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For
Macroeconomic Situation and Role of the
Mining Sector
And
Improvement of Mining Industry Structure

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**SECTOR PLAN FOR SUSTAINABLE DEVELOPMENT
OF THE MINING SECTOR IN THE LAO PDR**

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Macroeconomic Situation and Role of the Mining Sector

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The overall long-term economic development goal of the Lao PDR is to promote equitable economic growth with progressive poverty reduction so that it will be able to graduate from the least developed country status by 2020 (Lao Government, 2004). To achieve this development goal, the Lao government is required to develop a well integrated development approach, which will help to develop the country's potentials in the best possible manner. The Laos' abundant natural resource endowments, particularly mineral deposits and hydropower resources potential, are an important basis for its socio-economic development in Lao PDR because the exploitation of these resources can generate income needed for the development of other sectors (Hayami et al., 1980; Ghatak and Ingersent, 1984). However, it must be kept in mind that there have been countries whose natural resources have been exploited without producing sustainable economic growth (Karl, 1997; Ascher, 1999; Collier, 1999; Gylfason, 2001; Woolcock, Prichett and Isham, 2001; Birdsall et al., 2001). The economy of Lao PDR is in its early development stage in which abundant natural resources will be exploited on a large scale. It needs to avoid suffering from such "natural resource curse" if its long-term economic development goal is to be achieved through natural resource exploitation process.

This study aims to assist the Lao PDR in realizing sustainable development in its mining sector. Mining sector development requires huge amounts of investment, modern technology and highly skilled workers, but it will be difficult for the Lao PDR to meet the investment requirement on its own. The Lao government thus has to attract foreign capital and technology for its mining sector. It is hoped that this study on the Sector Plan for Sustainable Development of the Mining Sector will contribute to the Lao government's efforts in attracting foreign capital and technology needed for the development of its mining sector by providing reliable information on the macroeconomic situation, institutional development status, business environment, and geo-mines in the Lao PDR. This section focuses on the macroeconomic situation in the Lao PDR.

1. Economic Policies and their Current Situation

1.1 Major Economic Policies

After decades under Western colonial rule and years of being a part of a centrally planned economic block, the Lao People's Democratic Republic (Lao PDR) emerged on the international scene with very deprived social and economic conditions in 1986. Since then, the Lao PDR has pursued significant economic and institutional reforms aimed at improving the social and economic well-being of the Lao people by steadily building itself a market-oriented economy. Since the early 1990s (after the collapse of the former Soviet Union), Lao PDR has enhanced its economic policy

reforms to attract foreign investors and accept assistance from various governments and organizations around the world. Because of its positive reform efforts, Lao PDR was recognized by the international community, resulting in its admission to the Association of Southeast Asian Nations (ASEAN) in July 1997. In the same year, Lao PDR also applied for a World Trade Organization membership. Today, it is a member of various other regional and international organizations.

One significant policy change, implemented by the 6th Party Congress in 1996, set Lao PDR's long-term economic development objective of graduating from least developed country status by 2020. Realizing such an objective requires eradicating poverty in a sustainable manner. The medium term strategic approach of the Lao government presented at the 7th Roundtable Meeting in November 2000 was "Fighting Poverty through Human Resource Development, Rural Development and People's Participation". This was further developed into the National Poverty Eradication Program (NPEP). NPEP was further developed into the National Growth and Poverty Reduction Strategy (NGPES) in 2004.

In the 7th Party Congress in 2001, the government five-year development objectives such as maintaining public safety and political stability as well as macroeconomic stability, and strengthening law enforcement. All these are aimed at creating a favorable business environment for attracting both domestic and foreign investment that will ultimately promote sustainable economic growth.

In the banking sector, since the late 1990s Laos has moved away from its mono-bank system, separating central banking from commercial banking and permitting joint ventures and foreign banks. The Lao government's financial sector reform program since 2002 has comprised actions to improve supervision of banks, restructure state-owned commercial banks, support rural-micro finance and open up the banking system further.

The Lao government has also pursued a state-owned enterprises reform policy with three main objectives: (a) improving transparency and management of state enterprises, (b) restructuring enterprises that have caused losses to the state and banks, and (c) rationalizing the regulatory and pricing environment for state infrastructure enterprises. The Ministry of Finance and Business Promotion Office have been working on implementing this policy. According to information from the Business Promotion Office, this reform process has brought significant improvements to state enterprises in recent years.

Some other economic policies that are important for the economic development of Laos and have received considerable attention include public expenditure policy, trade policy, foreign direct investment promotion policy, and private sector development policy. Public expenditure policy aims to improve transparency, improve procurement and to provide a balance between recurrent and capital expenditure. Based on these guidelines, the government began public expenditure reform in 2001. Trade and foreign direct investment have been important issues for Laos

since its becoming a member of the Association of Southeast Asian Nations in 1997. In recent years, private sector development policy has emphasized the development of small and medium enterprises.

1.2 Current Situation

The policy measures and reforms described above were the basis for rapid economic growth throughout the 1990s, when real gross domestic product (GDP) grew at an average rate of more than 6.0 percent per year (World Bank, 2004a, 2004b). In conjunction with this rapid economic growth, Lao PDR was able to significantly reduce poverty headcount from 46 percent in 1992/93 to 29 percent in 2002/03. This fall was particularly dramatic in more recent years, being spurred by stable growth of agriculture, industry and services.

However, Laos is still behind in moving towards its policy objectives. The average GDP growth rate of 6 percent per year is lower than the expected growth rate of 7 percent. The implementation of the structural reform policy and program has progressed much slower than expected. Microfinance is important in reducing rural poverty but many financial programs still lack commercial viability as they have relied heavily on donor supports. Attracting foreign direct investments is crucial for capital-intensive sector development, particularly the mining sector. However, currently there are only two major mining projects in Laos; one at Phoubia and the other at Sepon. Moreover, the two projects had begun before the promulgation of the amended foreign investment law, which requires investors to make up-front payments of a certain percentage of their registered capital to the government. Since mining sector investment often has a gestation period, up-front payment means a significant risk to the investor.

Laos has mineral resources potential, but there has so far been little exploration work. It is necessary to increase investment in the first stage, which is the current stage. Investment in exploration will help to spur economic growth in the future.

2. Macroeconomic Situation

This section describes the recent macroeconomic situation in Laos. Particularly, it looks at trends in key macroeconomic indicators, government budget and trade balance. In general, it can be said that Laos has experienced rapid GDP growth. On the other hand, it has faced severely fluctuating inflation, decreasing value of the Kip, and prolonged budget and trade deficits. Grant aids from advanced countries are the primary source for ameliorating the budget deficit.

2.1 Trends in Major Indicators

Table 1 shows recent trends in the major macroeconomic indicators of Laos. From 2001 to 2004, Laos experienced an annual GDP growth rate of at least 5.8 percent. In 2004, this growth rate increased to 6.9 percent. These figures indicate that GDP growth in Laos has been quite stable. Since population growth in Laos has been quite stable (approximately 2.0 percent per year), the annual growth rate of GDP per capita has also been stable.

Table 1 Trends in Selected Macroeconomic Indicators

Year	Annual Growth Rate (%)		Inflation Rate (%)	Average Exchange Rate (Kip/US\$)
	GDP	GDP per Capita		
2000	5.8	3.8	23.1	7878
2001	5.8	3.8	7.8	8913
2002	5.9	3.9	10.7	10115
2003	5.8	3.8	15.5	10572
2004	6.9	4.9	10.5	10613

This stable economic growth has been heavily driven by the industrial sector which from 2001 through 2005, grew at about 11.2 percent per year. Over the same period, the service sector and the agricultural sector grew at 6.8 percent and 3.5 percent per year, respectively. Gold and copper mining projects in Sepon and Phoubia, zinc mining in Vientiane province, cement actor in Vangvieng, a steel mill in Vientiane province and motorbike assembly plants constitute some emerging and viable projects in Laos. Electricity, mining, garment manufacturing and wood processing are the driving forces in the industrial sector growth.

Population growth in Laos is approximately 2.0 to 2.4 percent per year. The fact that Laos could achieve about 3.5 percent per year growth in the agricultural sector of indicates that the country has been able to achieve food self-sufficiency. This food self-sufficiency is a crucial prerequisite for rapid economic development of the country.

Nevertheless, as shown in Table 1 Laos has experienced fluctuating inflation rates and

severe currency devaluation. Annual inflation fluctuated between 7.8 percent and 23.1 percent in the 2000-2004 period, generating hardship for both producers/traders and consumers in the Lao economy. Economists suggest that stable inflation rates between 6 to 8 percent would be ideal for promoting economic growth. The inflation rate fluctuation in Laos is therefore far too high for ideal economic growth.

The value of the Kip had been relatively stable against the US dollar until the Asian financial crisis of the late 1990s. After the crisis, the Kip has lost its value rapidly. One US dollar cost 7878 Kip in 2000 while it took 10616 Kip to buy the same US dollar in 2004. This rapid drop in the Kip value has reduced Laos' attractiveness as an investment destination for both domestic and foreign investors. Measures must therefore be taken to increase the value, and thus the use, of the Kip.

2.2 Government Budget Situation

The Lao government generates revenue through the collection of various taxes and other fees from Laotians and other nationalities who live and do businesses in Laos. Such revenue is then used to cover its current and capital expenditures.

Table 2 compares the revenues and expenditures of the Lao government over the period from 2000 to 2005. The table clearly shows that government revenue generally increased from US\$205.8 million in 2000 to US\$346 million in 2004/2005.

Table 2 Government Revenue and Expenditure (million US\$)

Year	Revenue			Expenditure			Deficit
	Total	Tax	Non-tax	Total	Current	Capital	
2000	205.8	166.3	39.5	335.2	127.8	207.4	129.4
2001	243.4	198.2	45.2	382.2	149.6	232.6	138.8
2002	283.4	229.1	54.3	381.6	166.8	214.8	98.2
2003/04	297.3	245.3	51.9	418.0	199.2	195.3	120.7
2004/05	346.0	284.5	61.5	522.4	247.6	235.2	176.4

From the table, it can be observed that the Tax revenue accounted for most of the government revenue and its share generally increased at the expense of the non-tax revenue component.

The Lao government also experienced an increase in expenditures in spite of a brief stagnation during 2001-2002. In the first three years of this period, the government also spent a much larger amount on capital formation compared with the current expenditure. But, in the latter two years current expenditure increased, sharply exceeding capital expenditures in 2004/2005.

Another point to be noted is that, the Lao government always experiences budget deficits. The period under examination was no exception. The level of deficit increased from US\$129.4 million in 2000 to US\$138.8 million in 2001. In 2001-2002, while revenues increased, expenditures stagnated, resulting in a considerable drop in the deficit level. However, the government budget deficit increased sharply from 2002 to 2004/2005.

Table 3 External Debt Accumulation (US\$ million)

Year	Total Debt Outstanding	Long-term Debt	Interest on Long-term Debt	Principal Repayment on LT Debt
2000	2502.1	2452.2	9.4	24.2
2001	2494.6	2455.9	11.0	25.3
2002	2664.5	2620.2	10.3	24.9
2003	2846.2	2800.9	11.6	28.9
2004	2941.9	2895.1	13.8	31.8

Due to the underdevelopment of a domestic financial and bond market, together with advanced countries' generosity towards Laos, the Lao government has relied heavily on external borrowing in the form of both grants and low-interest loans to finance its budget deficit. This has resulted in an increase in external debts as shown in Table 3. The total debt outstanding increased from approximately US\$2.5 billion in 2000 to US\$2.94 billion in 2004. Most of the debts were long-term. Table 3 also shows that the Lao government could repay only a very small amount of its long-term debts. The interest on long-term debt also increased.

Another negative note for Laos is that while the Lao government relies on external finance to ameliorate its budget deficit, the proportion of grants in the total external finance has declined. This indicates that unless the Lao government can substantially increase its revenue and be able to increase its repayments of its outstanding debt, Laos will remain heavily indebted well into the future. From 2000 to 2005, the nation's external debt accounted for 70 to 94 percent of Laos' GDP.

Nevertheless, the increasing government deficit and growing external debts do not necessarily confer a negative sign. If the country can use its external borrowings effectively to strengthen its competitiveness in the external markets, the foreign exchange generated thus far can be an important source for paying off the debts.

In the 1960s and 1970s, South Korea also experienced huge external debts since, like Laos in the present, its early stage development relied heavily on external borrowing. But South Korea's

borrowing was closely associated with high technology, and through the development of appropriate institutions and technologies, the economy of South Korea could grow rapidly, enabling it to pay off its debts by the late 1980s.

As stated in the introduction, Laos is endowed with abundant natural resources especially mineral and hydrological. These resources represent a huge income source for Laos which it can use for building up its competitiveness in the regional and world markets. Undoubtedly, Laos will not be able to quickly build up its competitiveness in the manufacturing sector. What it needs to do is to develop appropriate technologies for exploiting these resources, and if the income thus-far generated is used for improving technologies in the other sectors, Laos will be able to repay its external debts and will be able to graduate from least developed country status by 2020.

2.3 Trade Balance

Laos has considerably integrated itself into the regional and global economies since the collapse of Soviet Union in the early 1990s. Such integration efforts resulted in its joining ASEAN in July 1997. Laos has also become a member of many other regional and global groups and it has received trade preferences from many countries in the world. Its normalization of trade relations with the United States in recent years had been a significant achievement for Laos. It also appears that the country will soon become a member of the World Trade Organization.

However, Laos' integration into the international market with a very narrow production and export base has brought more imports than exports. Table 4 shows Laos' recent trade structure. Although the trade deficit has generally declined since 2000, it increased somewhat to US\$145 million in 2004.

Table 4 Imports and Exports (million US\$)

Year	Imports (I)	Exports (E)						Trade Balance (E-I)
		Total	Electricity	Garments	Wood Products	Coffee	Others*	
2000	535	330	112	92	73	12	41	-205
2001	528	331	106	100	79	15	31	-197
2002	447	301	104	100	71	9	17	-146
2003	462	336	91	91	64	10	80	-126
2004	506	361	97	97	67	14	86	-145

* includes mineral exports

Electricity, garments and wood products have accounted for the majority of Lao exports. The export products classified in the table as "Others", which also include mineral exports, increased

sharply since 2003 as a result of a significant increase in mineral exports. In 2002, Laos exported less than US\$1 million of minerals, but in 2004, it exported about US\$64 million of minerals. Due to its narrow industrial base, Laos has had to import most of its consumer and capital goods. That is why Laos has experienced a prolonged trade deficit problem. The capital goods import has particularly increased in recent years.

Another negative point of Lao's trade structure is the narrow range of its trading partners. The Lao export markets include Thailand, Vietnam, China, Japan, Korea, EU and Australia. The United States has become an export market for Laos, but the trade between the two countries has remained very low. It is also important to note that although Thailand and Vietnam have remained the two major export markets for Laos, Lao exports to the former have remained stagnant and the exports to the latter have even decreased. In contrast, Lao imports from Thailand and Vietnam have sharply increased since the late 1990s (Table 5). These trends indicate that Laos has lost competitiveness to its two major trade partners.

Table 5 Lao Exports by Destination and Imports by Source (million US\$)

	1998	1999	2000	2001	2002	2003	2004
Exports to:							
Vietnam	119.5	179.4	206.4	227	56.9	72	90.2
Japan		12.3	10.9	6.6	6.1	6.7	7.3
Thailand	28.8	51.6	68.9	81	85	94.3	104.3
France	23.3	18.2	27.1	33.7	33.8	33.6	43.2
Germany	21.4	27	20.8	23.4	22	23.6	30.6
Imports from:							
Thailand	411.3	452	419	451.7	727.5	838.7	1057.7
Vietnam	80.7	181.8	209.1	230.8	444	501.5	639.4
China	19.6	24.4	37.9	49.4	59.7	108.1	97.2
Singapore	22.1	37	33.6	28.9	29.1	22.4	42.3
Japan	21	24.9	23.6	12.6	19.6	15	15.4

3. Industrial Structure

The economy of Lao, one of the poorest countries in Southeast Asia, is still dominated by the agricultural sector. Table 6 shows the percentage shares in GDP of the three major sectors (agriculture, industry and services) in the past 6 years. One very noticeable feature of this table is that Laos has undergone a rather slow structural change. In 2000, the agricultural sector accounted for about 52 percent of GDP. Although there has been some structural change since 2000, the agricultural share in GDP was still a very high 45.4 percent in 2005.

Table 6 Structural Change in the Lao Economy

Year	Agriculture	Industry			Services	
		Total	Energy	Mining	Total	Commerce
2000	52.1	22.7	3.1	0.5	25.2	9.4
2001	51.2	23.6	2.9	0.5	25.2	9.6
2002	50.3	24.6	2.9	0.5	25.1	9.8
2003	48.1	26.6	2.8	1.7	25.3	10.3
2004	46.6	27.9	2.7	2.4	25.5	
2005	45.4	28.2			26.4	

The service sector's share in GDP has remained almost stagnant throughout the period under study. It was 25.2 percent in 2000 and increased to only 26.4 percent in 2005; an increase of merely 1.2 percentage points over five years. This fact is not so surprising. As described in Section 2.1, the service sector grew at 6.8 percent per year from 2001 to 2005, which is only slightly higher than the average growth rate of the whole economy over that period. In contrast, the industrial sector's share in GDP increased quite rapidly, from 22.7 percent in 2000 to 28.2 percent in 2005.

Garment manufacturing, wood processing and soft drinks account for most of the industrial sector; the energy and mining sub-sectors accounted for only small proportion of the country's GDP. Furthermore, the energy sub-sector's share in GDP has even declined slightly in recent years. However, this trend is expected to change after the completion of Nam Theun 2 (after 2009).

The mining industry's share in GDP was virtually stagnant at 0.5 percent from 2000 through 2002. It began its sharp increase only after the commencement of the Sepon mining operation. In 2004, after the commencement of the Sepon mining operation, the mining industry's share in GDP reached 2.4 percent, and this has made it more attractive for investment consideration in recent years. The two main mines, Sepon and Phoubia have been successful models of the mining industry development in Laos. In 2004, Laos received a total of about US\$64.7 million in mineral sales from the mines, including US\$56.4 million from Sepon Mine alone. In 2005, mineral sales more than doubled over the previous year, to US\$149.5 million. This implies that the mining sector's share in GDP is increasing sharply.

4. Role of the Mining Sector in the Lao Economy

4.1 Role of the Mining Sector in the Lao Economy

The mining sector has existed in Lao PDR for a long time. Under the French colonization, France particularly invested in the Lao mining sector, although entirely for the sake of its own benefits. The Phonthiew aluminum mining site of Khammouan Province is one remnant of French investment in the colonial period. Since 1975, the Lao government has invested in developing human resources for use in exploiting these mineral resources to support economic development. In the beginning (1975-1986), due to weakness in the soft-budget management system, many development efforts in the mining sector could not be sustained and only a few survived.

Lao PDR has also spent efforts on making basic geological surveys and mineral testing in various places, so that it now has a good understanding of the geological conditions in the country. That is, more than 550 sites have been found to have precious minerals and more than 50 sites have been further investigated in order to determine the current mineral concentrations. But the existing data and documents are inadequate for accurate estimation of mining sector development potential. So far, Lao PDR has prepared the following. It has developed a 1/1000000-scale geological and mineral existence map for the whole country. The provinces that already have 1/200000-scale geological and mineral existence maps drawn are Samneua, Xiengkhouang, Vientiane Provinces, and the Khammuan-Bolikhamisai border. These provinces and areas measure up to 62,107 squared kilometers, accounting for 26 percent of the total land area of the country. Geological and mineral existence maps of 1/50000 scale have also been drawn for some regions such as Xepon, Sanakham, and areas along the Mekong River of the Northern region.

From the opening of the Lao economy to the outside world, investments in the mining sector have dramatically increased. Up to the year 2000, 110 mining investment proposals had been approved but 36 could not be continued.

In October 2003, there were 81 mining projects invested in by 59 companies (22 foreign companies and 37 domestic companies). The major proportion of investment was spent on identifying mineral sites and types. Currently, more than 10 minerals are mined, produced and marketed in both domestic and international markets by 27 companies. These minerals include gold, coal, aluminum, granite, limestone, peat, marble, salt and construction stone. The Sepon gold mining company is now successful in commercial production after 12 years of investigation. This project's success proves that gold mining is realistic in Lao PDR. The project has been producing a significant amount of gold and silver mixture. From its first year of commercial production, 2003, the project has produced 9607 kilograms of gold, and it began copper production in 2005. The Phu Bia mining company is also in the process of increasing its gold production. The success of these two companies in recent years has significantly increased the role of the mining sector in the Lao economy. In 2004, Laos' mineral exports amounted to US\$64.7 million, accounting for 11 percent of the total exports.

In 2005, exports of gold alone amounted to US\$149 million. As discussed in Section 3, due to its narrow production base, Laos has run trade and budget deficits. These deficits are expected to decline as mineral production and exporting increase.

The role of mining in the Lao economy has grown quickly. The mining industry has power to contribute to the macro-economy, which directly impacts on the GDP and acquisition of foreign currency. Also, the mining industry is linked to increasing employment and local area development. The mining share of the GDP rose dramatically from 0.5% in 2000 to 2.4% in 2004, mainly because Sepon mine began production in this time (Fig.1, Fig.2). Consequently, both the position of the mining industry, and government revenues from royalties and income tax have risen dramatically. Sepon mine has just begun full-scale production, and Phu Bia mine will start full-scale production in 2008. In the future, if mineral resource development on the scale of Sepon mine continues, the mining industry will certainly become a cornerstone of Lao PDR's economic base. Also, if small-scale mining can improve its management, technology, and refurbishing of machines and facilities, then small-scale mines will become central to local economies and bring stable employment.

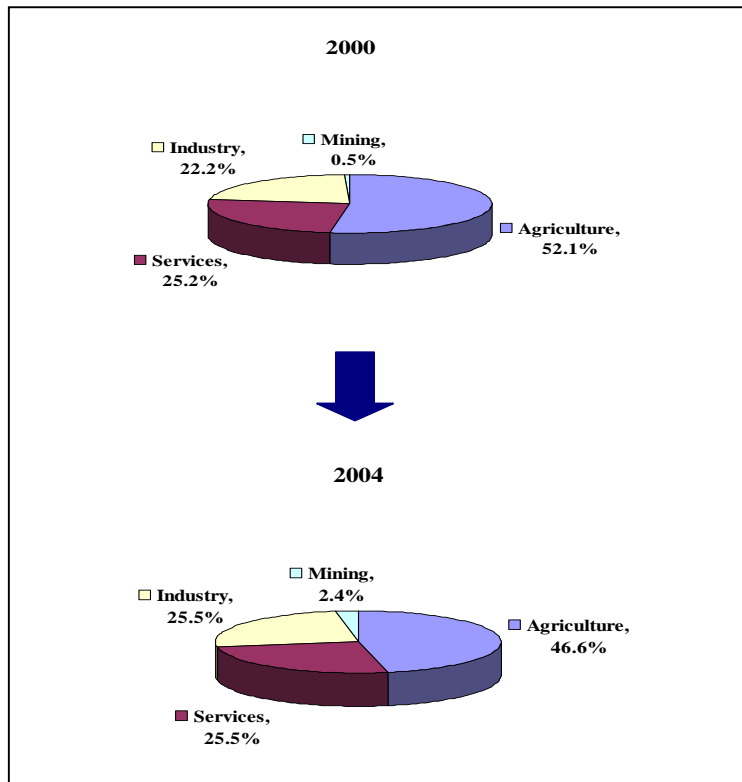


Fig.1 Mining in the Industrial Structure

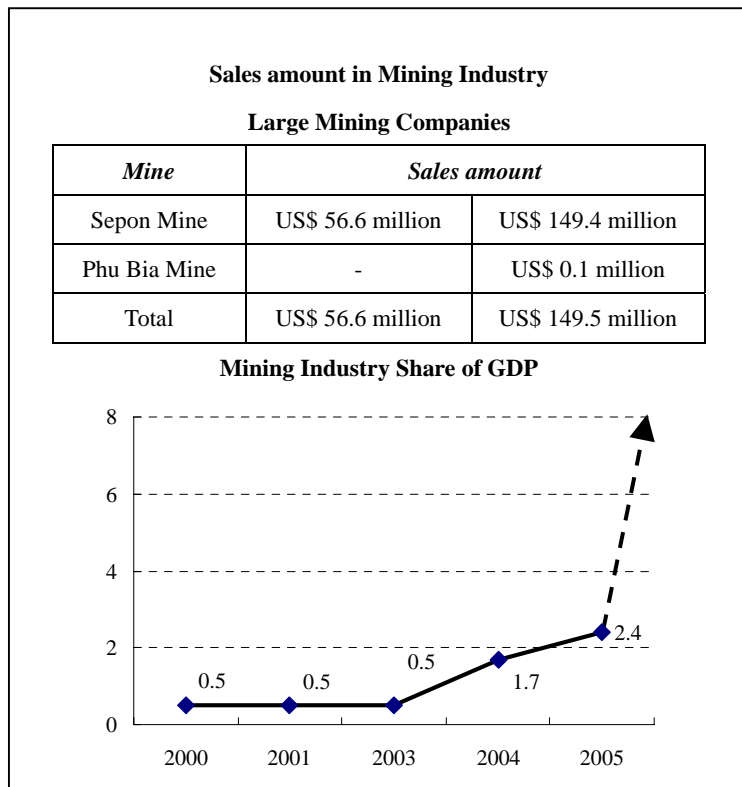


Fig. 2 Sales Amounts of International Mining Companies

An investment climate urgently needs to be created where international mining companies can participate and actively carry out production. The large amount of funds required to create this climate will come from the Lao PDR government. However, the government will receive a substantial return on its investment from royalties and income tax on future mining activity. Also, if management, technological, and financial support for local mining companies is implemented, those companies, especially domestic companies, will become stronger. Moreover, domestic companies will be able to enter into joint venture developments of large-scale deposits with international mining companies, and to develop medium-scale deposits with Laos capital. This will help to establish a base for downstream businesses and bring strength to the Lao economy.

4.2 Contribution of the Mining Sector to Poverty Reduction

The ultimate development goal of the Lao government is to promote economic development characterized by sustained high growth and poverty reduction. The government aims to eradicate absolute poverty by 2010. Currently, about 30 percent of the Lao population still lives under the national poverty line. This situation implies that achieving this poverty reduction target would require the Lao government to commit a significant amount of funds to its poverty reduction program. As indicated in Section 3, the government’s current budget situation is rather fragile. In

addition, the opportunity for the rural poor to participate in other development activities beyond subsistence agriculture is rather limited. Unless these situations are altered, the Lao government will find it difficult to realize its poverty reduction target.

Successful mining sector development can lead Laos into a virtuous circle of rapid economic growth with macroeconomic stability and progressive poverty reduction. There are a few important explanations for this favorable statement. First, income generated from mining activities will become a direct booster of economic growth. Mining activities are also a tax base for the government. Therefore, if mining activities increase, the Lao government's revenue will be increased through the collection of income tax and royalties. This will increase the Lao government's ability to finance its poverty reduction program without creating a risk of macroeconomic instability.

Second, the mining industry can benefit from the economies of scale. That is, the mining industry normally consists of a number of large companies whose operation and management are complex. Large companies require large capital and their management complexity requires effective institutions. This means that an expansion of the mining industry can induce effective institutional development. Effective institutions have tremendously important implications to poverty reduction.

Third, mining industry development provides job opportunities to the rural poor. The rural poor can participate in mining industry development directly through working in the mining companies. The mining industry has a great potential to contribute to economic development and poverty reduction through backward and forward linkages. Backward linkages can be explained using a food supply and demand example. A large mining company would require a huge quantity of food to sustain its laborers. Such an increase in the demand for food raises food prices, which in turn encourages agricultural production by the poor. Forward linkages refer to a situation where the mining industry promotes downstream business development. The downstream businesses include metal manufacturing and industrial material supply businesses.

As explained above, the mining industry has direct links to the reduction of poverty. The mining industry can bring the establishment of infrastructure and increased transportation of goods. As a mine becomes a social center, spin-off businesses, such as transportation and daily life goods will be created. The mining industry has the potential to bring development to many types of local businesses. This development is directly related to the reduction of poverty.

In conclusion, the mining sector offers a tremendous opportunity for poverty reduction in Laos. It increases the government revenue, investors' income and laborers' income.

5. Rural Development Related to Mineral Resources Development

5.1 Lao Government Development Goals and NGPES

The Lao government's development objective set at the 6th Party Congress was to “graduate” from LDC status by 2020. To achieve its goal of reducing poverty, the government implemented the National Growth and Poverty Eradication Strategy (NGPES). Today, 70 of the 142 districts of Laos are classified as “poor”, and 47 of these are “extremely poor”. The 4 main sectors for NGPES, i.e., agriculture, education, health and infrastructure, must be improved in order to reduce poverty. Supporting sectors for NGPES are energy and rural electrification, agro-forestry, tourism, mining, and the construction material industry.

Rural development basically requires the following items: road development, rural electrification, industrial development, technological services, and education and health services. The mining industry can make a significant contribution to rural development.

5.2 Role of the Mining Sector in Rural Development

The development of mineral resources is accompanied by the development of local infrastructure such as roads and electric power facilities. The mine can create not only mining jobs, but also spin-off businesses. Therefore, mine development provides both direct and indirect opportunities for employment.

Generally, mine sites may also contain educational and health facilities, not only for employees but also local residents. This helps to establish communication and provide a sense of community between local residents and the mine.

Environmental protection is another important consideration of mining activities. The natural environment (ecosystems, forests, etc.) can be protected by having a closed system at the mine.

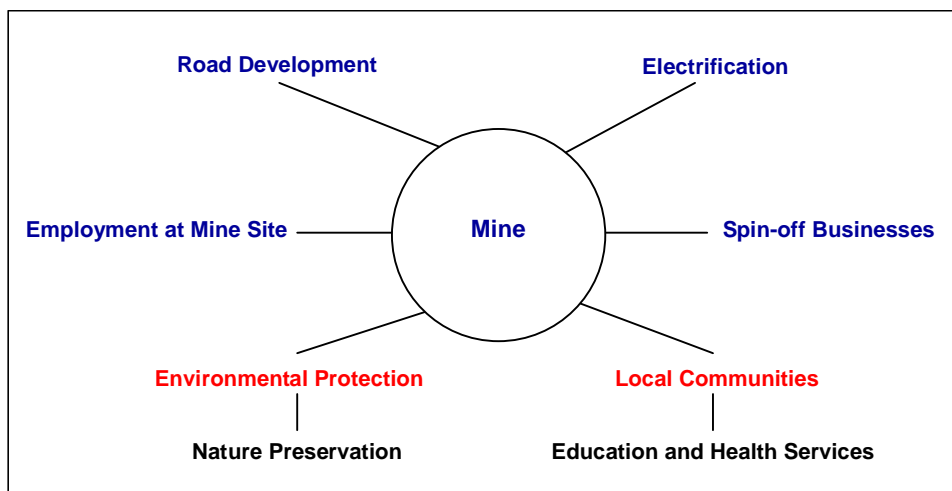


Fig.3 Mineral Resources Development and Rural Development

Currently, there is no government program for rural development that is connected with mineral resource development, because there are not so many working mines in the country. However, the Sepon mine operation has shown that mine development can spur the development of local infrastructure. Although there are 34 small-scale mines in Laos, they have so far contributed very little to rural development, and no spin-off businesses have been created. However, if small-scale mine management can be improved, it should be able to contribute to rural development by providing employment opportunities, stimulating the local economy, and spurring the construction of educational and health care facilities. Therefore, mineral resource development, at both large-scale and small-scale mines, can play a major role in promoting rural development.

End of Report

Improvement of Mining Industry Structure

Malaithong Kommasith

1. Current State of the Mining Industry in the Lao PDR

In Lao PDR, the government has so far given approval for 173 projects to 111 companies, including licenses for exploration and mining. These mining companies are engaged in prospecting, exploration and production, and include international operators, companies from neighboring countries, and local companies. Some of these companies have already stopped their activities, while others are continuing with prospecting and exploration work. However, at the present time only 34 companies are presently engaged in mineral production.

Mining structure in Lao PDR has dramatically changed since 2003, when international operators started production. This has led to the formation of a three-level hierarchy of mine operators consisting of international operators, regional operators (including from neighboring countries), and artisan gold miners. International mine operators are working large-scale deposits of gold and copper. Total revenues of these companies are around US\$200 million, about 13 times higher than the revenues of small-scale operators (Fig. 1). While there are 32 small-scale mining companies and only 2 international companies, the international companies employ about twice as many workers as all the small mining companies combined. There are big differences in revenues, number of workers, facilities, technology, management and environmental protection between the large and small companies. Moreover, the two types of companies do not have a working relationship with each other.

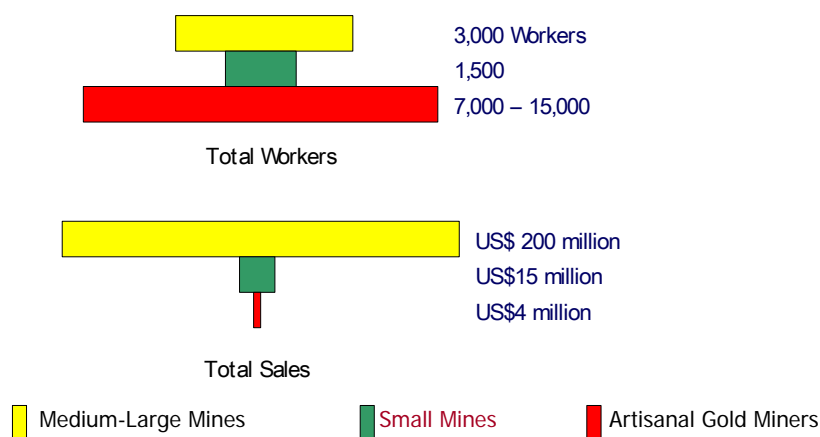


Fig.1 Scheme Structure of the Lao Mining Industry

Current State of Small-scale Mine Operators

Small-scale mine operators include companies from neighboring countries, state-owned companies, and private Laotian-owned companies. Roughly 25% of these are private Laotian-owned

companies, while state-owned companies account for 41% of the total. The remainder are companies from neighboring countries, mainly Thailand, China, and Vietnam, that sometimes have joint ventures with Laotian companies (Fig.2). These small-scale companies are producing mostly gold, titanium, zinc, and gypsum.

Small-scale companies are characterized by old facilities, lack of modernization, and insufficient management, and their activities are generally not profitable. Moreover, almost none of their activities are disclosed, and their financial situation is unclear. Such companies should play a major role in the growth and development of the mining industry in Lao. However, while they make some contribution to local employment and local economies, they have so far made little contribution to the national economy.

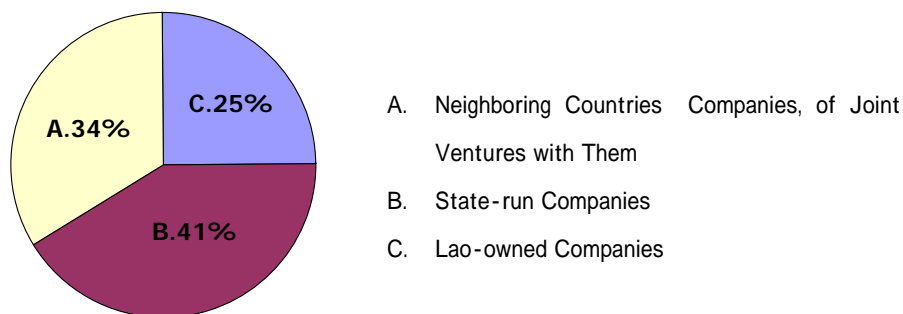


Fig.2 Recent Status of Small-scale Mining Companies

2. Characteristics of Small-scale Mines

2.1 Characteristics of State-run Companies

There are 13 state-run mines in Lao PDR, and they are under the jurisdiction of one of 3 government ministries. These mines were established to be self-sustaining, but their current role in the government is unclear. Many companies cannot reach profitability because of lack of technology and capital. Some of these companies wish to start joint ventures with foreign companies to obtain technology and capital, but their financial status and activities are not transparent, so it is difficult to foreign companies to evaluate the prospects of working in partnership with them.

2.2 Characteristics of Private Mining Companies

Small-scale mining companies produce crude ore and/or concentrate. Technology and capital are often procured through joint ventures with companies from neighboring countries. The financial condition of small-scale mining companies is unclear; however, their management is not systematic and their technology is rudimentary. Their products are sold to neighboring countries. Workers are from the area around the mine. Some mines stop production during the rainy season because of flooding, so their workers are only employed part-time. These mines are not concerned with environmental protection.

3. Promotion of Small- and Medium-scale Companies

ADB has a project called the “Private Sector/SME Development Program” that is designed to improve small- and medium-scale companies. However, it is not targeting mining companies. Small-scale mining companies in Lao are categorized as SMEs (small- and medium-scale enterprises). The Ministry of Commerce and Industry has established a Department of SME to promote such companies. Currently, SMEs in Lao do not have sufficient capacity, capital, and business know-how. Sometimes, working capital comes from the personal savings of company executives. The ADB project has suggested measures for promoting SMEs, such as making a regulatory framework, enhancing competitiveness, and improving the business environment by establishing a “one-stop shop”. It has also suggested ways for improving business organization. However, it is not easy for SMEs, including small- and medium-scale mining companies, to procure working or investment capital in Laos.

In addition, the Department of Business Promotion in the Prime Minister’s Office has started to improve management of 13 state-run companies. A few mines have been included in this program.

4. Necessity of MEM Policy for Small-scale Mines

There is already a policy at MEM to encourage the rapid development and management improvement of small-scale mines by promoting investment in them. However, this policy does not give specific details on how to materialize the institution of small-scale mines. Since MEM needs to have a policy for promoting small-scale mines based on their recent status, the following framework for small-scale mine policy is proposed in this project:

- Promoting mining as a core industry of rural communities
- Creating employment opportunities
- Nurturing Lao-owned companies
- Creating regional markets by increasing the level of processing
- Introducing technology through joint ventures with companies from neighboring countries

This framework must be detailed and able to achieve its objectives. For that purpose, government support is essential. However, the government needs to implement a means for introducing technology from neighboring countries by using capacity building to obtain basic knowledge and technology.

5. Reform of the Mining Industry Structure

There are large gaps between international mining companies and SMEs in technology, facilities, number of employees, management, financing, and so on. Furthermore, under the present conditions, it is difficult for these two types of companies to communicate with one another.

In a typical mining industry structure, each scale of operation (large, medium and small) has its own role in promoting mining, and the respective operators can communicate with one another to improve their respective technologies and management and benefit the mining industry in general. Therefore, small-scale mines in Lao must be modernized and their management improved. If these improvements are made, the importance of small-scale mines will increase. Moreover, improving small-scale mines will help to form a basement for downstream mineral products.

In the future, it would be desirable have a cooperative relationship between international operators and smaller companies. To achieve this goal, the following measures for improving mining company management will be need to be taken at the first stage:

- Establishment of a capital finance system
- Instruction for management improvement—Introduction of international accounting standards
- Technical support and job training
- Organization with organic management
- Instruction in environmental protection
- Community involvement and program for community benefits

It will take time and money to implement these measures. In any country, it takes about 10-20 years to improve the mining sector. At the present time in the Lao PDR, it is relatively easy to get support from donor countries and international organizations for projects such as the improvement of small-scale mines that are linked with poverty reduction. In this case, it would be preferable to receive a 2-step loan to carry out a systematic, step-by-step improvement of the management, facilities, and equipment of small-scale mines.

End of Report