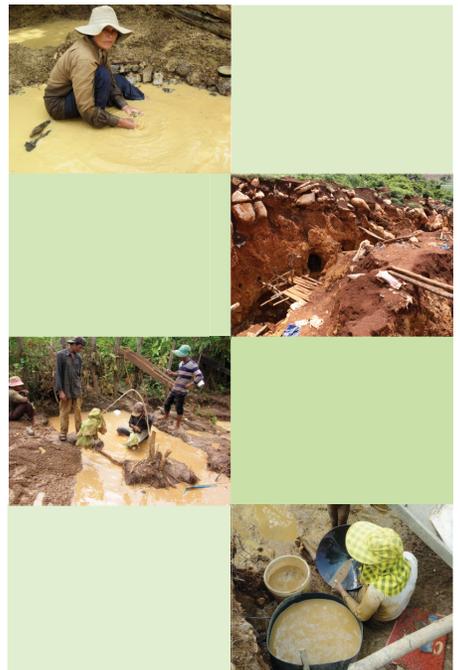




EAST • WEST
MANAGEMENT
INSTITUTE
Program on Rights and Justice (PRAJ)
អង្គការគ្រប់គ្រង និង យុត្តិធម៌ (ប្រជ)



Artisanal Small-scale Gold Mining (ASGM) in Battambang and Preah Vihear Provinces Investigation Report 2012



Phnom Penh, Cambodia
December 2012



Development and Partnership in Action

Table of Contents

Acknowledgement	iii
Abbreviations and Acronyms.....	iv
I. Artisanal Small-scale Gold Mining (ASGM) in Cambodia	1
II. Theoretical Model	4
III. Legal Framework	5
IV. Objective and Expectation of Investigation	6
V. Methodology of Investigation	7
VI. Locations and Subjects of Study in Battambang Province	8
VII. Locations and Subjects of Study in Preah Vihear Province	8
VIII. Procedures	9
IX. Summary of Key Findings	9
a) Land Use and Government Mining Licenses	9
b) Environmental, Social, and Health Issues (especially impact on children and women)	11
c) Governance Issues	12
d) Financial Issues.....	12
Case Studies.....	13
e) Phnom Preok Commune, Battambang Province (2012).....	13
f) Discussion with Phnom Preok’s District Authorities	14
g) Interview with Thai-Cambodia Border Guard.....	15
h) Interview with Youth Working as Artisanal Gold Miner in Phnom Preok	16
i) Violence toward Artisanal Miners in Preah Vihear (2010).....	16
j) Forced Eviction in Romony Commune and Rumtum Commune, Preah Vihear Province (2010)...	17
k) Cambodian WS Mining Industry Holding Ltd (2011).....	18
X. Recommendations	19
a. Government	19
b. Development partners	20
c. Private sector	20

Appendix 1

List of mineral companies in Preah Vihear province

Mapping of Mineral Company and Artisanal Gold Mining in Preah Vihear Province

Appendix 2

List of mineral companies in Battambang province

Mapping of Mineral Company and Artisanal Gold Mining in Battambang province

Appendix 3

Reference

Biography of ASGM investigation team in Battambang and Preah Vihear provinces

Acknowledgement

The Artisanal Small-Scale Gold Mining (ASGM) in Battambang and Preah Vihear Provinces Investigation Report 2012 was commissioned by Development and Partnership in Action (DPA) together with DPA-Extractive Industry Social and Environmental Impact (EISEI) Network Steering Committee Members.

This report benefited from the support and direction of Mr. MAM Sambath, DPA Executive Director and Chairman of DPA-EISEI Network, as well as Star Kampuchea, EWMI, ICSO, MVI, ADHOC, CCIM, VSG and NTFP, all of whom are DPA-EISEI Network Steering Committee members. In addition, the DPA management team provided their support and guidance.

We extend special thanks to the ASGM investigation team members in Battambang and Preah Vihear provinces who actively talked with artisanal gold miners, indigenous and non-indigenous communities and relevant government officials to collect information for this report.

Acknowledgment should also be extended to all 56 members of the DPA-EISEI Network who provided comments at the DPA-EISEI Network meeting on September, 6th, 2012. We also thank Mr. Mark Grimsditch, Ms. Gabrielle Yetter, Ms. Chan Ramy, Prof. Jenik Radon and Mr. Born Doeur who assisted in editing this report.

The DPA-EISEI Network secretariat staff would like to express their gratitude to Oxfam America, Norwegian People's Aid (NPA), Development and Peace and especially thanks for UNDP for their financial support for this project.

Phnom Penh, 01st December, 2012

DPA-EISEI Network Secretariat Staff

Abbreviations & Acronyms

ASGM	= Artisanal Small-scale Gold Mining
ADHOC	= Association for Development Human Rights of Cambodia
CCIM	= Cambodia Center for Independent Media
CFPM	= Community Focal Person of Mining
DPA	= Development and Partnership in Action
EWMI	= East West Management Institute
EISEI	= Extractive Industry Social and Environmental Impact
ICSO	= Indigenous Community Support Organisation
NTFP	= Non Timber Forestry Produce
NPA	= Norwegian People's Aid
MIME	= Ministry of Industry Mine and Energy
PWGM	= Provincial Working Group on Mining
PHV	= Preah Vihear Province
UNEP	= United Nations Environment Programme
UNDP	= United Nations Development Programme
VSG	= Village Support Group

I. Artisanal Small-scale Gold Mining (ASGM) in Cambodia

Over the past year, Cambodian civil society and non-governmental organisations have become increasingly concerned about potential social and environmental impact related to Cambodia's nascent yet expanding extractive industries. While mining has long been important throughout the country's history, recent decades have shown steady expansion in the mining sector which, unfortunately, has not been matched by advances in regulatory compliance and accountability in government and the private sector. This is creating a glaring gap between the current laws enacted to protect the environment and the rights of citizens, and the unfortunate reality of uncontrolled extractive industry activity potentially creating significant and irreversible social and environmental impact in Cambodia. Development and Partnership in Action (DPA) facilitated the national level Extractive Industry Social and Environmental Impact (EISEI) network which was formed in order to enable community-level organisations to work with government and private sector stakeholders to address these challenges.

There are currently 19 gold deposits in Cambodia, according to the Strategic Plan on the Management of Mercury and Mercury Containing Waste in Artisanal Small Scale Gold Mining (henceforth the "Strategic Plan"), a publication produced by the United Nations Environment Programme (UNEP) and the Ministry of Environment. Gold mining in Cambodia is currently shifting from small-scale community-level activity to become increasingly mechanised, industrial-scale activity undertaken by local, national and international stakeholders. Largely driven by soaring value for gold, coinciding with the opening of areas that were previously difficult to access, a new gold rush is steadily taking root in the country. With this increase in overall gold mining activity comes an expansion of gold mining at the small-scale, or artisanal, level. This expansion of artisanal gold mining in turn brings about an increase in the use of chemical-based gold processing and recovery techniques – particularly using mercury and cyanide, which are harmful to all living organisms, including humans.

UNEP and the Ministry of Environment estimate that in 2004, at the peak of the mining season (that is, during the dry season from November to May the following year), between 5,000 and 6,000 people worked as artisanal miners. Some of the miners were local farmers who conducted mining between agricultural seasons to supplement their income. Other miners were full-time professional migrant workers who specialised in mining and often formed communities of hundreds (and in some cases thousands,) reprocessing tailings from larger, mechanised operations using mercury amalgamation and cyanide leaching. According to the Strategic Plan, new mining settlements formed near major gold deposits. The Strategic Plan points out that ASGM in Cambodia is different from that in other countries in the sense that miners are not hired by international companies but by small, local companies. However, these local companies are increasing in size in response to international companies obtaining licenses for gold exploration and exploitation in some areas because they think there is potential for exploration or exploitation the gold mining. This results in a decrease in the number of independent miners and an increase in the level of organisation in ASGM.

According to the Blacksmith Institute, an international non-profit organisation dedicated to solving pollution problems in low and middle income countries, almost a quarter of the world's gold supply can be traced back to 10-15 million poor small-scale gold miners scattered about the globe. These miners are also the third largest source of mercury pollution today, comprising about 30% of the world's anthropogenic mercury releases. ASGM miners extract gold-laden rock, grind it into a fine sand, then mix it with mercury to form an amalgam. The amalgam is then subjected to high heat, either with a blow torch or over an open flame, and the mercury evaporates into the atmosphere leaving behind a substance that is roughly 80% pure gold.

One of three things will happen once the mercury has evaporated. The gaseous mercury may be inhaled by the workers and their families, leading to serious health issues. It may also settle into the surrounding environment, seeping into the ground and contaminating the water supply. It could also rise into the atmosphere, where it circulates for about three months before raining down again. It takes roughly one month for anything that rises into the atmosphere to circulate the globe; this means that mercury which has circulated for three months is dispersed more or less evenly about the earth by the time it rains back down. The effects of evaporated mercury affect not just the area in which it is released but the entire globe, and this is reflected in elevated mercury counts in organisms located far from artisanal gold mining activity or other sources of mercury pollution.

In Cambodia, the unregulated and uncontrolled use of these chemical processes has already resulted in significant adverse environmental impact in and around areas where artisanal mining activities are taking place. The Strategic Plan estimates that negative impacts include:

- Destruction of forests, wildlife and wildlife habitat;
- Pollution and sedimentation of surface water bodies (lakes, rivers, streams, etc.);
- Changes in land use and community livelihoods; and
- Significant impact on public health through exposure to hazardous materials.

Since the use of hazardous materials, namely mercury and cyanide, in the mining process is currently unregulated and unmanaged, stakeholders (such as the DPA-EISEI network, UNDP and the Ministry of Environment) have identified the control of hazardous materials as an important issue for collective action. New efforts are urgently needed to raise awareness for such concerns among artisanal miners.

Artisanal mining in Cambodia takes many forms, depending on the social structure of the mining community and the type of deposit being mined. These diverse forms of mining require policy-makers to consider the mining sites on a case-by-case basis. With this in mind, DPA carried out studies in Battambang (northwestern Cambodia) and Preah Vihear (central northern Cambodia) provinces in the summer of 2012 in order to better understand the latest developments in the rapidly growing ASGM industry.



Photo by Mr.Lu Yijia: Woman working as artisanal gold miner in Preah Vihear province

Photo by Yijia LU: Artisanal gold mining site in Battambang province



Photo by DPA-EISEI Network Member: ASGM in Rovieng district, Preah Vihear province in 2009



II. Theoretical Model

Before we present our findings of the Cambodian ASGM industry, we would like to introduce a theoretical economic framework of land use to illustrate the problems facing immobile resources, of which the extractive industry is an example.

Consider a piece of land that yields certain products (such as gold). Column A of the table below illustrates the under-utilisation of resources. Every year, 10 units of resources (gold, in our specific case) are produced. However, more units can be produced with the introduction of better technology, increased access to labour, or more capital. Column B illustrates the optimal private use of resources, meaning that factors of production (such as labour and capital) used in the production of the goods are employed optimally to increase the private benefit of the land. By private benefit, we mean the profit that will benefit the owner of the land without consideration of economic external factors such as pollution and health impacts on workers. Under column B, every year, 25 units of resources are produced yet some workers may be harmed without receiving sufficient compensation, or the firm may damage the environment with impunity. Column C shows the socially optimal use of resources, in which society's benefit is maximised. Under C, all external factors are taken into consideration so that production takes place to serve the maximum benefit of the public. Columns D and D' illustrate the over-utilisation of the land. Under Column D, the land is over-used in the first four years to produce 50 units of the resources per year at the cost of permanent damage to the land for the remaining years for which only 15 units of the goods can be produced. Column D' illustrates an extreme case in which the first four years each produce 100 units of resources at the cost of permanent destruction to the land since it becomes barren after the fourth year.

Annual Production	A	B	C	D	D'
Year 1	10	25	20	50	100
Year 2	10	25	20	50	100
Year 3	10	25	20	50	100
Year 4	10	25	20	50	100
Year 5	10	25	20	15	0
Year 6	10	25	20	15	0

A rational and benevolent government that intends to maximise society's benefit would seek to encourage a development model that reflects Column C. If, however, the benevolent government overlooks external factors, something like Column B could result. Column D and D' illustrate the situation in which the land is left to a short-sighted private entity or government, in which no consideration of the future is made. This model goes against the concept of "sustainable development". Under D or D', the private company or government extracts as many resources as possible for the present, at the cost of future generations. Such a situation often occurs when the land is rented for a fixed number of years to a private firm. Consider the scenario in which a government provides four-year license to a foreign company to extract gold over a specific piece of land. That

foreign company and local mining company, acting in pursuit of its private interest to maximise profits in those four years, is unlikely to choose Columns A, B, or C. The company, if operating in this country only once, may well choose D' and walk away with 400 units, having no interest with respect to what happens after its license expires - after all, this maximizes the company's profit.

Now consider a corrupt government that wants to gain as much revenue (legitimate or illegitimate) as possible. Governments do not live forever; nor do politicians, who often get displaced or re-assigned. If a corrupt politician expects to hold a key position related to the land for four years, he is likely to favour Column D or D' to maximise his illegal income from the government's revenue.

Where does an artisanal miner fit into this picture? Column A might be a possibility, since artisanal miners use rather rudimentary tools and are not well organised. But without further investigation, it is unfair to simply claim that ASGM under-utilises the valuable resources, as it is possible the miners are actually working at the privately optimal level (Column C) or even over-utilising their land. This theoretical framework, despite its over simplification of the situation, raises the following issues which with recur throughout our report:

- Whether artisanal mining exhibits sub-optimal use of valuable resources;
- Whether externalities such as pollution and miners' health are taken into full consideration; and
- How to align the interests of a potentially corrupt (local) politician, private companies with a limited licensing period, and the public, in a way that encourages sustainable development and avoids short-sighted behavior at the cost of permanent destruction.

III. Legal Framework

According to the Constitution of Cambodia in 1993, Article 58 says that "state property" notably comprises land, mineral resources, mountains, sea, underwater, continental shelf, coastline, airspace, islands, rivers, canals, streams, lakes, forests, natural resources, economic and cultural centers, bases for national defense and other facilities. The control, use and management of state properties shall be determined by law.

Article 2 of the Cambodian Law on the Management and Exploitation of Mineral Resources considers all mineral resources to be property of the state. Mining activities are therefore considered illegal unless prior permission is granted in accordance with the law (Article 5). Article 11 of the same law states that licenses for artisanal mining may be issued to Cambodian nationals who conduct exploration and exploitation of mineral resources using locally available common instruments and their own labour, with the help of family members. Such operations should include no more than seven people. However, despite the prevalence of ASGM and its long history in rural Cambodia, specific laws that interpret Article 11 are still relatively underdeveloped, and there is no known procedural framework to support granting artisanal mining licenses.

The provincial governments in the two provinces investigated by DPA-EISEI had drastically different views towards ASGM activities. Preah Vihear province permits local communities to conduct ASGM activities with “traditional tools,” although a clear definition for “traditional tools” is lacking and it is unclear whether this includes machinery or the use of chemicals such as mercury. The local government’s explanation that “traditional tools” are just “normal tools” is unhelpful.

Battambang province outlaws all ASGM activities. Recently, on 16 June 2012, the Battambang provincial office issued a document to terminate illegal exploitation activities in Phnom Proek district and other districts in Battambang province. The document, citing relevant laws, requests that all illegal mining workers terminate their mining activities immediately and outlines institutional processes that will be invoked to crackdown on those who refuse to adhere to the announcement. The Battambang provincial office issued a decree on 29 May, 2012 to establish a provincial committee of 20 members under the leadership of the provincial governor, Excellency Sun Heng, to terminate illegal gold exploitation activities in Phnom Proek commune, Phnom Proek district, Battambang province. In addition to ensuring timely termination of illegal mining activities, the committee is responsible for ensuring that the licensed mining activities of Phou Yang Company are conducted in accordance with its EIA and relevant laws.

IV. Objective and Expectation of Investigation

Field interviews were conducted with miners and discussions held with local and provincial leaders in order to:

- Investigate the extent of artisanal small-scale mining (personal) and its impact in Battambang and Preah Vihear provinces;
- Investigate the extent of some of large-scale mining (licensed companies) and its impact in Battambang and Preah Vihear provinces;
- Understand the challenges of artisanal small-scale miners who are not licensed;
- Study the legal framework for ASGM; and
- Build capacity for the DPA-EISEI network in Battambang and Preah Vihear provinces.

At the conclusion of our fieldwork, we expect to:

- Identify key concerns in ASGM;
- Understand the different forms and practices of ASGM in Battambang and Preah Vihear;
- Develop a deeper understanding of the effects of ASGM ;

- Understand the main challenges of ASGM for the miners through interviews;
- Investigate the effect of artisanal large-scale mining on ASGM;
- Provide recommendations to relevant government entities to develop improved laws and policies; and
- Keep DPA-EISEI network members in Battambang and Preah Vihear informed of our ASGM research result and recommend appropriate actions to be taken in response to the problems identified.

V. Methodology of investigation

The DPA-EISEI network secretariat and its steering committee members, in collaboration with Provincial Working Groups on Mining (PWGM) in Battambang and Preah Vihear Provinces, Community Focal Person on Mining representatives, the Voice of Democracy Radio and CCIM, designed a set of questionnaires in June 2012 to be used in all future fieldwork related to ASGM. Specific questionnaires were developed for targeting local commune leaders, ASGM workers in groups and individually, local residents in groups and individually, and women and children in order to gather such information as the history and extent of mining in each region visited, the use of harmful substances in the mining process, miners' welfare and knowledge of mining-related harm, and the impact mining activities have had on the local population.



Photo by Mr. Yijia LU: Investigation team talk with commune council in Phnom Preok commune

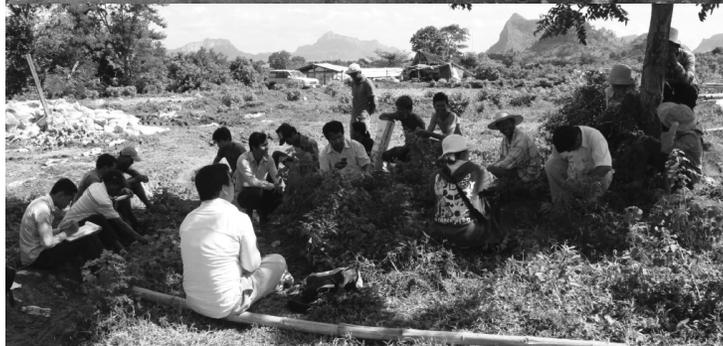


Photo by Mr. Yijia LU: Investigation team talk with artisanal gold miners in Phnom Preok commune



Photo by Mr. Yijia LU: Investigation team talk with artisanal gold miners in Preah Vihear province

VI. Locations and Subjects of Study in Battambang Province

Phnom Proek commune, located in Phnom Proek district in north-western Battambang province about 80 kilometers from Battambang, consists of 1,292 families with a population of 5,389 (including 2,671 women) in six villages (Phoum Koki, Phoum Sralao, Phoum Toul Kpouss, Phoum Saart, Phoum Phnom Proek, and Phoum Otom). Some of the residents are migrant workers.

Through interviews with commune authorities, we learned that most of the citizens work as farmers, tending to their orchards and growing various agricultural products such as potatoes, corns and beans. Some citizens also work part-time as artisanal miners.

VII. Locations and Subjects of Study in Preah Vihear Province

Rromtum and Romany communes are located in Rovieng district, Preah Vihear province along National Road 64. Rromtum commune consists of 812 families with a population of 4,249 in six villages, and Romany commune consists of 831 households with a population of 4,113 people in five villages. Most of the people in these two villages are from the Kuoy minority.

In these two villages, most of the citizens are farmers, growing agricultural products such as potatoes, corn, beans and rice and some of them have part-time jobs as artisanal miners. Some of the families do not work as farmers and artisanal mining is their sole occupation.

VIII. Procedures

Our research team built a set of questionnaires based on a standardised survey developed by UNDP to pose a series of questions to the subjects of our study. Through the local commune offices, we scheduled meetings with local artisanal miners in groups. Interviews started with the entire group of miners, and we also interviewed some of them individually. We also visited mining sites and interviewed miners and local residents on-site, as well as local authorities including commune officers and police officers, in order to gather knowledge of mining activities and their associated negative externalities from local government. Telephone follow-ups were conducted to stay up-to-date with the latest development. This report summarises our preliminary findings after field trips to Battambang province in July, 2012 and Preah Vihear province in August, 2012.

IX. Summary of Key Findings

Our field trips to Battambang in July, 2012 and Preah Vihear in August, 2012 helped identify the following key issues that required serious attention.

a. Land Use and Government Mining Licenses

Land grabbing is a severe problem for local residents in mining areas. Most local residents do not have proof that they own the land, and obtaining this proof is complex and more costly than most local farming families can afford. In addition, mining licenses issued to mining companies entitle them to evict whomever they wish, as long as the party to be evicted cannot demonstrate legal possession of their land. This inevitably leads to eviction by self-interested companies, who practice private eminent domain.

Licensed companies also come into conflict with ASGM individuals/groups and indigenous people, who have traditionally conducted activities in the affected areas. In Battambang, a young miner working near the Thai border told us he had no choice but to conduct ASGM as he was unable to find a job in Cambodia and illegal entrance to Thailand in search for work would violate domestic and international law, often resulting in harsh treatment. In areas such as Battambang province where ASGM is explicitly outlawed, miners face great uncertainty and threats from powerful entities, which extort protection money from them.

Mining licenses are issued for a short period of time in the order of a few years to foreign and local companies as explained in the theoretical framework, and might lead to short-sighted behaviour that over-utilises resources. Moreover, mining licenses are issued in two types: (1) exploration; and (2) exploitation. An exploration license permits a company to conduct research in the area allocated to determine whether the land is appropriate/profitable for exploitation. Successful exploration typically leads to the exploring company applying for an exploitation license to take advantage of its finding. In reality, however, an exploration license, which is much cheaper and

easier to obtain, is often used as a pretext for actual exploitation activities. Many mining companies pay the local military to guard their complexes, forbidding entry to any outsiders. Shrouded in secrecy, many of these foreign and local companies have long been suspected to carry out illegal exploitation activities with only cheaper exploration licenses. Worse still, when the exploration license expires, the company may have already over-utilised and damaged the land, thereby claiming unsuccessful exploration even though the company had reaped the greatest short-term benefits from the now barren land. Such secrecy incentivises corruption and leads to losses in valuable fiscal income for the state and local government.



Photo by Yijia LU: Phu Yang (Cambodia) Co.,Ltd is located in Phnom Proek commune and overlaps ASGM site

Phu Yang (Cambodia) Co.,Ltd, Delcom Cambodia PTE.LTD and other mining companies have not trained or employed the local population, preferring to bring their own nationals or Chinese workers to the location. This not only sustains local unemployment but also fails to create opportunities for the locals to learn from the foreigners on site.

There is, however, a benefit which large mining companies have brought to remote areas since road conditions have improved significantly due to the operation of these large companies in Cambodia, therefore having positive impact on local infrastructure.



Photo by Yijia LU: Delcom Cambodia PTE.LTD is located in Romtum commune and has conflict with ASGM



Photo by Yijia LU: Artisanal Gold Miner using mercury to extract gold in Preah Vihear province

b. Environmental, Social and Health Issues (especially impacts on children and women)

Mercury and cyanide are chemicals often used in ASGM which are known to have severe long-term effects on humans and the ecological system. Miners have told us about the development of skin rashes and the death of animals near mining sites, and the remote location of some of these sites means poor access to sanitary and medical facilities.

Children were often seen working in mining sites and educational opportunities for children are dire. One of the remote communes we visited in Preah Vihear had approximately 50 children in grades 1 to 4 but only two teachers. Mosquitoes in these remote areas were plentiful and led to the spread of contagious diseases and the most recent EV71 virus was said to have affected some of these children in mining sites.



Photo by DPA-EISEI Network: Children involved in ASGM activities in Preah Vihear province

Men and women were seen standing in dirty water in Preah Vihear province for many hours every day in the gold extraction process. One of the women interviewed told us that she recently gave birth. Base on the observation, we believe prolonged exposure to dirty water is harmful to the human body, especially to women who recently gave birth.

c. Governance Issues

We learned that information released by the central government concerning mercury use and its harmful effects was not shared with local communities and some of the miners in Preah Vihear who still use mercury in their gold refining process were not aware of its harmful effects. Despite the intention of the central government to control mercury use, information was not passed down and some commune councils were not aware of the government's policies. Those who were aware of it often lacked the capacity to provide technical support to miners and, while they would tell them to avoid using mercury, were unable to suggest a cheaper alternative to incentivise this change.

Information regarding policies and regulations for mining was not readily accessible. No mechanism was in place for the miners and local commune leaders to learn about the government's view on the extractive industry and few opportunities existed for locals to access information from the national level.

d. Financial Issues

According to our investigation and interviews with local people in both study areas, we found that ASGM was one of the most important sources of income, particularly for indigenous people (IP). ASGM is a second priority job for local people after they finish working in rice cultivation and many are able to earn between 5 US dollar and 7.5 US dollar per day from ASGM to support their families, in addition to their income from farming, according to Mr Thorn Thnoit, Kuy, an indigenous farmer in Romtum commune. In addition, the overlap of mining companies' license areas with ASGM sites was the main cause of poverty due to the loss of agricultural and mining land.

Photo by Yijia LU: Gold extracted by ASGM in Preah Vihear province



Case Studies

The following cases studies document our investigation in Battambang and Preah Vihear provinces over the past several years.

e. Phnom Proek Commune, Battambang Province (2012)

Phnom Proek Commune Council chief, Mr. Men Seb, and clerk, Mr. Chen Cham, told us that mining activities began during 2006-2007 when the Chinese company, Phou Yang Cambodia, obtained a license from the government to explore mines in a 4km² forested region in Phnom Proek from 2006-2007. Since no gold was found in two years, Phou Yang terminated its activities. However, some of the citizens, including military forces guarding the company, later found gold and Phou Yang obtained a license from the government for 2007-2011 to explore the area. However, the company worked on five hectares (0.05km²) of land in 2006 and, in 2011, expanded to 20 hectares (0.2km²). Phou Yang Cambodia compensated citizens in the area by purchasing one rai of their land (1,600m²) for \$5,000 USD,. Mr. Men Seb and Mr. Chen Cham told us that artisanal miners from the Phnom Proek commune of Battambang, Siem Reap, Mondulhiri, Kratie, and Kompong Cham, conducted personal mining without licenses or permission and the military and police regularly interrupted them and stopped their activities. The miners were eventually driven to mine on their own land and migrant workers were forced to pay land occupiers to work on their land. The miners met with the district governor who urged them to apply for a license through the Ministry of Industry, Mine and Energy. (According to the 2001 mineral law, artisanal miners, who possess rudimentary equipment, are only able to dig to a depth of five meters below the surface).

As a result of artisanal and company activities, some of the cows in the village died after drinking contaminated water from the open mining holes. Phnom Proek Commune Council also said that artisan miners usually suspended their mining activities from April to June because they had to take care of their fields.

In February 2012, Phu Yang Cambodia obtained a two-year license to explore an area of 64km² and to exploit an area of 4km². This license can be renewed for a further two years 90 days prior to its expiration, if desired.



Photo by Yijia LU: Investigation team clarified information with commune council in Phnom Proek

f. Discussion with Phnom Proek's District Authorities

Mr. Hem Sinak, Deputy Director of Administration in Phnom Proek District, told us that Phou Yang Cambodia received a license to explore an area of 64 km² from 2006-2010. The company also received an exploitation license to mine for gold in an area of 4km² in 2011.

According to the district authorities, migrant miners (from provinces such as Kompong Cham, Kratie, Prey Veng, Siem Reap and Preah Vihear) came to this area so they could work with local mining businesses.

A district census indicated that at least 59 people were involved in small-scale gold mining activities without licenses, but a few have since abandoned the business after making a loss. Commune and district authorities have informed the miners of the illegality of their activities, but the miners still continued their activities. Mr. Sinak told us that the Department of Industry, Mines and Energy was planning a meeting to consider terminating illegal small-scale mining on 13 July, 2012, with participation from the communes, districts and villages as official meeting. The reasons cited were that individual miners lacked appropriate skills to conduct safe mining and that their unlicensed activities violated Cambodian law.

Mr. Sinak told us that three cows died after drinking the water that was used to wash the mine and a water stream was permanently destroyed due to mining activities upstream. Since gold refinery process utilises acid and mercury, contaminated water from this work also caused skin diseases despite the use of gloves by the miners. A migrant miner died and a villager from Dey Saart broke his hip while mining due to landslides. Miners who worked along the border with Thailand were sometimes arrested and threatened and their harvest was usually confiscated, and Cambodian authorities often had to negotiate with Thai border guards to secure their release. Mr. Sinak told us that Phou Yang Cambodia had begun its exploitation activities but no Cambodian citizens except for two military guards had been hired to work for the company. Phou Yang Cambodia applied to the Cambodian general national military for permission to use explosive devices to break stones in May and is currently waiting to hear back from the relevant military office.

The deputy district governor, Ms. Kheom Srean, urged the organisations and the mass media to help educate citizens, especially women and children, on the impacts of artisanal mining. The deputy district administrator, Mr. Hem Sinak, also requested that organisations run workshops for miners to encourage them to participate in conflict resolution meetings. The chief of commune of Phnom Proek asked organisations (such as DPA-EISEI) to help people obtain mining licenses so that they could legally conduct their activities.



Photo by Yijia LU: Investigation team talked with deputy of district governor in Phnom Proek

The following items document the main suggestions from the district and commune:

1. DPA-EISEI should organise forums or workshops to educate artisanal gold miners how to mitigate impact.
2. DPA-EISEI should organise a workshop and invite relevant stakeholders to identify key strategies on how we can support artisanal gold mining or legalise these activities.
3. DPA-EISEI should advocate to relevant stakeholders to prevent conflict between artisanal mining and private companies which obtain licenses from the government on land which overlaps artisanal gold mining areas.

g. Interview with a Thai-Cambodia Border Guard

We interviewed a border guard in Phnom Proek near the Cambodia-Thai border who told us that small-scale mining occurred from 2011-2012 with approximately 70 miners, some of whom were from different provinces. However, these migrant miners returned to their home towns because some lost money and some were in debt.

When asked about the impact of mining activities in the area, he mentioned the following:

- Many children had to abandon their studies because local families took their children (aged four to 10 years) to conduct mining activities.
- Some of the crops were damaged and a water stream became dry because miners removed it to search for gold beneath.
- Skin rashes and Itchiness developed in people who had contact with the water in the stream.

The border guard verified that nobody suffered serious consequence of mining activities because all miners took good care of themselves.

h. Interviews with youth working as artisanal gold miners in Phnom Proek

We interviewed a group of young people from 18 to 25 years old working as artisanal miners in Phnom Proek near the Phu Yang Mining Company. They said they faced a number of challenges since the government on the provincial level considers their activities to be illegal and does not allow them to conduct their work and they wanted to know how to legalise their activities. They said they often don't want to do artisanal mining but had no alternatives since they have low education and their families don't possess enough land for them to farm.

They added that the government in Cambodia often conducts speeches in the public, especially aimed at youths, discouraging Cambodian people from seeking work in Thailand, and the government always encourages the Cambodian people try to find jobs inside Cambodia.



Photo by Yijia LU: Investigation team meeting with ASGM youth group in Phnom Proek commune

The main concerns of youths who work as artisanal gold miners in Phnom Proek district, Battambang province included the following:

1. What options will the government provide for them? If they do not go to Thailand to find work and remain in artisanal gold mining, will the government in Cambodia consider them to be engaged in illegal activities?
2. Does the government require them to stop their activities and then issue mineral licenses to the private sector? (As they have experience with the Phu Yang (Cambodia) Co., Ltd. in Phnom Proek district, Battambang province. This company did not make or provided job opportunities for them.)

i. Violence towards Artisanal Miners in Preah Vihear (2010)

On 6th December 2010, Ponlok Khmer, an EISEI member organisation based in Preah Vihear province, received a copy of a written complaint prepared by community members from the villages of Romcheck, Trapeang TonTim, O-Trolork, O-Por, Bangkaen Phal, Romany commune and

Rom Tom commune, Rovieng district. The complaint alleges that Mr. Chan Sopheaktra, military commander of Phnom Dek, Rovieng district, physically intimidated a group of indigenous people conducting mining activities using traditional methods in October, 2010.

The complaint was originally submitted to the Provincial Department of Mines, Industry and Energy in Preah Vihear province, and copies of the complaint were also sent to the Adhoc association of Preah Vihear, the Provincial Governor and the Preah Vihear military commander. In addition to the incident for which the complaint was prepared, Mr. Chan Sopheaktra was alleged to have committed abuse towards and intimidation of local villagers through the use of armed forces, causing community residents to live in fear and preventing them from earning their living through ASGM activities as permitted by law. At the same time, it was alleged that Mr. Chan Sopheaktra conspired with his soldiers, extorting money from the community members who practiced artisanal mining in the area. It was further alleged that Mr. Chan Sopheaktra allowed groups of 3-4 people to use machines to extract gold for a fee of 20,000 riels over a period of three days. In particular, whenever local community members found gold deposits, they were driven away by him and he said: “If you want to explore for gold here, you must be authorised by the provincial governor and pay the fees in advance”.

Mr. Sopheaktra elected to engage in violence despite a July 2010 order from the Provincial Governor. The order, aiming to prevent conflict in gold exploration by all people in a number of regions in Ramany and Rom Tom commune, took the following measures:

- Machines are forbidden to be used in the search for gold. In case of non-compliance, the machines will be confiscated and lawsuits will be filed.
- Gold exploration is only allowed for those who use simple/traditional tools such as crow-bars, hoes and manually operated gold pans.
- Only residents of the region are permitted to conduct gold exploration.

Pursuant to Ponlok Khmer’s discussion of the situation with the DPA-EISEI Network at the bi-monthly national network meeting in Phnom Penh, DPA-EISEI Network and DPA worked closely with the newly formed WGMPVP (Working Group on Mining in Preah Vihear Province) to address the situation, providing legal, financial, monitoring and logistical support. With the support of DPA-EISEI Network and DPA, WGMPVP is currently preparing supporting materials to present to the Provincial Governor and the provincial department of MIME for their reference as the dispute is adjudicated. The DPA-EISEI Secretariat continues to follow developments as they unfold.

j. Forced Eviction Cases in Romony Commune and Rumtum Commune, Preah Vihear Province (2010)

The residents of Romony and Rumtum Communes mined for gold with traditional methods for self-support until the arrival of two licensed companies.

The arrival of Delcom Cambodia PTE Ltd (a company from Malaysia and China) in 1999 to

develop a mine measuring 16,200 hectares at Long Mountain near Ramony Commune made it impossible for locals to access their traditional mining sites. The company employed police and army officers who forbade the residents from entering the sites. Meanwhile, harmful effects of the company's mining activities were reported: local residents fell ill with viruses and their animals died. There was a lack of access to sanitary water. The government eventually allowed the residents to mine again in Sre Commune, but only after they made efforts to raise a case to the government.

The arrival of Long Meng Company in Rumtum Commune similarly disrupted the traditional mining livelihood of the 837 families living there (4,337 people, including 1,871 women). When the locals found a huge amount of gold, the police and soldiers hired by the company forced them to stop mining for five days. After that time, four villagers (from Long Kong, Roun Vong, Roun Long, and Bin) were arrested and imprisoned and were only freed when they paid a sum of approximately \$2,000-3,000 per person to the provincial court in Preah Vihear province. Choun Vanak, however, is still serving his 15-year sentence because his family was not able to submit money to the court. The court arrested these people and accused them of robbery. On December 4, 2010, villagers from both communes submitted complaints to the Provincial Department of Mining and Energy and the local rights group ADHOC and the DPA-EISEI Network members in Preah Vihear province, alleging that a group of soldiers under the leadership of Chan Sopeak used violence against them and extorted money. The case was settled with Chan Sopeak apologising to the villagers and promising not to commit similar acts again. Mr. Dern Vern, the director of Sra Prok Community, and Mr. Sok Mao, the director of Romchage Community, made the decision to demote Chan Sopeak and move him to another commune.

k. Cambodian WS Mining Industry Holding Ltd (2011)

Cambodian WS Mining Industry Holding Ltd received an exploration license from the Royal Government of Cambodia (license number 889) on October 30, 2008 to explore a parcel of land in Rovieng district, Preah Vihear province measuring 972.25 square km. After conducting exploration for a year, the Cambodian WS Mining Industry Holding Ltd asked the government, specifically the Ministry of Mine Industry and Energy, to reduce the size of the operation by one square kilometer. Therefore, on October 1, 2009, the Minister of MIME accepted the request and reduced the size of the mining site to 971.25 square km.

The mining site is located on the land of the Kuy indigenous communities where 80% of people perform artisanal and small scale mining as a second occupation. Prior to the mining activities of indigenous communities, the Kuy community received an official letter from the provincial governor in Preah Vihear allowing them to have access to the forests in order to benefit from their own artisanal mining activities. However, once the mining companies started exploring, the IP communities were forced to move as they were not considered "legal" by the government since they did not have a formal legal land title for their land or a license to conduct mining activities. They are therefore referred to by the government as "illegal" or "anarchic" miners.

This is one of the cases which gives voice to the concerns of the IP communities in Rum Tum and Rumany communities in Rovieng district, Preah Vihear, province with regard to mining industry exploration associated with Phnom Dek. It also highlights the responsibilities of the Royal Government of Cambodia (RGC) and the private sector in terms of considering the social, cultural and environmental impacts of exploratory mining activity affecting indigenous peoples in Cambodia.

In this situation, many of the IP communities were fearful because the Cambodia WS Mining Industry Holding Ltd uses the military to protect their company and to block off parts of the land, thereby preventing some of the residents from entering areas where they grow rice. It also affects the livelihood of the Kuy people since they are unable to practice artisanal mining or access the forests. The methods used by the mining company are also considered harmful to the environment since the cyanide used to leach gold from the base rock is believed to contaminate local water supplies, causing sickness for the residents and death of livestock.

According to the local authorities in Rovieng district, the mining company does not provide work for residents of local communities as they bring workers from other provinces and China. There are therefore no benefits for local people and the situation has brought communal land titling to the attention of the Kuy people.

X. Recommendations

This section discusses possible solutions to the key issues identified above and proposes that further research should be conducted.

a. Government

The conflicting attitudes towards ASGM held by Battambang (illegal) and Preah Vihear (legal) governments indicates an area of uncertainty in the law that needs to be addressed by the central government, particularly with regard to indigenous peoples and those that have traditionally conducted ASGM. Although we encourage efficient use of resources, we believe the government should assign entitlement to these vulnerable members of our community as they should be the ones to decide what use is to be made of their traditional land: after all, they could always use their entitlement and rights for a company that values it more out of their own will provided that transaction costs are made sufficiently low.

The current short-term nature of the licenses which have been issued encourages over-utilisation of resources and discourages sustainable development. Longer and renewable licenses issued to companies will likely mitigate the problem of over-utilisation, as a longer time horizon incentivises companies to be more forward-looking.

The government should also discourage the secrecy of activities of companies with exploration/exploitation licenses. The local community should first be informed of any license issued to a

company that works in or around the community. These companies should be subject to investigation by an independent team with members coming from diverse sectors in Cambodian society, the media, and the local community. Exploitation with only an exploration license should be severely punished.

The government should have any strategic to ensuring the employment for local people in large mining operations, contribution to social and environment funds and development livelihood opportunities for artisanal miner.

Lastly, government information should not only flow more freely from the top down, but also be made easily and cheaply accessible to everyone, upon request.

b. Development partners

Cyanide and mercury use can be replaced by the use of alternative techniques such as gravity separation. Development partners should conduct further research into evaluating the viability, effectiveness and cost of such alternatives, lobby the government to incentivise the use of these alternatives, possibly through subsidies,, and collaborate with other agencies to propagate these alternatives to the mining community. Development partners should also learn from their peers in other countries to figure out what strategies have worked and which have failed to work.

Literature concerning ASGM in Cambodia is abundant with description but lacks quantification. We are, therefore, aware of the various problems with under- or over- utilisation of resources and externalities as outlined in the theoretical framework, but not quite sure what the socially optimal outcome should be. An important next step for development partners and NGOs would be to focus on the quantification of these impacts in order to provide more precise suggestions for the future. The numerous mining sites also present excellent opportunities for randomised, controlled experiments that can help identify the most effective method.

We have often been told by miners that ASGM mining is their only way to earn a living. While sympathetic towards their plight, we also think it necessary to study the veracity of such statements. What is the real opportunity cost for these miners if they are prevented from carrying on with their ASGM activities? Are there alternatives?

c. Private sector

Cambodia, after suffering several decades of civil war, still has a relatively under educated workforce but foreign companies that have entered Cambodia's mining industry almost always bring and hire their own nationals. Artisanal miners in the same region who lose their jobs or income due to the presence of such large companies as well as the unemployed local population will benefit enormously if they can be trained and hired by these foreign companies.

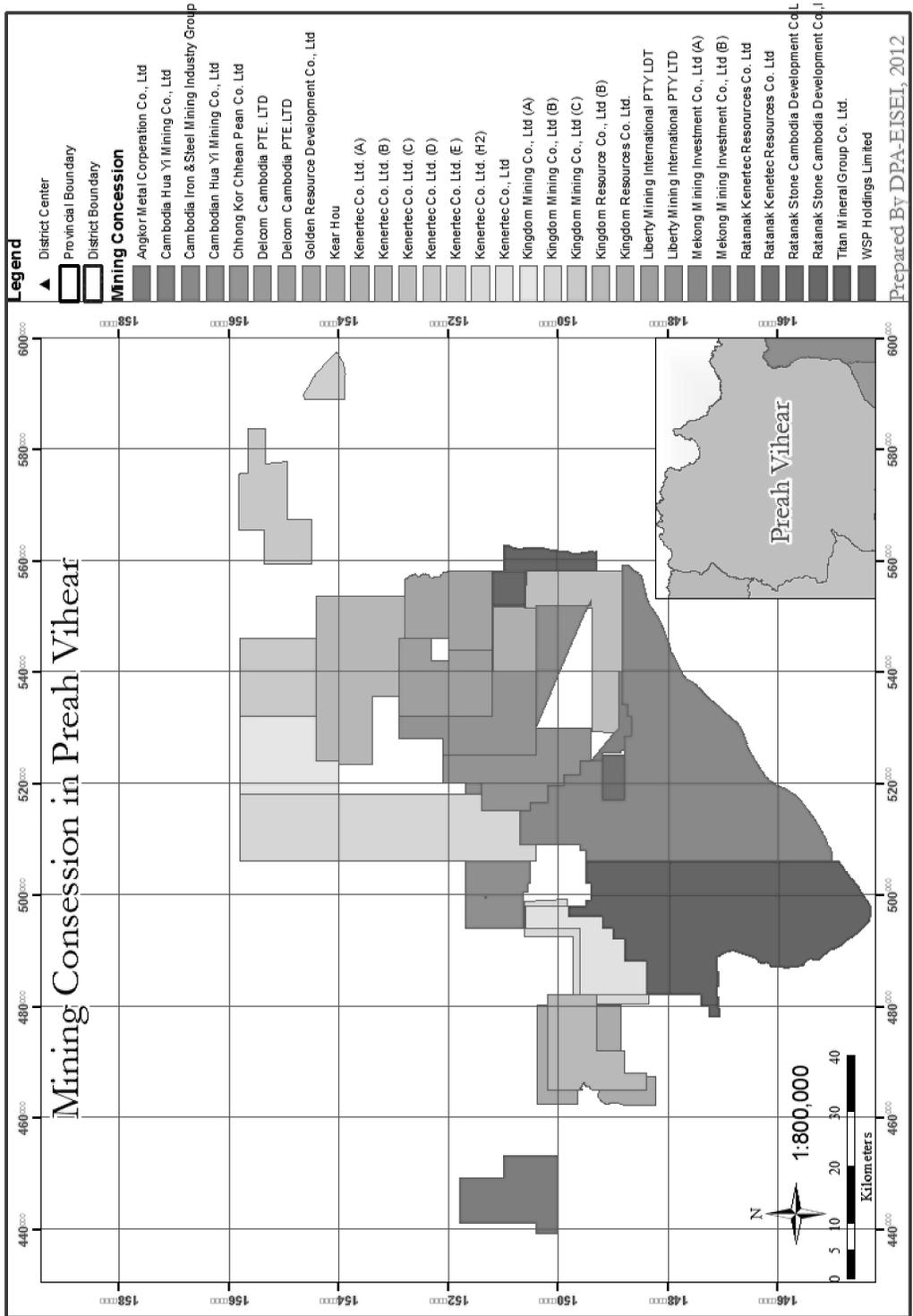
List of Mineral Company and License in Preah Vihear Province

No	Company	Date of issue for licenses	Area	District	Province	Size	Exploration Types
1	Angkor Metal Corporation Co., Ltd	05/01/2009	Tro Yorng	Ku Lan	PHV	192km ²	Metallic exploration
2	Cambodia Hua Yi Mining Co., Ltd	20/06/2008	O Svay (Area 2)	Chey Sean	PHV	45km ²	Metallic ore
3	Cambodia Iron and Steel Mining Industry Group	08/10/08		Roveing	PHV	1306.74	Iron and steel exploration
4	Cambodian Hua Yi Mining Co., Ltd	20/06/08	Chom kar Sro Mov	Chey Sean, Thorning Mean Chey	PHV	245km ²	Metallic minerals exploration
5	Cambodian Hua Yi Mining Co., Ltd	20/06/08	Chhmar Area 1	Chey Sean	PHV	220km ²	Metallic ore
6	Chhong Kor Chhhean Pean Co. Ltd		Phnom Ker	Rovieng	PHV		Metallic minerals exploration
7	Delcom Cambodia PTE .LTD	24/03/94		Rovieng	PHV		Metallic minerals exploration
8	Delcom Cambodia PTE.LTD	01/10/09	Phnom Derk	Roveing	PHV	1 km ²	Gold mineral exploration
9	Golden Resource Development Co., Ltd	22/09/08	Phnom Kou Sa	Cheib	PHV	208km ²	Metallic minerals exploration
10	Kear Hou	27/08/09	Bang Korng	Preah Klang	PHV	4 km ²	Gemstone quarry
11	Kenertec Co. Ltd. (A)			Chey San, Chhaeb	PHV		Iron
12	Kenertec Co. Ltd. (B)		Ou Khlong	Chhaeb	PHV		Iron
13	Kenertec Co. Ltd. (C)		Phnom Thnot	Chey San	PHV		Iron
14	Kenertec Co. Ltd. (D)		Phnom Charei	Chhaeb	PHV		Iron

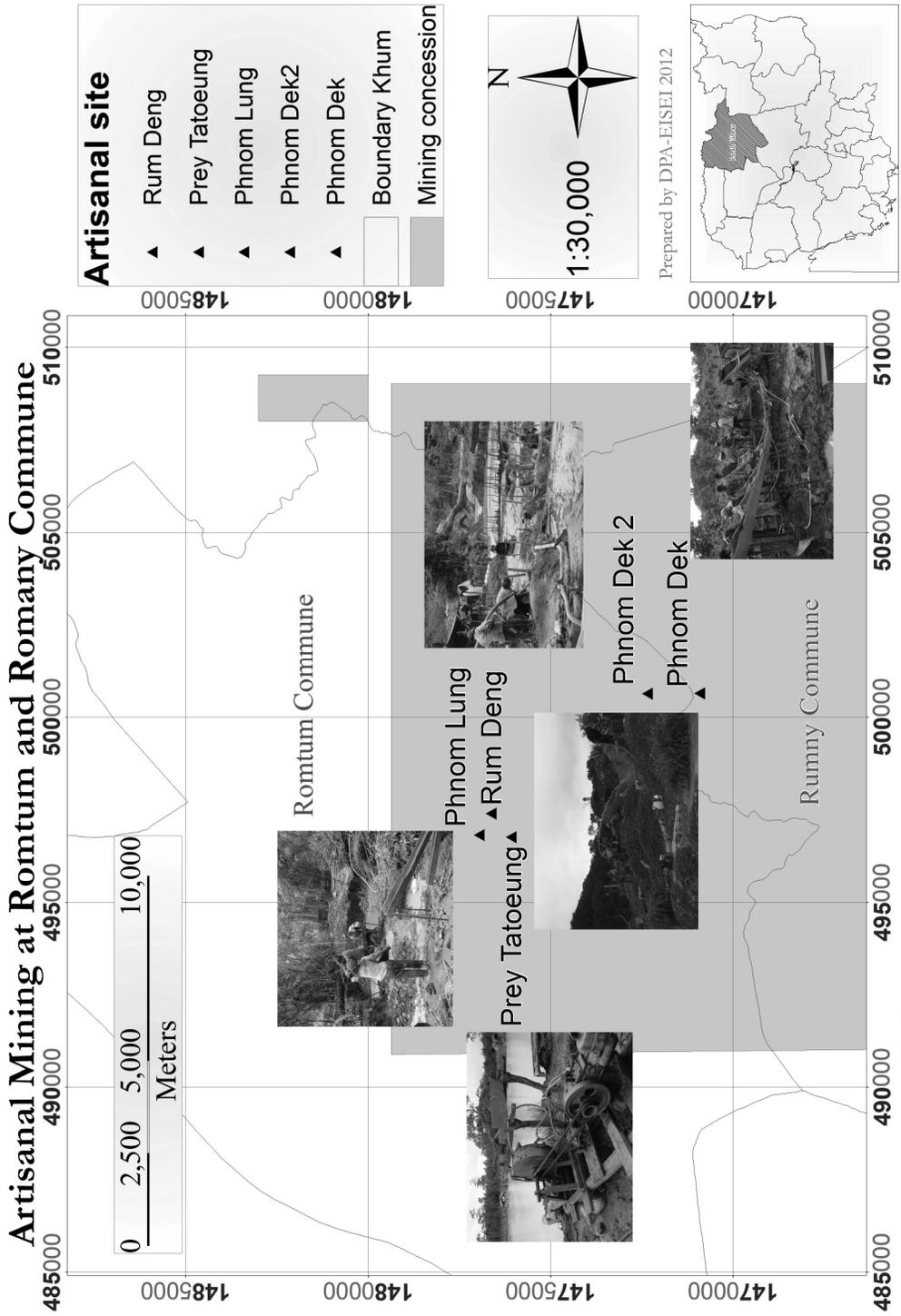
15	Kenertec Co. Ltd. (H2)			Phnom Natong	Chey San	PHV		Iron
16	Kenertec Co., Ltd	25/11/07	Phnom Thnort	Sangkhom Thmei	PHV	160 km2	Metallic ore exploration	
17	Kingdom Mining Co., Ltd (A)	09/12/08	O Chroung	Cheib	PHV	220km2	Metallic minerals exploration	
18	Kingdom Mining Co., Ltd (B)	09/12/08	O Sdarch	Chorm Ksan	PHV	216km2	Metallic minerals exploration	
19	Kingdom Mining Co., Ltd (C)	09/12/08	O Phich	Cheib, Chorm Ksan	PHV	196km2	Metallic minerals exploration	
20	Kingdom Resource Co., Ltd (B)	13/03/08	Phum Ta bors, Sdov	Sangkhom Thei	PHV	200km2	Iron	
21	Kingdom Resources Co. Ltd.		Phnom Ta Bus	Sangkom Thmei	PHV		Iron, Copper	
22	Liberty Mining International PTY LTD	20/06/08	Chork Chey	Cheib	PHV		Metallic ore exploration	
23	Liberty Mining International PTY LTD	12/06/08	Perk	Chey Sean, Cheib	PHV	210km2	Metallic minerals exploration	
24	Liberty Mining International PTY LTD	12/06/08	Chey Sean	Chey Sean, Cheib	PHV	227.4	Metallic minerals exploration	
25	Mekong Mining Investment Co., Ltd (A)	13/10/09	Perk	Chey Sean, Cheib	PHV	215km2	Metallic minerals exploration	
26	Mekong Mining Investment Co., Ltd (B)	13/10/09	Chey Sean	Chey Sean, Cheib	PHV	227.4 km2	Metallic minerals exploration	
27	Mekong Mining Investment Co., Ltd (B)	13/10/09	Chey Sean	Chey Sean, Cheib	PHV	215km2	Metallic minerals exploration	
28	Ratanak Kenertec Resources Co. Ltd	12/05/08	Phnom Thmor	Rovieng	PHV	375km2	Iron mineral exploration	
29	Ratanak Kenertec Resources Co. Ltd	12/05/08	Phnom Kos Keo	Rovieng	PHV	3200ha	Metallic minerals exploration	

29	Ratanak Stone Cambodia Development Co. Ltd	13/07/04		Chey San, Chhaeb	PHV	3600ha	Metallic minerals exploration
30	Ratanak Stone Cambodia Development Co., Ltd	11/06/09	Khum Thmear	Chey Sean	PHV	36 km2	Metallic Ore
31	Titan Mineral Group Co. Ltd.	08/04/08		Chey San, Thalla Barivat	PHV & Stung Treng		Iron exploration
32	WSP Holdings Limited	08/10/08		Roveing	PHV	972.25 km2	Iron exploration

Mapping of Mineral Company Preah Vihear province



Artisanal Gold Mining in Preah Vihear province

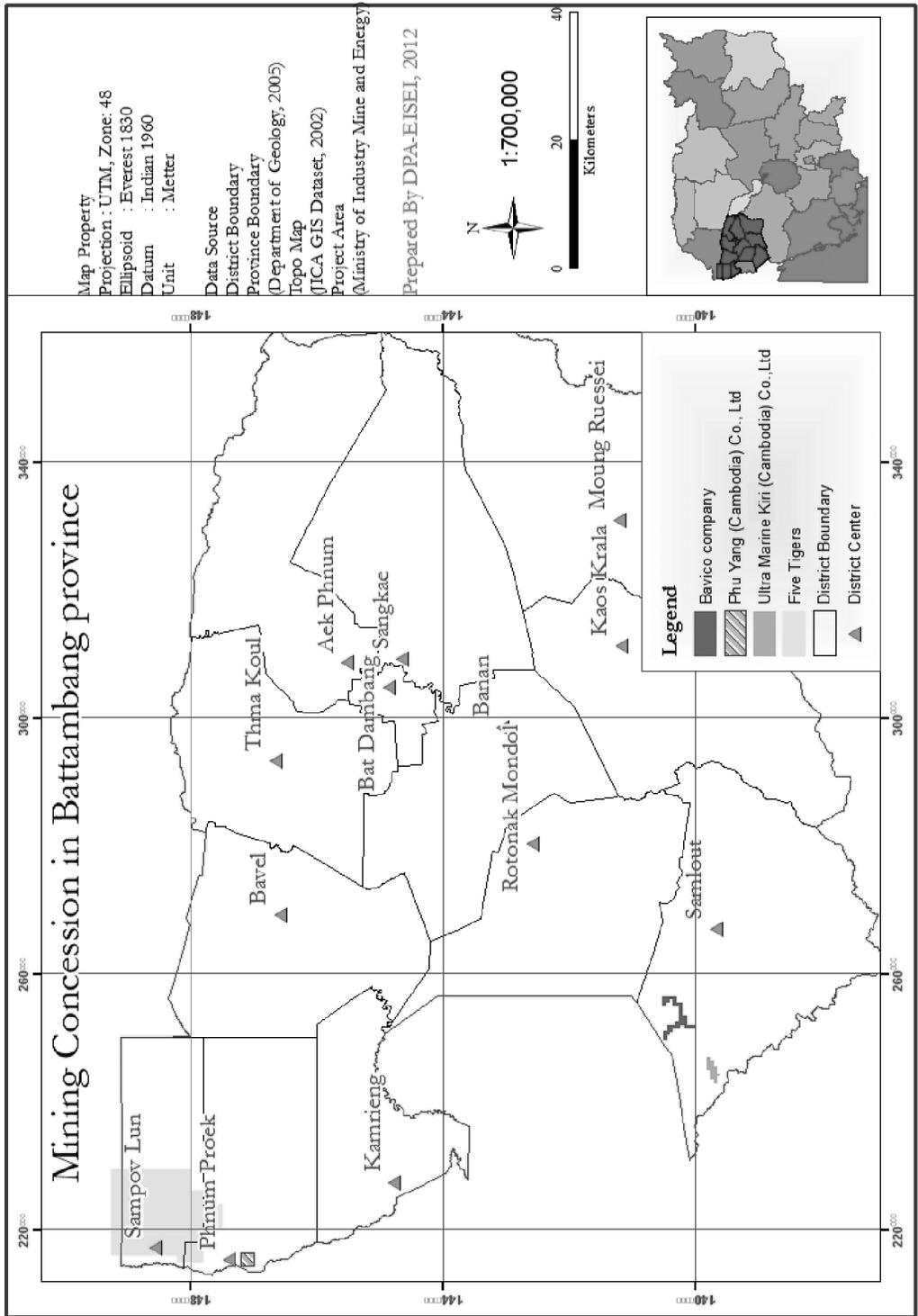


List of Mineral Company and License in Battambang Province

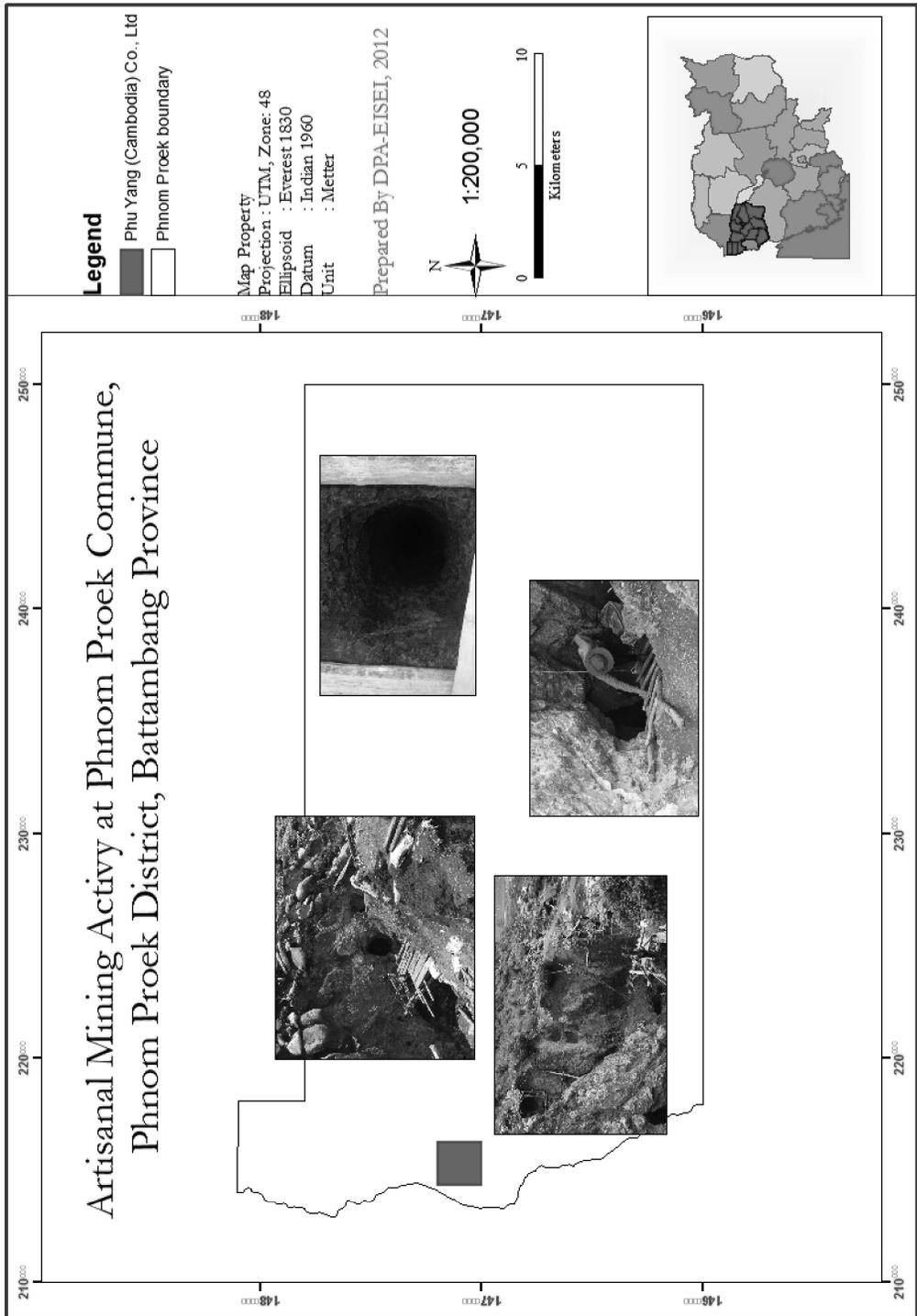
No	Concession	Nationality	Address	Area	District	Province	Size (km ²)	Exploration Types
1	Bavico (Cambodia) Mining & Metallurgy Joint Stock Company Limited.	Vietnamese	Mr. Tran Cao Sang No 36, 271 Road, Tumnup Teuk Sangkat, Khan Chamcarmorn , Phnom Penh City, Cambodia. Tel: 0855 89 844 332/ 092 612 868 e-mail: info@bavico-mining.com	Kbal Stung	Som lout	Battambang ,Pailin	936	Gemstone exploitation
2	Ultra Marine Kiri (Cambodia) Co. Ltd Exploitation licenses	Cambodian-Korean	No 17K, Group 1 , Village Mettepheap, Khan Reuseikoe, Phnom Penh, Cambodia	Sen Chao	Samlot	Battambang	4	Gemstone
3	Cambodia Mining Development Co. Ltd.				Samlot	Battambang	4	Gemstone Exploration
4	Jireh International Cambodia Construction & Import-Export Co. Ltd.			Anlong Krapeu- Prekbey	Samlot	Battambang	8	Gemstone
5	Ratanak Stone	Cambodian			Ratanak Mondul	Battambang	14.85	Gemstone

6	Five Tiger (Cambodia) Mines Co.,Ltd					Battambang	60	Matalic
7	Khov Primes Co.,Ltd					Battambang & Bantheay meanchey	204.75	Matalic
8	Phu Yang (Cambodia) Co.,Ltd Exploitation licenses		Phnom Proek village	Phnom Proek commune	Phnom Proek district	Battambang		Gold

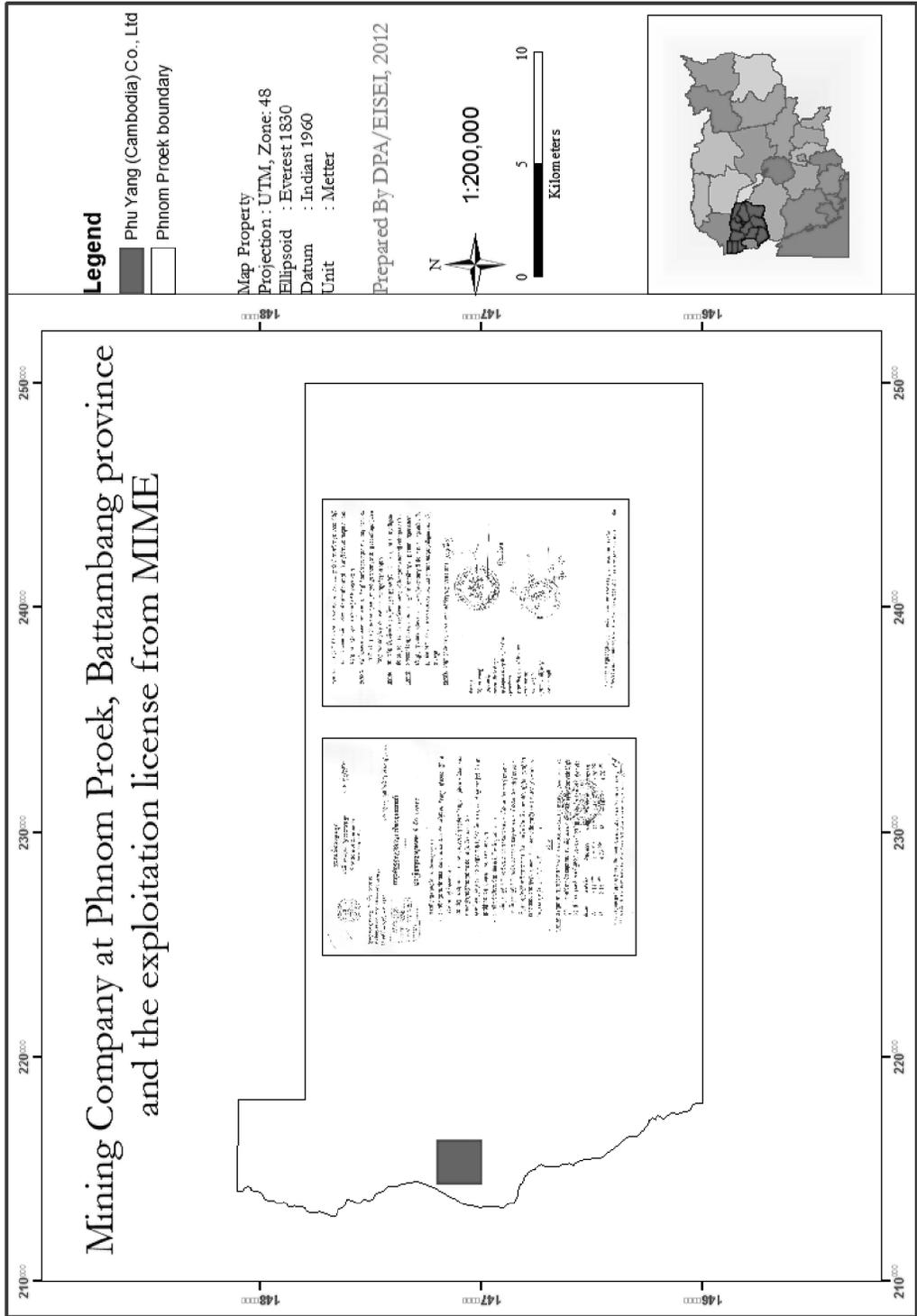
Mapping of Mineral Company in Battambang province



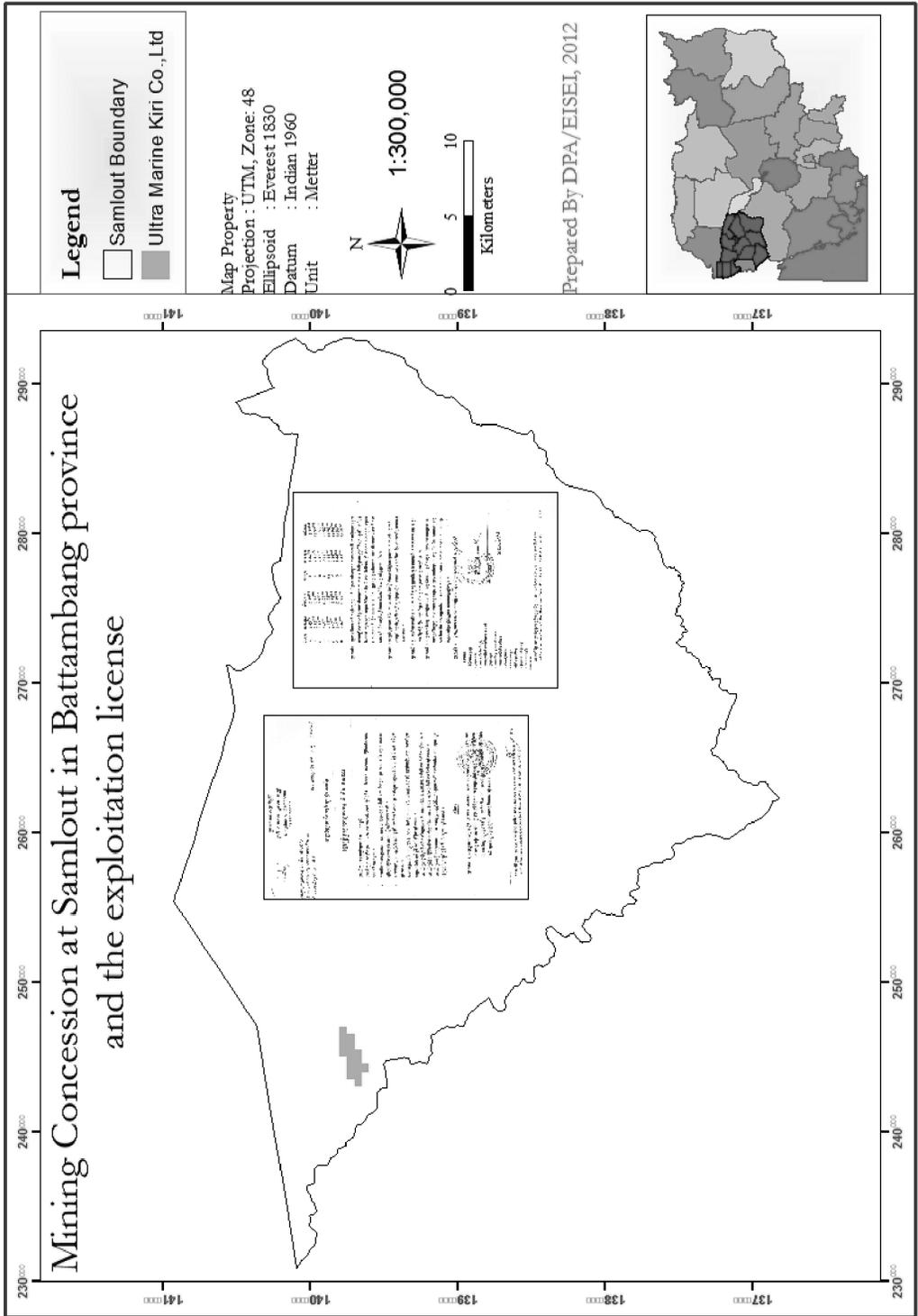
Artisanal Gold Mining in Battambang province



Exploitation License in Phnom Proek district, Battambang province



Exploitation License in Samlout district, Battambang province



Appendix3

Reference

1. Artisanal and Small Scale Mining (ASM): Policy Options for Cambodians, UNDP Cambodia, April, 2011
2. Cambodia Law on Mineral Resource Management and Exploitation, 2001
3. Constitution Law of Kingdom of Cambodia, 1993
4. Strategic Plan on Management of Mercury in Artisanal and Small Scale Gold Mining In Cambodia 2012-2016, Ministry of Environment, June 2011

Biography of ASGM investigation team members in Battambang and Preah Vihear provinces

1. Mr. Try THY

E-mail: eiseicoordinator@gmail.com /try_thy@yahoo.com

Mr. Try THY is the coordinator of the ASGM investigation team and network coordinator at DPA-EISEI Network for the National Network on Extractive Industry Social and Environmental Impact (EISEI). He has worked as DPA-EISEI Network coordinator since May, 2010.



2. Mr. Yijia LU

E-mail: yijialu@stanford.edu



Mr. Yijia Lu is the assistant of the ASGM investigation team, a J.D. candidate at Stanford Law School and a Ph.D. candidate in economics at Yale University. He interned with DPA-EISEI network through the introduction of **MS. YOU Sounty**, former EI officer of UNDP, and **Prof. Jenik Radon**, adjunct professor of international and public affairs at Columbia University. He would like to acknowledge the generous support he received from the John and Terry Levin Center for Public Service and Public Interest Law, Stanford Law School.

3. Ms. Sem Chhayden

semchhayden@yahoo.com

Ms. Sem Chhayden is an ASGM investigation team member in Battambang province and a project staff member for Association of Community Economic Development (ACED), Battambang province. ACED is a DPA-EISEI network member.





4. Mr. Seng Sarin
sarin.seng@yahoo.com

Mr. Seng Sarin is an ASGM investigation team member in Battambang province and member of the inter-personal community staff for Rural Development Association (RDA), Battambang province. RDA is a DPA-EISEI network member.

5. Mr. Chhuon Leang
leang.chhuon@yahoo.com

Mr. Chhuon Leang is an ASGM investigation team member in Battambang province and a volunteer for the Village Support Group (VSG), Battambang province. VSG is a DPA-EISEI network member.



6. Mr. Lon borey
lon_borey@yahoo.com

Mr Lon Borey is an ASGM investigation team member in Battambang province and project assistant CBO for the Village Support Group (VSG), Battambang province. VSG is a DPA-EISEI network member.

7. Ms. Phalla SAY

Ms. SAY Phalla is an ASGM investigation team member in Preah Vihear province and EI programme officer for Voice of Democracy of Cambodia Center for Independent. CCIM is a DPA-EISEI network member.



8. Mr. Kheang Sochea

Mr. Kheang Sochea is an ASGM investigation team member in Preah Vihear province and an artisanal gold miner of Kuy indigenous ethnicity from Preah Vihear province. He is the DPA- Community Focal Person of Mining (CFPM) in Preah Vihear province.



Financial and technical support provided by:



Empowered lives.
Resilient nations.



Contact US!

Extractive Industry Social and Environmental Impact (EISEI) Network
C/o Development and Partnership in Action (DPA)

#69z, St 450, Toul Tompoung II, Chamkar Morn, Phnom Penh

Phone: 023 216 495/ 023 216 396

Email: eiseicoordinator@gmail.com and eiseiasstcoordinator@gmail.com

Website: www.dpacam.org