<ul style="list-style-type: none"> <li>• Methodology of facilitating conflicts,</li> <li>• Agreements between large operations and ASM operators as master</li> </ul>	Involvement of expert in the development of a harmonic ASM legal framework
<b>Organisation of ASM miners</b>	<ul style="list-style-type: none"> <li>• Creation of “coordinating commissions” as interest groups during the development of the draft law,</li> <li>• Their later transformation into provincial associations,</li> <li>• Establishment of a national association</li> </ul>	Involvement of the NGOs using the Peruvian experiences and linking the organisation component with the legal assistance
<b>Environmental management</b>	<ul style="list-style-type: none"> <li>• Plan ECO+ as example for simple collective environmental management of a larger ASM community with comparable technology and environmental impacts,</li> <li>• Environmental Adaptation and Management Plans (PAMAs) as simple tools for management of individual operations</li> </ul>	Discussion with relevant stakeholders (MRPAM, Environmental Ministry, Specialised State Inspection Authority etc.) about appropriate mechanisms for ASM environmental management providing experiences from projects in LA
<b>ASM technology, environmental technology</b>	<ul style="list-style-type: none"> <li>• Vast treasury of traditional and appropriate ASM technology with high recovery of values and low costs (produced in the countries);</li> <li>• Extended experience with transformation of polluting mineral concentration plants (mercury problem, amalgamation) into clean and better performing plants</li> </ul>	Engineering of pilot measures from Bolivian metallurgical experts; import of masters of appropriate and (for Mongolia) innovative ASM technology (for later copies in Mongolia)
<b>Decentralisation of ASM administration</b>	<ul style="list-style-type: none"> <li>• Assistance and active involvement of mining offices of the provincial government as well as of the provincial office of the national mining ministry in the project implementation;</li> <li>• Training and empowerment;</li> <li>• Subproject-monitor as a versatile communication tool</li> </ul>	
<b>Communication and public awareness building</b>	<ul style="list-style-type: none"> <li>• Computer based communication and information platform on ASM in Peru</li> <li>• Periodic newsletter serving currently around 300 key stakeholders in Peru</li> </ul>	Provision of experiences for the establishment of media and advocacy communication channels in Mongolia
<b>Qualification of service providers</b>	<ul style="list-style-type: none"> <li>• Training of environmental animators; transfer of responsibilities for the implementation of subprojects to private and non-governmental service providers</li> </ul>	

	Relevant elements / mechanisms	Kind of involvement in project
<b>Training and didactic materials</b>	<ul style="list-style-type: none"> <li>Masters for didactic materials (curricula, texts, graphics etc.)</li> </ul>	Provision of know-how from Bolivia and Peru for the development of didactic materials
<b>Complementary social services</b>	<ul style="list-style-type: none"> <li>Nutritional services for school children in mining communities</li> </ul>	

Furthermore the linkages of the SDC-supported projects and the implementing consultancy to CASM/WB will generate additional benefits for the know-how transfer.

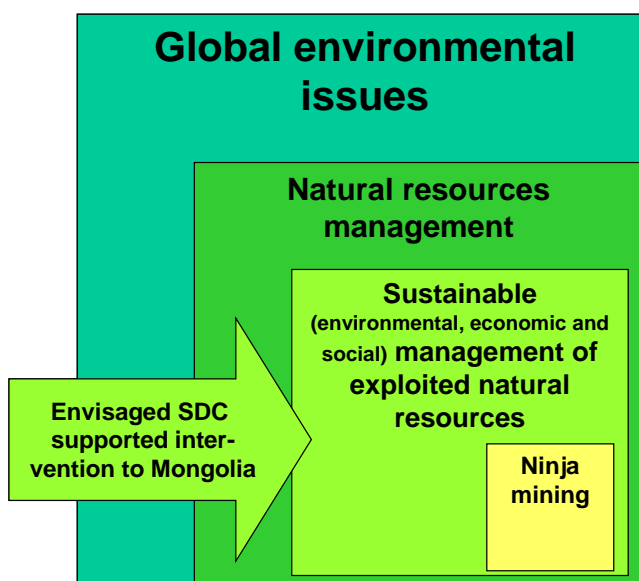
### 6.5. General frame for the intervention

SDC took a strategic decision to assist Mongolia with a project on Sustainable Natural Resources Management. This project shall empower the Mongolia key stakeholders to integrate extractive and exploitive natural resource based activities to be fully integrated into the rural development planning in order to optimise their contribution to sustainable livelihood in remote areas. The project may at a later stage include further sectors such as forestry, energy efficiency etc. In an initial phase a component on the artisanal mining sector will guide the further thematic development of the issue.

**It has been approved to support the intervention as a component of a sustainable natural resource management project in Mongolia through the Swiss Global Environment Program (GEP)**

The opportunities for artisanal mining as a motor for rural development and the recommended strategies fostering the development of the sector towards sustainable livelihood are outlined by key experiences: (1) the inventory of CASM (platform “communities and small-scale mining” hosted at WB, leading the global discussion on artisanal mining) summarizing the last 10 years of ASM interventions worldwide and

basing upon the latest policy discussions (Mining, Minerals and Sustainable Development MMSD, Extractive Industry Review etc.) suggests the inclusion of ASM initiatives into the rural development framework, (2) the experiences from the SDC supported Latin American ASM projects (Ecuador, Bolivia and Peru) highlight the need of broad integrated approaches flanked by legal-administrative procedures together with all relevant levels of administration (national, provincial and local) to define a new relation between the miners and the civil society and to pave a road towards formalisation of illicit operations and (3) the recent experiences from Mongolia advise for an incentive based multi-stakeholder initiative minimizing social and economic conflicts.



## **6.6. Project goal and objectives**

The knowledge of the problem hierarchy has allowed planning required interventions. The development goal of the intervention should read as follows:

**Artisanal mining is developing as a motor for sustainable rural development under an integrated sustainable resource management by the Government of Mongolia**

The intervention shall have the following objectives:

**Objective 1:** Support the establishing of an transparent and straight-forward **regulatory framework** for the artisanal mining sector in collaboration with all interested parties, which sets favourable conditions for the transformation of informal mining activities into legal ones, improving their livelihood security and clarifying the rights and obligations of all stakeholders.

**Development of a straight-forward legal framework.** The project will provide input into the development of a mutually agreed law, regulations for its implementation, consensus building and conflict management measures between local and central administration as well as license holders. It will also contain guidance principles for all partners towards compliance (legalization campaign, monitoring and follow-up).

**Integration of artisanal mining into rural development planning.** The project will provide support to generate an enabling environment for the integration of the artisanal mining sector so that it effectively contributes to socio-economic development and securer livelihoods.

**Objective 2:** Encourage the **formation of institutional structures** and organizations within the artisanal mining and related sectors and encourage cooperation at all levels.

**Creation of structures at all levels within the artisanal mining sector.** The project will contribute solve the artisanal mining related problems in a constructive manner. In achieving this it will contribute to strengthen institutional capacity (establishment of a department for artisanal mining and local subunits within MRPAM, support of organizations like the Mining Rescue Service to effectively deliver services to the miners, formation of artisanal miner groups), encourage inter-institutional coordination and increase the mediation capacity of relevant stakeholders in mediation and conflict resolution and prevention. A network for effective coordination of actions geared towards improving the artisanal mining sector will be established under the lead of the MRPAM for donors and government agencies and among the artisanal miners to enable them to voice their concerns.

**Objective 3:** Transfer skills and know-how to artisanal miners and other stakeholders in support of better performing and safer operations

**Building capacity** among the relevant stakeholders to effectively and competently deal with regulatory, economic, environmental, technical and social issues of artisanal mining, leading to securer livelihoods and a more sustainable use of natural resources.

**Transformation towards appropriate means of production and better livelihoods.** After generating a positive working climate between the relevant stakeholders the

project will focus on integrated natural resource management, complete use of the deposit, occupational health and safety, remediation and rehabilitation. The actions combine technology transfer and development of skills, which will be further spread to other mining sites by multipliers. Awareness raising on social issues (e.g. HIV/AIDS), environment (e.g. . water and fuel use) and skill training in relating and integrating into the formal sector (e.g. using banking services for gold transfers) among the stakeholders are important to improve their livelihoods in a sustainable way.

**Objective 4:** Establishe a knowledge base for the integrated natural resource management and rural development

**Sustainable use of natural resources as livelihood security.** The project will assess the current environmental status and challenges in the target area and produce specific recommendations to integrate natural resource management into a long-term socio-economic development strategy, considering the different livelihood strategies, options and restrictions. The assessment will also provide benchmark data on the environmental situation in the target area and allow for comparison between artisanal mining, herding and other impacts. The assessment will help the design and integration of environmental actions into the main phase of the program.

### **6.7. *Expected benefits (effects, impact, sustainability)***

Expected effects of the project are:

- The project itself will neither solve the problem nor legalise the artisanal miners. It will not erase informal artisanal mining as it is not able to influence the poverty drivers associated to the rural population of Mongolia. But it will enable the Mongolian relevant partners to effectively deal with the problems in a competent manner.
- Solutions can only be achieved with multi-stakeholder cooperation. In addition action has to be sustained and integrated (in all the 3 aspects: environmental, economic and social). The project will assist in facilitating this integrated approach and coordination.
- The project itself cannot provide a blueprint of a solution. But it will provide vast experiences from other countries with artisanal mining projects and it will benefit from proven solutions developed in these projects.
- Furthermore it will mobilize all available Mongolian and international know-how to empower the key players in Mongolia.

### **6.8. *Phased intervention***

In order to prepare a longer engagement in the sector a Preparatory Phase of 18 months is envisaged. The phase shall start on July 1<sup>st</sup>, 2005.

#### **6.8.1. Preparatory Phase 7/2005 to 12/2006: Support for Artisanal Mining**

The objectives of the Preparatory Phase would be to:

- Generate a better understanding of the sector,



- To develop a sound basis of confidence between the relevant partners at all levels (national, regional and local as well regarding the artisanal miners themselves)
- To test the applicability of the envisaged institutional outline for the implementation phase
- To assess the opportunities for South-South cooperation including the aspect of applicability of technical, organisational and managerial solutions developed and proven in the South American projects
- To allow for the experience-based planning of a full-scale implementation, a harmonisation with other donors and in line with the MDG's

According to the mission results the Preparatory Phase should work on four different action lines:

1. the assistance of the Government of Mongolia in the development of a multi-stakeholder agreed draft for a artisanal mining law or any follow-up support action provided the present draft law is approved
2. the initiation of a development of structures allowing an efficient and sustained resource management regarding the artisanal mining sector and
3. the first transfer of know-how to artisanal miners to assist the transformation process to less polluting and better performing operations
4. the assessment of the environmental, social and economic impact of artisanal mining on selected rural communities and the potential for sustainable natural resource management in the area.

These four pillars should lead to the following outcomes:

#### **Objective 1: Regulatory framework established**

*A transparent and straight-forward regulatory framework sets favourable conditions for the transformation of informal activities into legal artisanal mining*

**Development of a straight-forward legal framework.** The legal process requires a mid term input to development (development of a mutually agreed law, regulations for the law, consensus building and conflict management measures) and a guidance of all partners towards compliance (legalisation campaign, monitoring and follow-up). The integration of the artisanal mining issue into the rural development planning as a tool to generate an enabling environment for the artisanal miners and soum/aimag administration optimising the livelihood conditions in rural communities is a key challenge.

#### **Output 1.1: Development of legal framework**

GOM is assisted in the development of a straight-forward ASM draft law

#### **Objective 2: Institutional structures and organizations within the artisanal mining sector encouraged and supported**

*Artisanal mining related institutional structures and bodies are established and cooperate at all levels*

**Creation of structures for regional sustainable natural resources management.** Here it would be important to contribute with the intervention sustaining the efforts of the involved stakeholders to solve the artisanal mining related problems in a constructive manner. Institutional strengthening (including the establishment of a artisanal mining related department within MRPAM, which shall take a lead in addressing the artisanal miners issues; support of the Mining Rescue Service), inter-institutional coordination, decentralisation, involvement of the local administration will be key strategies to follow.

**Output 2.1: Basis for cooperation**

A basis for cooperation established with stakeholder at all levels leading to an increased acceptance of the artisanal mining sector and the artisanal miners

**Output 2.2: Organisational structures**

Development of organisational structures for an efficient sustainable resources management related to the artisanal mining

**Output 2.3: Donor coordination**

Projects and donor supported activities in the mining sector are coordinated in view of the development of the artisanal mining sector

During the Preparatory Phase the partners shall start with measures to raising the public opinion on the artisanal mining phenomenon.

**Objective 3: Development of capabilities: Skills and know-how to artisanal miners and other stakeholders transferred in support of better performing and safer operations**

*Artisanal miners in selected areas have access to improved technology, safer practices and guaranteed mining holdings. Awareness of relevant stakeholder and their support to artisanal miners is increased.*

**Assist artisanal miners transformation towards sustainable means of production and better livelihood conditions**

After generating a positive working climate between the relevant parties the focus shall shift towards stronger resource oriented foci (environmental protection, complete use of the deposit, occupational health and safety, remediation and rehabilitation). The actions combine technology transfer and development of skills and are complemented by empowerment of further multipliers and of organisational structures. They should assist the artisanal miners to reintegrate into the formal society. Implementing advocacy and information campaigns to raise public opinion on artisanal miners shall be complemented by actions to generate ownership on artisanal mining issues by everybody and all institutions concerned.

**Output 3.1: Technology and skills**

Current level of technology and skills assessed and training material developed to improve know-how and operational safety

**Output 3.2: Artisanal mining sites selected**

After the selection of Pilot sites its Artisanal Miners are supported in use of better performing, more appropriate and safer tools and methods

**Objective 4: Knowledge base for the integrated natural resource management and rural development established**

*Environmental, social, economic and livelihood indicators determined and impact of natural resource use assessed and possible actions formulated*

**Sustainable use of natural resources as livelihood security.** The project will assess the current environmental status and challenges in the target area and produce specific recommendations to integrate natural resource management into a long-term socio-economic development strategy, considering the different livelihood strategies, options and restrictions. The assessment will also provide benchmark data on the environmental situation in the target area and allow for comparison between artisanal mining, herding and other impacts.

**Output 4.1: Assessment and monitoring**

Socioeconomic and environmental settings in selected sites are assessed and monitored

**Output 4.2: Potential sustainable natural resource management**

An understanding of key environmental issues and challenges is obtained

**Output 4.3: Institutional set-up**

An accurate understanding of the institutional set-up for effective integration of artisanal mining into the rural development and natural resources management framework is gained

It is expected that the Preparatory Phase will not only create a basis of confidence between the involved partners including the artisanal miners, but will also result in a better understanding of the interfaces of the artisanal mining with other sectors and issues, such as the rural sustainable development, pasture and poverty driven structural changes etc.

The Preparatory Phase shall undergo an evaluation process at the beginning of 2006 which will produce guidance for the planning of an envisaged subsequent full-scale intervention.

Right from the beginning of the project a shared ownership between the Swiss and Mongolian partner is envisaged. In order to achieve this, the full integration of the Swiss team into the Mongolian organisational setting shall be foreseen. Thereby the proposed organisational outline of the implementation shall guide the set-up of the Preparatory Phase (MRPAM as direct counterpart, Mining Rescue Service together with the soum administration as principal implementing partner).

**6.8.2. Project elements of a later full-scale implementation**

After the completion of the Preparatory Phase the implementation phase shall according to the current knowledge then focus on the following issues:

- *Creation of structures for regional sustainable natural resources management*  
here it would be important to contribute with the intervention sustaining the efforts of the involved stakeholders to **solve the artisanal mining related problems in a constructive manner. Inter-institutional coordination, follow-up of the organizational measures, decentralisation, and involvement of the local administration** will be key strategies to follow. The **legal process** will require a further development (regulations for the law) and a guidance of all partners towards compliance (legalisation campaign, monitoring and follow-up). The **integration of the artisanal mining issue into the rural development planning** as a tool to generate an enabling environment for the artisanal miners and soum administration **optimising the livelihood conditions** in rural communities is a key challenge.
- *Assist artisanal miners' transformation to sustainable means of production and better livelihood conditions*  
After having generated a positive working climate between the relevant parties during the Preparatory Phase in the implementation phase the focus shall shift towards stronger resource oriented foci (**environmental protection, complete use of the deposit, occupational health and safety, remediation and rehabilitation**). The actions combine technology transfer and development of skills and are complemented by **empowerment of further multipliers and of organisational structures**. They should **assist the artisanal miners to reintegrate into the formal society**.
- *Awareness raising*  
**Implementing advocacy and information campaigns to raise public opinion on artisanal miners** shall be complemented by actions to **generate ownership on artisanal mining issues by everybody and all institutions concerned**.

The final design of the main phase will base upon the experiences from the Preparatory Phase and the results of the Mid Term Review,

### **6.9. Type and features of target groups**

The group of **beneficiaries** includes the artisanal miners and their families, the relevant members of the soum and aimag administration, the environmental inspectors at soum level as well as the staff of the national mining administration (MRPAM):

- the **artisanal miners** will profit in an most direct way from a new path into the formality. They will be formally recognised, have the opportunity to receive a permit to legally mine without repression or harassment and will gain access to full schooling and health services. Their work safety will be upgraded and they and **their family** will benefit from better performing technology
- the **relevant members of the soum administration** will profit from the acquired skills in negotiation and mediation which will enable them to resolve conflicts through consensus building. They will become competent partners of the artisanal miners and will be able to integrate the artisanal mining activity into the rural development framework
- the **environmental inspectors** will receive tools and methods to assist and control the environmental performance of artisanal mining in a more competent and effective manner

- **staff of the national mining administration** will benefit from thorough on-the-job-training in artisanal mining related issues

In addition the **formal mining industry** will benefit from reduced level of conflicts with artisanal miners.

## 7. Implementation strategy, harmonization, coordination and cooperation

### 7.1. *Implementation strategy*

The **implementation strategy** consists of the following key elements:

- The creation of synergies between three parallel tracks:
  - Development of technical response to the needs and challenges of ASM in Mongolia (equipment, tools, procedures, training, on-going technical assistance): *THIS PROCESS IS THE DRIVING FORCE*
  - Participatory development of an appropriate ASM law : *THIS CREATES AN ENABLING ENVIRONMENT*
  - Development of stakeholder engagement mechanisms that enable conflict resolution/management and consensus-building around ASM: *THIS ENABLES “SOCIAL OWNERSHIP” AND SUSTAINABILITY*
- The use of synergies with the LA projects and international linkages (with other global stakeholders in the ASM sector)
- Right from the beginning of the project a shared ownership between the Swiss and Mongolian partner is envisaged. In order to achieve this, the full integration of the Swiss team into the Mongolian organisational setting is foreseen.
- The implementation focuses on Mongolian ownership (local team with reduced international assistance and coaching)
- The project will support of positive attitude of local administration (soum and aimag level) versus the artisanal miners

### 7.2. *Project organisation*

The Project organisation comprises of four different levels: the political (between the 2 Governments signing the project agreement), the strategy level (Project Steering Committee and Advisory Board), the managerial and implementing level, as well as the operational level. These levels are specified in the organigram on the following page.

### 7.3. *Key stakeholders, assessing their potentials in pros and cons*

The following table gives an overview over the key stakeholders involved in the artisanal mining sector, their strengths and weaknesses as well as their potential involvement in the project:

Name	Position	Strength	Weakness	Remarks
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Name	Position	Strength	Weakness	Remarks
Ministry of Trade and Industry	Develop trade and industry policies and veil over their implementation	Political will to change the regulatory framework for mining optimising the macro-economic benefits for the country and society	Consider artisanal mining as problem hindering the development of the investment climate; Lack policy to deal with the artisanal miners; Limited skills and resources to deal with mining sector (in contrast to the macro-economic importance of the sector);	Supportive to project and assistance to artisanal mining sector
Environmental Ministry	Develop environmental policy and veil over it's implementation	Have the mandate to license the use and exploitation of non-mineral natural resources	General position against mining activities as they are performed at the moment Not accepting any use of mercury in gold mining (not even under controlled conditions) Negative track record in dealing with licenses, permits etc.	
Mineral Resources and Petroleum Authority of Mongolia	Under Ministry of Trade and Industry: central agency for the mineral sector implementing the national mining policy and advising the ministry in sector related issues; about 150 staff, ca. 12 in the mining department	Motivated, well organised; Commitment to resolve the artisanal mining problem	so far not dealing with the artisanal mining sector; lacking concepts and methodology to deal with the artisanal mining sector	MRPAM recently created a small-scale mining unit which serves as the direct counterpart for the project team

Name	Position	Strength	Weakness	Remarks
Mining Cadastre	Under MRPAM, granting licenses for formal companies	Channel the granting process for mining titles in the country	Low skills and limited resources to control licenses granted; No possibility to limit speculation with licenses	
Mining Rescue Service	Under Ministry of Energy about 50 professionals in 4 offices, head office in Naleigh	Providing rescue services in state coal mines, but as well in private formal and informal mining operations on all commodities; providing training in the use of explosives. Highly motivated and well skilled for mining rescue from formal coal mines and certain training issues, good relation of confidence with artisanal miners	Only four offices in the country, heavily understaffed and underfunded; limited skills to cover gold and other commodity mining as well as some artisanal mining relevant new issues: i.e. environmental prevision,	
Specialized State Inspection Agency	Under the Prime Ministry;	Are partner for the BGR project on mines safety and health project (to be started)	Are not entitled to deal with the informal sector	
Environmental inspectors	Under Specialized State Inspection Agency	Environmental inspectors in all soums; they have the best knowledge about the artisanal mining situation (sites and numbers of artisanal miners working) at the moment; in many soums approach towards artisanal miners is understanding and helpful	Inspectors lack mining related technical knowledge and skills related to artisanal mining	

Name	Position	Strength	Weakness	Remarks
MONEF	NGO; umbrella organisation of employers; 8000 members from the private and public industry	Partner of the ILO/IPEC project, the only ongoing project with reference to the artisanal miners; Very supportive of the enactment of a artisanal mining law	Very limited coverage of the project (only Bornuur and Zaamar as intervention regions)	
Association of Mongolian Miners	NGO; umbrella organisation of the formal mining industry; about 60 members out of the 130 mining companies	Hosted the first conference on artisanal mining in 2002; Is cooperating with the ILO-MONEF child labour project	No practical approach to deal with the artisanal mining sector	
Aimag administration		Some aimags are supportive to deal with the artisanal miners in a manner reducing the social and legal conflicts	Limited skills to deal with the artisanal mining problem. Some aimags have developed a negative perception of artisanal miners. Base of information on aimag and soum level regarding mining (concessions etc.) very limited	
Soum administration	Ca. 300 soums in the country	Some soums are willing to deal with the artisanal miners in a manner reducing the social and legal conflicts; Soums have an important role as well in the legalisation of formal mining operations which require a permit of the local administration	Little skills regarding artisanal mining. Some soums have developed a negative perception of artisanal miners	According to governmental policy the soums shall assume more responsibility for the management of artisanal mining



Name	Position	Strength	Weakness	Remarks
Formal mining companies	About 130 mining companies	Some more recently developed mines have imported technological and environmental standards to the country	Mostly in conflict with artisanal miners; especially in the placer areas some have very outdated and inefficient technology causing losses and huge environmental damages	
National University of Mongolia	Academic institution. Centre for Development Research assisted by Prof. Janzen (CIM)	Highly motivated team; Experience in applied field research in Mongolia; Excellent understanding of herding and nomadism	Limited funds to finance field research Skills with regard to artisanal mining not yet developed	Contributing with academic research in the framework of institutional strengthening for the NUM
NGO	Some local movements have appeared to reflect the interest of local communities in natural resource use	Grassroot movements with increased support from the public, finding a hearing with government	Capacity and networking is weak and no awareness of the potentials of artisanal mining yet.	
Artisanal miners	Between 80.000 and 100.000 artisanal miners countrywide (nearly operating in all areas of Mongolia)	Good and cheap geologists; highly flexible and mobile; willing to legalise given the condition that they receive gold bearing sites and do not have to pay high taxes; Provide important cash circulation to the rural economy	Artisanal miners completely lack organisation (associations, lobby groups, umbrella organisations); Conflicts with herders and non mining communities about degradation of pasture; operating without mining title, without traditional skills; are blamed for excessive environmental damage; lack sometimes access to rural services (registration, health and safety)	Target group of the envisaged project

Name	Position	Strength	Weakness	Remarks
Non mining communities			Some feel heavily effected by artisanal mining related changes (drying of rivers, pollution of water, dust, etc.)	
Herders	About 1 million herders countrywide	Herding is fully integrated with the rural environment (i.e. using dung as energy source thereby saving local vegetation);	Overgrazing and poverty in rural area drive herders in mining operations where they work completely unskilled; due to loss of livestock during dzuds and droughts many have lost their subsistence and converted to artisanal miners	
Other donors	Many donors active in Mongolia	Some have contributed with studies to a better understanding of the artisanal mining sector (Canadian, Norwegian, JICA, WB)	Currently no donor based other artisanal mining related project planned or in pipeline	Project shall contribute to donor coordination regarding artisanal mining activity and integration of the artisanal mining into the rural development framework

#### 7.4. Project partners and participants

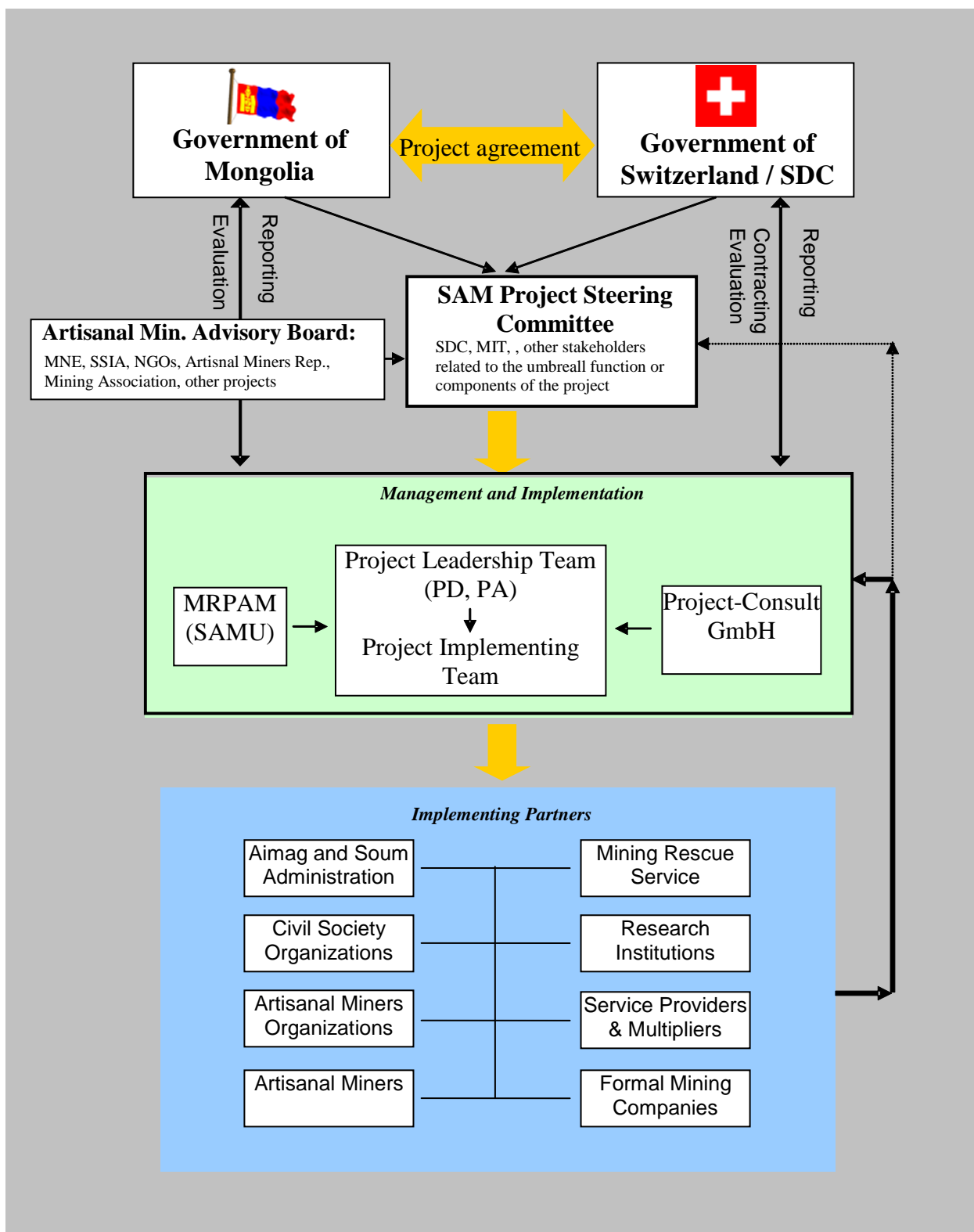
On the level of project execution a number of further partners shall be involved. In summary, project partners and participants comprise all key stakeholders concerned with artisanal mining, from national organisations to the private small-scale operations. They include:

Partner	Role
Mineral Resources and Petroleum Authority of Mongolia	Direct counterpart, responsible for the co-management of the implementation of the project
Mining Rescue Service	Partner to deliver services such as training and advise to the artisanal miners
National NGOs	Partner for the assistance of artisanal miners and miners communities in the creation of basis

	<i>organisations / associations</i>
National University of Mongolia	<i>Partner for the academic support of the project with baseline studies of target areas</i>
The local administration (soum and aimag)	<i>Key partners for the implementation of support measures in harmony with the authorities on soum and aimag level</i>
The artisanal mining miners and their organisations	<i>Beneficiaries of the project</i>
The formal mining industry and its organisations	<i>Partners for the solution of conflicts with informal mining on the concessions of formal mining companies</i>
The licensed gold buying agents and banks	<i>Partners for the upgrading of legal marketing mechanisms for the gold from artisanal mining</i>
Local medial doctors, school teachers, environmental and health and safety animators	<i>Local multipliers for knowledge to be transferred to the artisanal miners and their families</i>
Local service providers	
The national metal mechanics industry	<i>Partners for the local manufacture of new and appropriate mining equipment for the artisanal miners</i>
Other mining related projects and SDC projects	<i>Coordination to create synergies in Natural Resources Management</i>

## 7.5. Proposed organigram for the implementation

Figure 1: Organizational Overview of SAM Project Implementation Structure



For the **supervision and strategic outline** of the project/partial action 1) a **Project Steering Committee** will be established. The steering committee is an inter-institutional body composed of the signing parties of the project agreement and other mayor stakeholders at the political level. It shall meet twice a year and review the implementation, endorse project planning for the project within the agreed framework, guide the strategic outline and support the policy dialogue (see Figure 1).

The project shall be **implemented by Projekt-Consult**, which will establish a contract with SDC upon approval of the project by its board of directors. Projekt-Consult will appoint a **Project Director** (Dr. Michael Priester, PD) to lead the **Project** and the **Project Leadership Team** (PLT). It consists further of the **Project Advisor from MPRAM** (Dr. Ch. Enkhzaya; PA).

The Project Director appoints the following members of the **Project Implementation Team**: Project Manager, Technical Expert, Finance and Administrative Officer and a Translator. MPRAM appoints three Technical Experts (mining) and two specialists (geology and cadastre) to the PIT, who form the core of Small and Artisanal Mining Unit (SAMU).

This applies for the strategic outline of the project, the development of action plans, the planning for the allocation of funds and the planning for the procurements of goods and services. Both project directors as well as the implementing teams shall work fully integrated and endorse any planning for its implementation. Similarly the monitoring and auto-evaluation of the project progress shall be implemented mutually. Any potential disputes shall be settled diplomatically between MPRAM and Projekt-Consult GmbH or the parties having signed the project agreement.

The division of **roles, responsibilities and tasks of all the team members** and major further stakeholder is given in full detail in annex 9.

## **7.6. Resources**

### **7.6.1. SDC Contribution**

The **resources** from the SDC contribution towards the Preparatory Phase comprise of human and financial resources (for further details please refer to the budget in the annex):

- local advisory team (project manager, mining expert, translator, accountant), full time
- local management adviser (6 months)
- 11 months international management and technical experts (Projekt-Consult: 3,5 months management; 2,0 months moderation of legal process; 1,5 months pilot project planning, implementation and follow up; 1,0 months diagnostic and baseline in target area; 1,0 months study tour; 1,0 months establishment of institutional structure; 0,5 months development of training material); 0,5 months not yet allocated
- 28 months of local short term expertise
- funds to ensure the operation of the project and

- funds to cover support to the artisanal miners by pilot projects, assistance of artisanal miners by the Mining Rescue Service, workshops, printing of training material, training courses, academic research as well as for a study tour to Latin American projects and artisanal mining

#### SDC Contribution

		<i>all in CHF</i>
<b>human resources</b>	<b>114,5 expert months</b>	
<b>operational costs</b>	local costs for operation	<b>170.300</b>
<b>fiduciary funds</b>	local costs for material, contribution to third parties etc.	<b>478.750</b>
<b>Total SDC contribution for the entry phase (VI 2005 - XII 2006)</b>		<b>1.133.950</b>

#### 7.6.2. Mongolian contribution provided by MRPAM:

- a recently created Small and Artisanal Mining Unit (SAMU) within MRPAM and its staff. The strategy is that this unit will be capacitated to manage the project in the future. The work done for project is being remunerated.
- office premises for the project implementation team
- operational costs for the SAMU
- information
- coordination and harmonisation of programs in the sector

#### MRPAM Contribution

<b>human resources</b>	<b>72,0 expert months</b>	<i>all in CHF</i>
<b>operational costs</b>		<b>39.100</b>
<b>fiduciary funds</b>		<b>10.000</b>
<b>Total financial contribution in entry phase (VI 2005 - XII 2006)</b>		<b>49.100</b>

## 8. Risks and chances, conditions

Regarding major **risks** the project has sound **mitigation strategies** to buffer the potential effects on project

Risks	Mitigation strategy
pressure of international and formal mining industry and their political lobby limit action margin of government to legalise artisanal mining or delays the enactment of a law	consensus building, three parallel tracks of interaction: shift to operations with artisanal miners in rural areas with support of local administration as well as to the support of the organisation of the sector
government loosens commitment to formalise artisanal mining after becoming aware that the law does not formalise the miners by itself and instead a long and strenuous process is required	shifting towards actions with the artisanal mining community
changes in the legal environment do not lead to massive liberation of interesting areas for artisanal miners due to late information of the soums, political agendas prioritising formal mining companies in the granting process of licenses or corruption. Thereby the new changes do not lead to equal opportunities and competitiveness for the artisanal miners	focus on negotiation between formal mining operations and soums/artisanal miners to earmark ASM zones; support political measures to liberate areas; support transparency of decision taking processes and enable the soums to receive up-to-date data on mineral licenses; support informal artisanal miners with training and capacity building
artisanal mining miners resist accepting technical innovations	risk is low as there is a spirit of innovation and no traditional obstacles hindering technological change
costs and barriers for legalisation are too high to lead to massive transfer into the legal operation	The answer is conflict resolution. Local mediators shall be empowered and provided with tools and methodologies to gain agreements between the key stakeholders (formal license holder, soum administration and artisanal miners)
environmental concerns are not taken seriously by artisanal miners (and local administration) due to additional costs	proposal of integrated technological packages leading to lower environmental impacts as side effects
artisanal miners resist to form cooperatives and working groups	risk is low as the project will according to the suggestions of the academic study foster the role of the traditional “gal” (artisanal mining groups sharing the fireplace and working together) as core elements of organisation
mobility of artisanal miners	risk for longer term cooperation and sub-projects requiring investment in machinery. Here the project will react with tailor-made short term interventions for highly mobile placer artisanal miners and longer term interventions in the hard rock sector when the legal environment allows creating a conflict-free development

For the implementation of such a project SDC has a lot to offer:

- SDC offers it's environmental competence, it's commitment and it's support (human, material and financial) over an extended period of time.
- SDC offers good relations with the Mongolian government and other donor programs in Mongolia
- SDC can offer the experiences gained from 12 years involvement in the implementation of practical measures to support the artisanal miners in Ecuador, Peru and Bolivia.

- SDC furthermore offers the strong ties with and access to key global players in the strategy development of artisanal mining related issues.

The current framework conditions for the implementation of the project are encouraging:

- The political will is given to solve the problem of informality of the artisanal mining
- The Government and other main stakeholders on regional and community level have made serious steps towards attacking the problem
- The artisanal miners have expressed their will to legalise as the costs of informality create a heavy burden on livelihood conditions
- The public opinion in Mongolia is looking towards an increase of the share of benefits from the mineral resources exploitation in the country to the people of Mongolia