

## Impact of Global Financial Crisis on Economic Growth in Lao PDR

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### Abstract

*We examine the Lao PDR's economic growth issue in this from a global financial crisis perspective. Different from previous research, this paper wants to emphasize the significant effects of natural resource sectors contributed to economic growth in Lao PDR. There are three parts in this paper. We start with a brief introduction to the Lao PDR's macroeconomic achievement in the past decade. Then we discuss the impact of global financial crisis on economic growth in Lao PDR. We end the study with the conclusion that after the shocks of the global financial crisis and world economic recession, hydropower and mining sectors played the important roles on economic growth in Lao PDR. Based on these findings, we may conclude that excessive reliance on natural resources could confront the country with substantial risks and challenges.*

**Key words:** Financial crisis, economic growth, natural resources, Lao PDR, challenges.

### 1. Introduction

Lao People's Democratic Republic (Lao PDR or Laos) is a landlocked country in Southeast Asia, bordered by China, Vietnam, Thailand, Cambodia and Myanmar. It has a population of around 6.25 million (2010) and a land area of 236,800 square kilometers. With an estimated per capita income of about US\$1050 in 2010, Lao PDR remain is one of the poorest countries in East Asia. It is classified by the United Nation as a Least Developed Countries (LDCs). Lao PDR has significant natural resources like minerals, hydro-electric power and forestry. The government introduced the "New Economic Mechanism" in 1986, to begin the transition from a centrally planned to a market-oriented economy. Whereas remaining a one-party state, Lao PDR has become a relatively open economy. During the Asian financial crisis (1998-1999) inflation climbed to an annual average of 110 percent and growth fell to 4 percent. The adoption of a stabilization program since 2000 and implementation of several reform programs since 2001 - in trade, banking, forestry, public expenditure management, state owned enterprises, and the private sector contributed to this improvement.

As a result, Lao PDR has succeeded in a robust economic growth with real GDP growing at an average of 6.6 percent per annum in 2000-2007 (Fig 1); inflation declined from around 27 percent in 2000 to 10.5 percent in 2004 and to 6 percent in 2010; overall budget deficit is down from 6.7 percent of GDP in 2009 to around 4.5 percent in 2010 (Fig 2); external public debt has declined steadily in recent years, from 143 percent of GDP in 2001 to 92 percent in 2004 and to 65 percent in 2007; and there was a significant decline in poverty: the incidence of poverty fell from 45 percent in FY1992/93 to 33 percent of the population in FY2002/03 and to 28 percent in FY2007/08 using Lao PDR national poverty line (of approximately US\$1.5 a day).

### 2. Impact of Global Financial Crisis on Economic Growth in Lao PDR

The outbreak of the global financial crisis, fluctuations in oil, food and other commodity prices, and the economic slowdown has brought one of the most difficult challenges to many countries in the world, especially the developing countries. Nevertheless, Lao PDR is weathering the global financial crisis better than many of its neighbors. The Lao economy is expected to maintain a rapid growth rate. Real GDP grew at an average of 8 percent per annum in 2008-2011. This robust growth rate was possible cause of the Lao PDR economy is relatively insulated from the global financial system and its exposure to global trade is relatively limited, thereby mitigating the direct impact of external shocks. In addition, as Lao PDR is surrounded by some of the fastest growing economies in the world, after opening up the country, it has benefited from increased demands for its products and large Foreign Direct Investment (FDI) inflows in natural resources sectors from neighboring countries, such as China, Vietnam and Thailand (Lao PDR Economic Monitor, 2009). Furthermore, the government of Lao PDR took important steps on both monetary and fiscal policy in response to the impacts of the crisis: central banks reduced interest rates; taxes were cut; targeted cash transfers were made; fiscal authorities adopted expansionary policies; and stimulus packages were launched.

In the past, agriculture was the major sector of Lao economy, contributing around 45 percent of GDP (2005) and employing nearly 80 percent of the labor force; the industry accounts for a bit more than 29 percent and services for nearly 26 percent. Since 2008, the contribution to Lao PDR's economic growth has shown a noticeable shift toward the natural resource sectors, especially mining and hydropower (Fig 3). In 2008 and 2009, Lao PDR's real GDP growth were both 7.5 percent. The mining sector contributed around 2 percentage points of economic growth in 2008 and accelerated to 2.5 percentage points in 2009 whereas the service sector made up 3.2 percentage points in 2008 and dropped to 3 percentage points in 2009 (Fig 4). The agriculture grew slowly in 2008 due to flooding and falling prices, although the government of Lao PDR has made efforts to support recovery of the sector. In addition, the 25th SEA Games in Lao PDR (2009) have acted as a timely stimulus on the economy, by attracting more than ten thousand foreign visitors and by supporting Lao tourism, retail trade, construction and other services industries.

Real GDP growth will remain robust in 2011 with projected growth of 8.6 percent (estimates by the Ministry of Planning and Investment, Lao PDR) compared to 8.4 percent in 2010. Resource export growth (in nominal terms) is estimated at 59 percent in 2010 and about 32 percent in 2011. Thus, resource trade surplus is likely to rise to about \$1,224 million in this year (or about 13.9 percent of GDP) compared to \$915 million in 2010. The service sector also shows signs of improvement, particularly in transport, tourism (mainly hotels and restaurants) and retail trading contributed about 2.5 percentage points in 2010 and projected at 2.6 percentage points in 2011. At the same time, the expected growth in the garment exports (by about 15 to 20 percent in this year) follows the EU relaxation in raw material sourcing requirement and increased orders by key garment producers. Agriculture (fishery, livestock and crops) is expected to benefit from the recent increase in regional demand and higher food prices. Despite the good performance of recent years, the country's economic situation remains precariously dependent on continued capital inflows from private investors and multilateral development partners. The main challenge going forward for the government of Lao PDR is to maintain macroeconomic stability whereas dealing with the global financial crisis impact.

## **2.1 Mining Sector in Lao PDR**

Recently, Lao PDR was ranked as one of the most resources-rich in Asia. Mineral exports include: gold, copper, gems, zinc, tin, potassium, gypsum, coal and lignite. So far, only 30 percent of the country has been surveyed in detail for mineral deposits and 570 mineral deposits have been found (Department of geology, Lao PDR). In 2008, there were 127 mining companies in the country (Table 1) - 42 companies are domestic investors and 85 companies are foreign investors. Foreign investment in the sector comes from China, Vietnam, Thailand, Australia, Russia, South Korea, North Korea, Canada, England and Poland. The total area of these concessions is 3,737 square kilometers. Prospecting stage has 40 projects, exploration stage has 85 projects, feasibility study stage has 7 projects and mining stage has 46 projects (Table 2). The total area of these concessions is 3,737 square kilometers. In comparison, the total area affected by the Nam Theun 2 (NT2) dam, the largest hydroelectric project in the country will be only 1,000 square kilometers. In prospecting stage, copper and zinc have 9 projects (22.5 percent), iron has 7 projects (17.5 percent), and gold and bauxite have 4 projects (10 percent). The exploration stage consists of 13 gold, iron and salt projects (15.7 percent), 11 gemstone projects (11.7 percent), 9 tin projects (10.8 percent), and 6 copper and potassium projects (7.6 percent). The feasibility study stage has 2 tin, coal and gold projects and 1 bauxite project. Mining projects consist of 10 gemstone projects, 6 gold and coal projects, 5 barite projects, and 4 tin projects. About 70 percent of the mining projects are in the prospecting period, exploration period or feasibility study period, showing that it takes time for projects to reach the mining stage.

According to Mitsui Mineral Development Engineering (MINDECO, 2006), there are about 35 working in Lao PDR which included the Sepon and Phubia mines. Of the 35 working mines, only two working project have modern production systems. There are 13 mines belonging to the Lao government: 7 mines manage by Ministry of Energy and Mines, 5 mines managed by Ministry of Defense, and 1 mine managed by the Ministry of Industry and Commerce. Foreign investors manage 12 mines, of which China has 6, Thailand has 3 and Vietnam has 2 mines. Lao PDR has some constraints in mining development, such as only about 50 percent of the country area has geological maps (1/200,000); infrastructure is poor and as about 80 percent of the country is mountainous, this constrains mining exploration and mining; there are some problems with the procedure for acquiring mining concessions; the Mineral Exploration and Production Agreement (MEPA) process creates some barriers to the promotion of mining exploration and development; current mining laws constrain investors, for example, transferring mining rights is not well defined, and foreign investors face a high risk of losing their property if they withdraw the project without government consent (MINDECO, 2006).

Nonetheless, FDI in the mining sector in Lao PDR also has some advantages: the political situation is stable, which makes investors confident; mines require substantial amounts of electricity, and Lao PDR has a high potential for hydropower development and electricity production; the labor force is abundant in Lao PDR, especially unskilled labor for mining exploration and development, labor costs are quite cheap compared with the neighboring countries; in order to promote FDI in the mining sector, the government of Lao PDR provides various incentives, including the tariff rates for imported investment goods (1 percent), income taxes for foreign employee (10 percent), etc. Ministry of Energy and Mines of Lao PDR expects mineral exports to increase rapidly. In 2010, exports of mining around US\$336 million. Australian and Lao firms are prospecting for and exporting gold. Gold exports alone were US\$60.7 million in 2004. By far the largest mining project and single source of mineral exports is the Sepon mine concession, covering 1,947 square kilometers in Savannakhet along the old 'Ho Chi Minh Trail.' The project is being developed and operated by the Lane Xang Minerals Company - the Lao subsidiary of the Oxiana Corporation of Melbourne, Australia. The concession is estimated to contain 3.5 million ounces of gold, up to ten million ounces of silver and one million tons of copper. Total investment by early 2006 was US\$375 million. Planned future expansion would involve investment of an additional US\$400-500 million.

However, the mineral exports offer the risks, such as the dangers of the 'resource curse'; there may be creation of export enclaves with little connection to the rest of the domestic economy, and there may be 'Dutch Disease'; there may also be government fiscal indiscipline and rent seeking; there may be continued environmental degradation. These impacts could eventually have negative consequences for education, health care, employment, human development and the quality of life.

## **2.2 Hydropower Sector in Lao PDR**

Hydropower is seen as a cost-effective energy source in Lao which has a theoretical hydroelectric potential of about 26,500 megawatt (MW) excluding the mainstream Mekong (around 35 percent of total inflows of the Mekong river are contributed by main tributaries that are scattered through the territory of Lao PDR). Of this, about 18,000 MW is technically exploitable, with 12,500 MW found in the major Mekong sub-basins and the remainder in minor Mekong or non-Mekong basins. Electricity from hydropower plants was not produced in Lao PDR until the late 1960s. Before 1993 only three hydropower plants had been developed and brought into operation. Less than 2 percent of the country's hydropower potential has been developed over the past 30 years, but under present government policy the hydropower sector has already become an important contributor to Lao PDR's economic growth and its national poverty eradication effort. Between 2000 and 2006, electricity exports were more than 500 million kilowatt-hours a year, except for a dip to around 470 million kilowatt-hour in 2003 (Fig 5). The total value of electricity exports is about US\$340 million in 2010.

The Government of Lao PDR has to date signed Memorandums of Understanding (MOUs) or is undertaking research studies on more than 70 hydropower projects. Of these 15 are either operational or under construction (Table 3). Lao PDR has also signed an MOU to provide 7,000 MW of energy after 2015 to Thailand, and 3,000 MW of electricity from now until 2020 to Vietnam. The representatives of the energy sectors in Lao PDR and Cambodia have signed a purchase agreement for the supply of about 5 MW by the end of 2009. Up to date, with a total estimated base project cost of \$1.25 billion, Nam Theun 2 (NT2) is the largest investment ever made in Lao PDR and is also the world's largest private sector hydroelectric project financing. The Project site is in the central provinces of Khammuane and Bolikhamxay, about 250 kilometers southeast of Vientiane, the capital of the Lao PDR. The project will be developed by a private company, the Nam Theun 2 Power Company Limited (NTPC), which is owned by a consortium comprising Electricité de France International (EdFI) of France (35 percent), Electricity Generating Public Company (EGCO) of Thailand (25 percent), Italian Thai Development Public Company Limited (ITD) of Thailand (15 percent), and government of the Lao PDR (25 percent).

The project is structured as a build-own-operate-transfer project. It has a concession period of 31 years, of which the operating period is 25 years. At the end of the concession period, the project facilities will be transferred to the government free of charge. The project includes the development, construction, and operation of a 1,070-megawatt trans-basin diversion power plant on the Nam Theun River. The project will export 5,354 gigawatt-hours (GWh) of electricity to Thailand, supply about 200-300 GWh of electricity to consumers in the Lao PDR, and generate about \$1.9 billion of revenue for the government over the 25-year operating period. NT2 is generated about \$155 million in 2010 and \$240 million in 2011. These earnings will enable the country to increase the amount of money it can invest in health, education, and basic infrastructure for the benefit of the poor.

It is expected that NT2 revenues will account for between 3 and 5 percent of total revenues to Lao PDR from 2005 to 2020, equivalent to about 60 percent of domestically financed expenditures on education and health. However, the direct negative environmental impacts of the hydro-electric projects may include increased illegal logging, reduced soil fertility, erosion of alluvial plains, decreased fish populations and low downstream water quality, decreased wildlife and non-timber forest products, conflicts between power generation and supply of irrigation water in the dry season and conflicts between excessive reservoir levels and downstream flooding in the wet season (UNDP, 2006). Most serious is the impact of dam projects on fish populations and fishing, because 70 percent of rural households in the Lao PDR supplement their incomes (and diets) by fishing. All of these environmental impacts could be much larger for NT2. The project will flood 450 square kilometers of the Nakai Plateau inevitably altering the wildlife habitats. The project will displace 6,200 indigenous people from the reservoir area, and another 6,700 people from other areas of infrastructure construction. The effect on fishing could be extensive. About 790,000 people could be affected by changes in the flows and water quality of the Xe Ban Fai, Nam Phit and Nam Katang rivers. Unlike some of the other projects, the likely downstream impacts of NT2 have been analysed. Money is to be set aside for mitigation and compensation. It is important that these promises be kept.

### **3. Conclusion and Suggestions**

Based on above analysis, we found that after the shocks of the global financial crisis and world economic recession, Lao PDR economic growth has been heavily dependent on FDI, which is mostly flowing into the natural resource sectors, particularly hydropower and mining sectors (about 80 percent of FDI). However, FDI in non-resource sectors (agriculture, light manufacturing, processing industries, and services) also grew rapidly in recent years but is still small in value terms and in comparison to that in the resource sector. Major FDI to Lao PDR in recent years comes from the region, mainly from Thailand, China, Vietnam, Australia, India, Japan, and Korea. Natural resource exports offer both promise and challenges. The export of minerals and electricity are lower potential for human development, these are capital intensive, use much less labor, and may damage the environment and local livelihoods. Increasing reliance on natural resources means that growth will progressively be more sensitive to the volatility of commodity prices and could impede development of other sectors.

However, export of minerals and electricity will increase government revenues. If the increases in revenue are used for investments in agriculture, education, health and for protection of the environment, then Lao PDR benefits of these exports will be large. It could improve the quality of life and support the building of an economy based on human resources. It also leads to increased irrigation, rural electrification, and enhanced choices for families in communities affected by dams, mining and new or improved roads. Alternatively, an important opportunity to transform the Lao economy from a natural resource-based economy to more of a human-resource based economy may be lost (UNDP, 2006).

In a word, these challenges must be tackled before the so-called ‘Dutch disease’ effects set in, eroding the competitiveness of the Lao PDR’s economy. It is necessary for the Lao PDR to persevere with initiating and implementing the strategic measures and changes that will promote economic diversification in sectors, such as agriculture, manufacturing, tourism and garments. The measures needed to be taken at all societal levels, from national right down to individual, to protect nature. The need for sustainable use of natural resources and suggest that the protection of resources should be incorporated into the law system at country level. In addition, the development of efficient and transparent mechanisms to manage export revenues and public expenditure is to be needs, otherwise it will only benefit for a small group of people, whereas the ordinary people get the impacts from “these development programs” and threatened by the natural disasters.

### **References**

- Asian Development Bank. (2009). Nam Theun 2 Hydropower Project. Lao PDR Resident Mission, Vientiane, Lao PDR.
- Asian Development Bank. (2009). The Global Economic Crisis: Challenges for the Developing Asia and ADB’s Response. Lao PDR Resident Mission, Vientiane, Lao PDR.
- Australian Government. (2009). Country Report of the ASEAN Assessment on the Social Impact of the Global Financial Crisis: Lao PDR. Aid Program.
- Bank of the Lao PDR. (2008-2009). Annual Economic Report. Vientiane, Lao PDR.
- International Monetary Fund. (2007). Lao PDR: Selected Issues and Statistical Appendix. (No.07/359). Washington D.C.

Kyophilvong, P., Toyoda, T. (2008). Foreign Capital Inflows in the Natural Resources Sectors: Impact on the Lao Economy. Presented at the Future of Economic Integration in Asia Conference, Bangkok, Thailand.

Ministry of Energy and Mines. (2008). Annual Mine Report. Department of Mines, Vientiane, Lao PDR.

Ministry of Energy and Mines. (2010). Hydropower in Lao PDR. Department of Energy Promotion & Development, Vientiane, Lao PDR.

Phouphet Kyophilvong. (2008). Mining Sector in Laos. Faculty of Economics and Management, National University of Laos, Vientiane, Lao PDR.

Phouphet Kyophilvong, Toyoda, T. (2008). Foreign Capital Inflows in the Natural Resources Sectors: Impact on the Lao economy. Presented at the Future of Economic Integration in Asia Conference, Bangkok, Thailand, 2008.

The Government of Lao PDR. (1996). National Growth and Poverty Eradication Strategy. Vientiane, Lao PDR.

The Government of Lao PDR. (2006). 6<sup>th</sup> National Socio-Economic Development Plan. Committee for Planning and Investment, Vientiane, Lao PDR.

The Government of Lao PDR. (2008). 8<sup>th</sup> Millennium Development Goals (MDGs). Vientiane, Lao PDR.

The World Bank. (2009). Country Report of the ASEAN Assessment on the Social impact of the Global Financial Crisis: Lao PDR. ASEAN Secretariat & Australian Government.

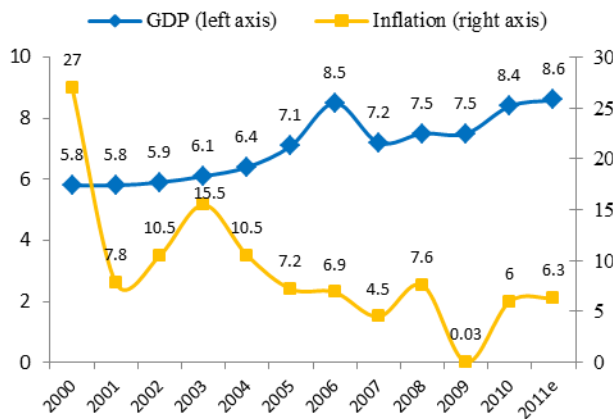
The World Bank. (2008-2010). Lao PDR Economic Monitor. (Issue No.11-17). Lao PDR Country Office, Vientiane, Lao PDR.

The World Bank. (2006). Sector Plan for Sustainable Development of the Mining Sector in Lao PDR. Mitsui Mineral Development Engineering (MINDECO).

United Nation Development Programme (UNDP). (2006). National Human Development Report: Lao PDR. (Vol.3). Vientiane, Lao PDR

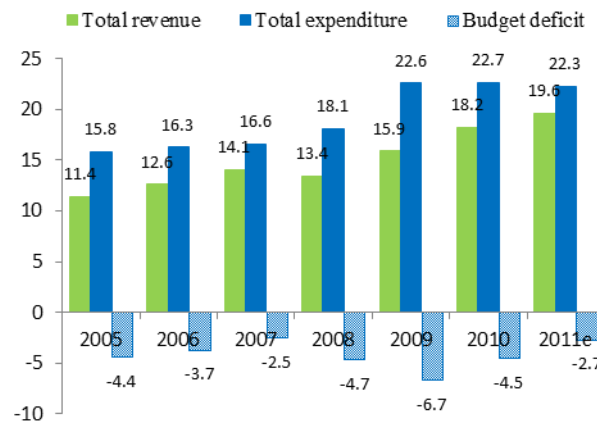
Appendices

**Fig 1 Real GDP Growth (percent) and CPI (percent change, annual average)**



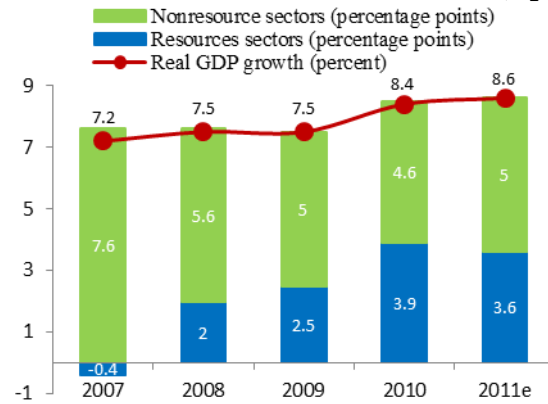
Source: Ministry of Planning and Investment, Lao PDR

**Fig 2 Government Fiscal Performance (percent of GDP)**



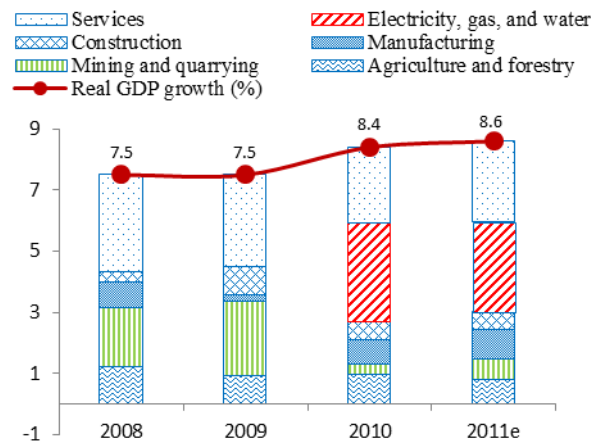
Source: Ministry of Planning and Investment, Lao PDR

**Fig 3 Resource Sectors Contribution to GDP Growth, (percentage points)**



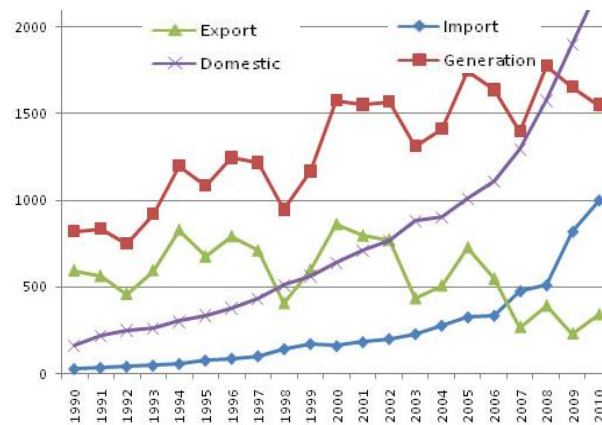
Source: Ministry of Planning and Investment, Lao PDR

**Fig 4 Real GDP Growth: Contribution by Sector (percentage points)**



Source: Ministry of Planning and Investment, Lao PDR

**Fig 5 Electricity Generation, Export, Import and Domestic Sale (million kilowatt-hours)**



Source: Ministry of Energy and Mines, Lao PDR

**Table 1 Number of Foreign Mining Companies**

Country	Company	percent
China	48	56.5
Vietnam	19	22.4
Thailand	6	7.1
Australia	4	4.7
Russia	2	2.4
S. Korea	1	1.2
N. Korea	2	2.4
Canada	1	1.2
England	1	1.2
Poland	1	1.2
Total	85	100.0

Source: Ministry of Energy and Mines, Lao PDR

**Table 2 Stage of Mining Projects Development**

Development	Project	percent
Mining	46	25.8
Prospecting stage	40	22.5
Exploration stage	85	47.8
Feasibility study	7	3.9
Total	178	100.0

Source: Ministry of Energy and Mines, Lao PDR

**Table 3 Operational or Under Construction Hydropower Projects**

Projects	Capacity (MW)	Status
Nam Theun 2	1070	operational
Theun Hinboun	210	operational
Nam Ngum1	155	operational
Houay Ho	152.1	operational
Nam Lik 1-2	100	operational
Se Xet 2	76	operational
Nam Leuk	60	operational
Se Xet 1	45	operational
Nam Mang 3	40	operational
Selabam	5	operational
Nam Ko	1.5	operational
Nam Dong	1	operational
Hongsa Coal-Fired	1878	under construction
Nam Ngum 2	615	under construction
Theun-Hinboun (expansion)	280	under construction
Xekaman 3	250	under construction
Nam Ngum 5	120	under construction
Tad Salen	3.2	under construction
Nam Nhone	2.4	under construction

Source: Ministry of Energy and Mines, Lao PDR