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Poverty, Integration and Development”*

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**Environmental Management in the Lao PDR Mining
Sector**

Keeping Pace with a Rapidly Growing Industrial

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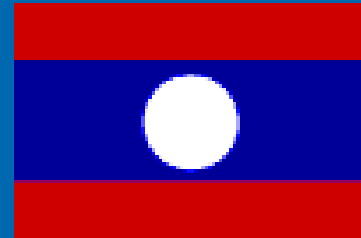
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Lao flag



Lao logo



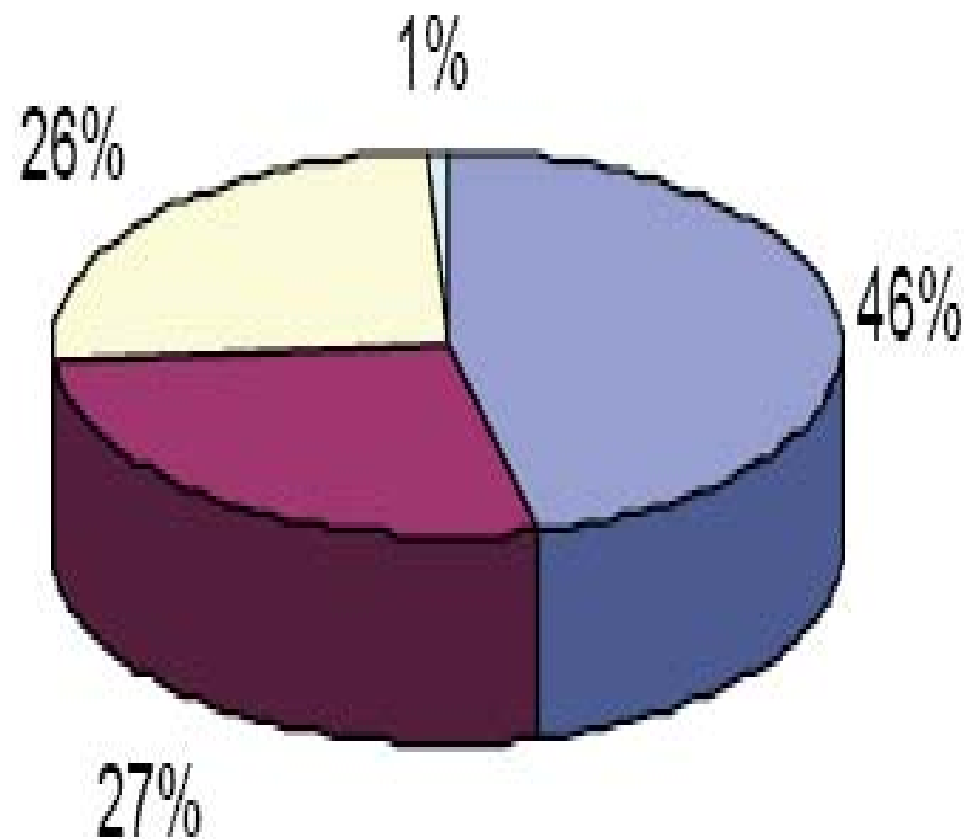
Introduction of Laos

- Land locked country
- Land area: 236,800 Km²
- Total Population: App. 5.5 M
- Increasing Rate: 2,9 %
- About 80% of population live in rural area
- The Mekong river is the main river in Laos
- The economy of Lao PDR is heavily dependent on the country's natural resource base.

- Branch of Mekong in Laos carry about 35% of the total watershed area of the Mekong Basin
- Agriculture is the principle economic sector in Laos (accounting for 46 % of GDP) 1995



Contribution to the GDP of Lao PDR by Sector (2003-2004).



- Agriculture
- Industry and Handicrafts
- Service Sector
- Import Duties

POVERTY LEVELS

- Poverty in Lao PDR has been reduced from 46% in 1992-3 to 33% in 2002-3 (GRID, 2005) with the largest reductions seen within ethnic minority groups
- However, the gap in poverty between ethnic minority groups (40-50%) and the majority group, the Lao-Tai (27%), remains, with the largest disparities occurring among women.

- **Data for 2002-2003 show that the highest levels of poverty are in Saravane Province in the South with more than 54 percent of the people living**
- **below the poverty line, followed by Huaphanh (North), Phongsaly (North), and Savannakhet (Center), with over 43 percent of the people living below the country's poverty line (GRID, 2005).**

Laotian woman working in the textile



House of peoples in rural area



**Young girls in rural Laos participate
in harvesting food**



**Young girls bear the responsibility
of caring for younger siblings**



Environmental Management in the Laos Mining Sector

- The GoL is facing significant challenges in addressing environmental issues in the rapidly growing mining sector. In particular, the development of appropriate legislation in conjunction with increased government of Laos capacity of environmental monitoring and assessment is critical to the future sustainable development of Laos natural resources.

Status of the Mining Sector

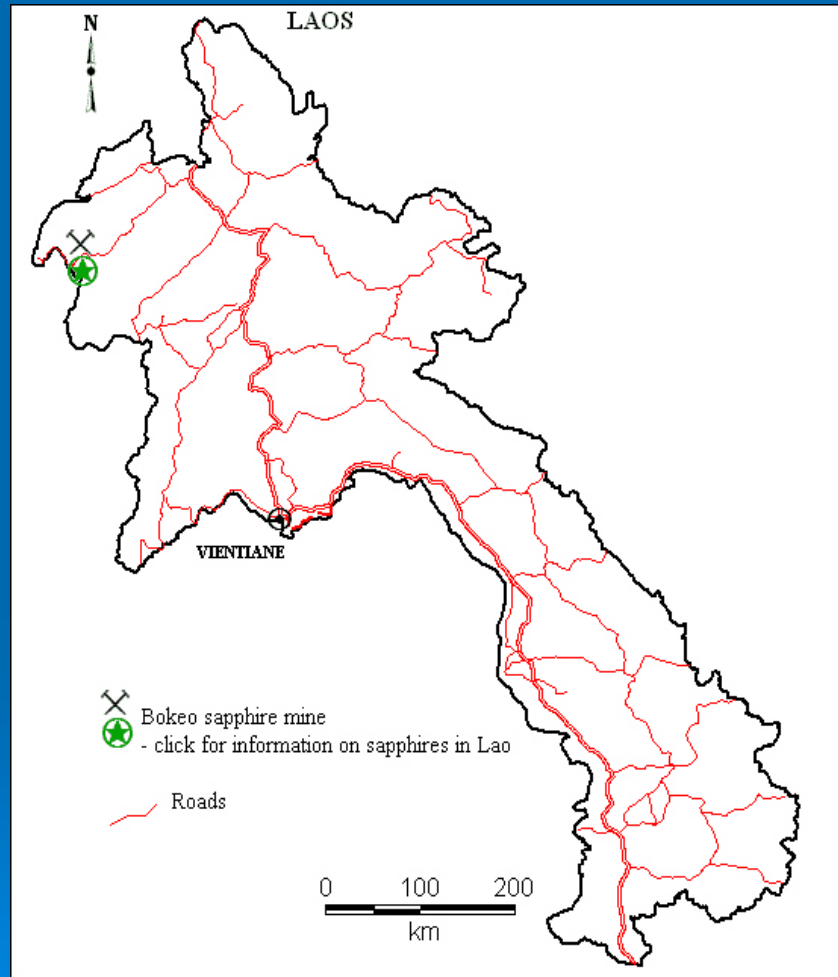
In recent years, the mineral sector in Laos has experienced significant growth

- Private investment in the mineral sector has increased almost 34% per year over the past 5 years
- At present, the mineral sector comprises 19,5% of the out put of the entire Laos industrial sector
- And continued growth is expected at the rate of approximately 11 % per year during 2006-2010

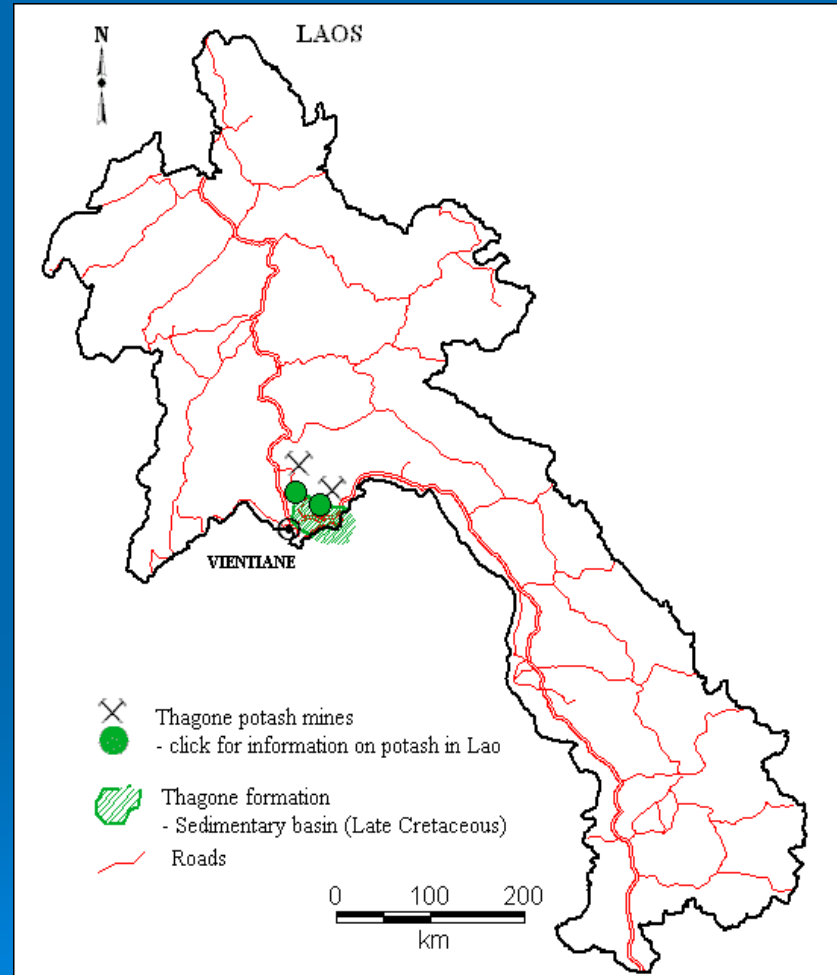
- There are over 200 companies engaged in various activities related to exploration, development and / or mining operations within the country
- Of this number, 34 are foreign companies. Two world -class mines are operational for gold and cooper and there are 55 mines under development

Mineral Potential in Lao PDR

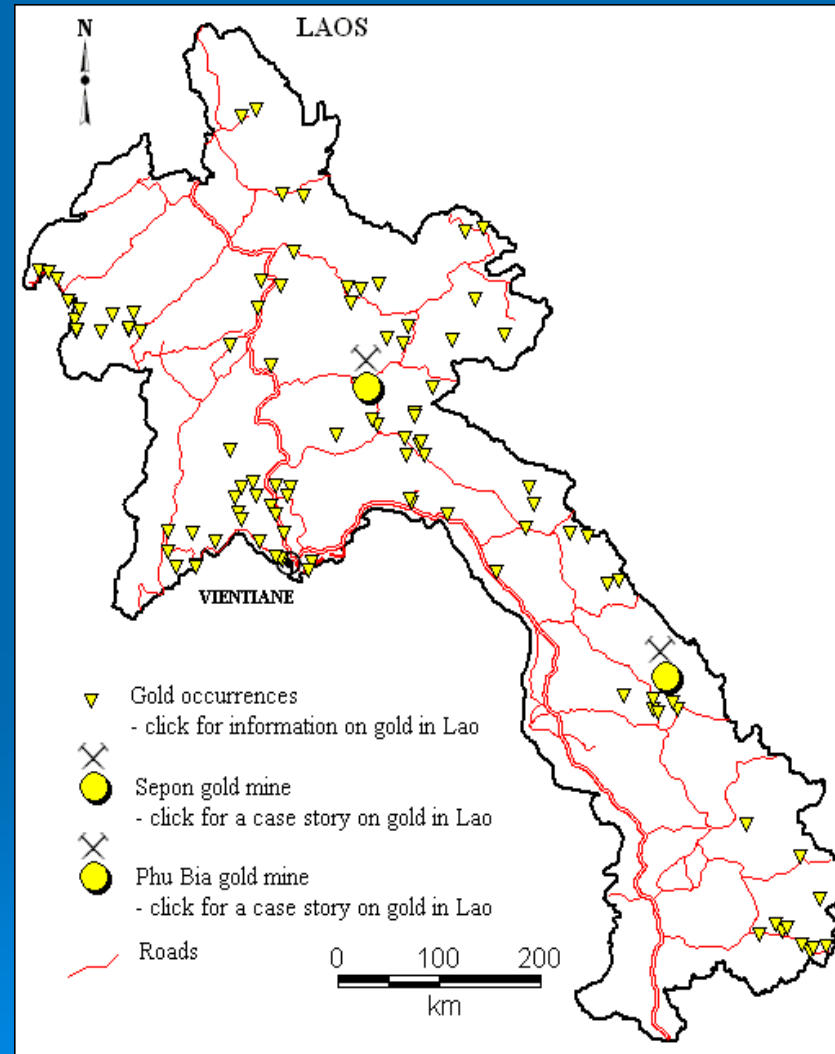
Sapphire



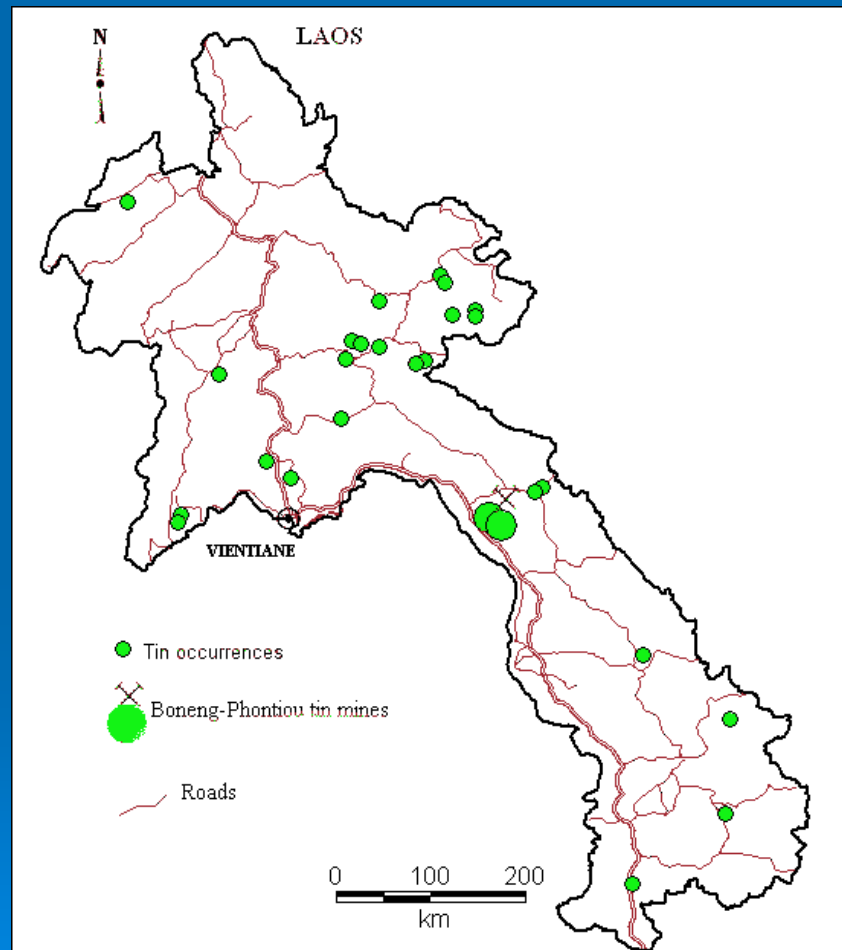
Potash



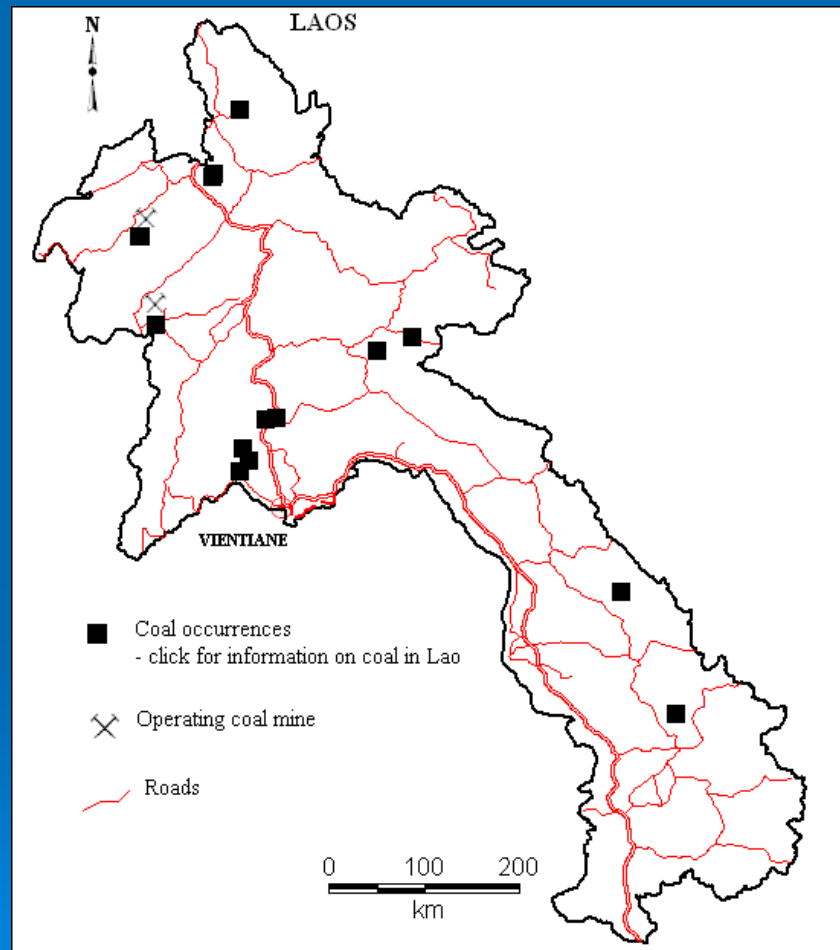
Gold



Tin



Coal



Environmental Concerns

- **Forest resources,**
- **Water resources**
- **Threat to aquatic species**
- **Threat to biodiversity,**
- **Land degradation,**
- **Inadequate solid waste management,**
- **Inadequate hazardous waste management,**
- **Potential impacts in downstream countries from improperly managed discharges.**

Mineral Policy and Legislation

- **Promote local and foreign investments in the mining sector.**
- **Reduce step by step exports of raw materials.**
- **Extract mineral resources for industrial processing.**
- **In parallel with environmental protection.**
- **Mining industry as one of the priority sectors in national socio-economic development.**

- **All mineral resources that exist at the surface or under land or water, within the territory of the Lao PDR, are the property of the national community and are subject to the centralized and unified management of the State.**
- **The Mining Law has been promulgated in May 1997 and its Implementing Decree Was approved in October 2002. Environment protection and mines health and safety in the mining sector was issued in 2004. Mining activities is governed conjointly by the Foreign Investment Law, Mining Law, Implementing Decree and Ministerial Regulations as well as relevant fiscal and taxation Laws and Decrees**

Current State of Environmental Consideration and Environmental Management Plans

- The main administrative authorities for the mining industry in Laos are Water Resources and Environment Agency and Department of Geology and Mining -DGM. The current state of environmental management is described as follows:
- The relevant laws for the mining industry related on the environment are the Constitutional Law, Environment Protection Law, Environmental Protection Regulations, Environmental Assessment Regulation, Mining Sector, Law on Water and Water Resource, Land Law, Forest law, etc. These laws and regulations must be reviewed systematically from the viewpoint of the mining industry.

- Lao environmental standards have not yet been established but some provisional standards are in place and environmental standards used by international organization and advanced mining countries have been adopted as reference compliance standards.
- The main administrative authority for the mining industry in the Lao PDR is the DGM, now a part of the Ministry of Energy and Mining-MEM. The DGM issue exploration and mining licenses and maintains the environmental protection by providing information and regulations for environmental protection, and also encourages investors to recognize the importance of the environmental.
- However, legally regulation have not been implemented due to the lack of capacity, knowledge and technology in the organization.


- Water Resources and Environment Agency is legally required to implement environmental management and monitoring activities but does not currently implement any environmental monitoring due to budgetary constraints
- An Environmental Compliance Certificate is needed to obtain licenses for exploitation or mining after examination and approval by Water Resources and Environment Agency.
- Detailed degrees on regulating mining activities have been relaxed so the DGM may conduct its environmental management duties. They will need to be complete fulfilled in the future.

- No baseline survey has yet been to provide back up data for environmental monitoring



What are the Challenges to the GoL?

- Limited capacity in the provincial and central government to properly assess the EIA document for project;
- Limited capacity and resources in provincial governments to properly assess the impact and extent of environmental incidents;
- Lack of control over foreign investors operating in Lao PDR;
- Lack of independent monitor of mining sector activities;
- Lack of legislated penalties for mining infractions;

- No legislated requirement for land compensation to the local community; and
 - Limited funds available to implement proper independent environmental monitoring programs for the mining sector.
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How are the Challenges Being Addressed?

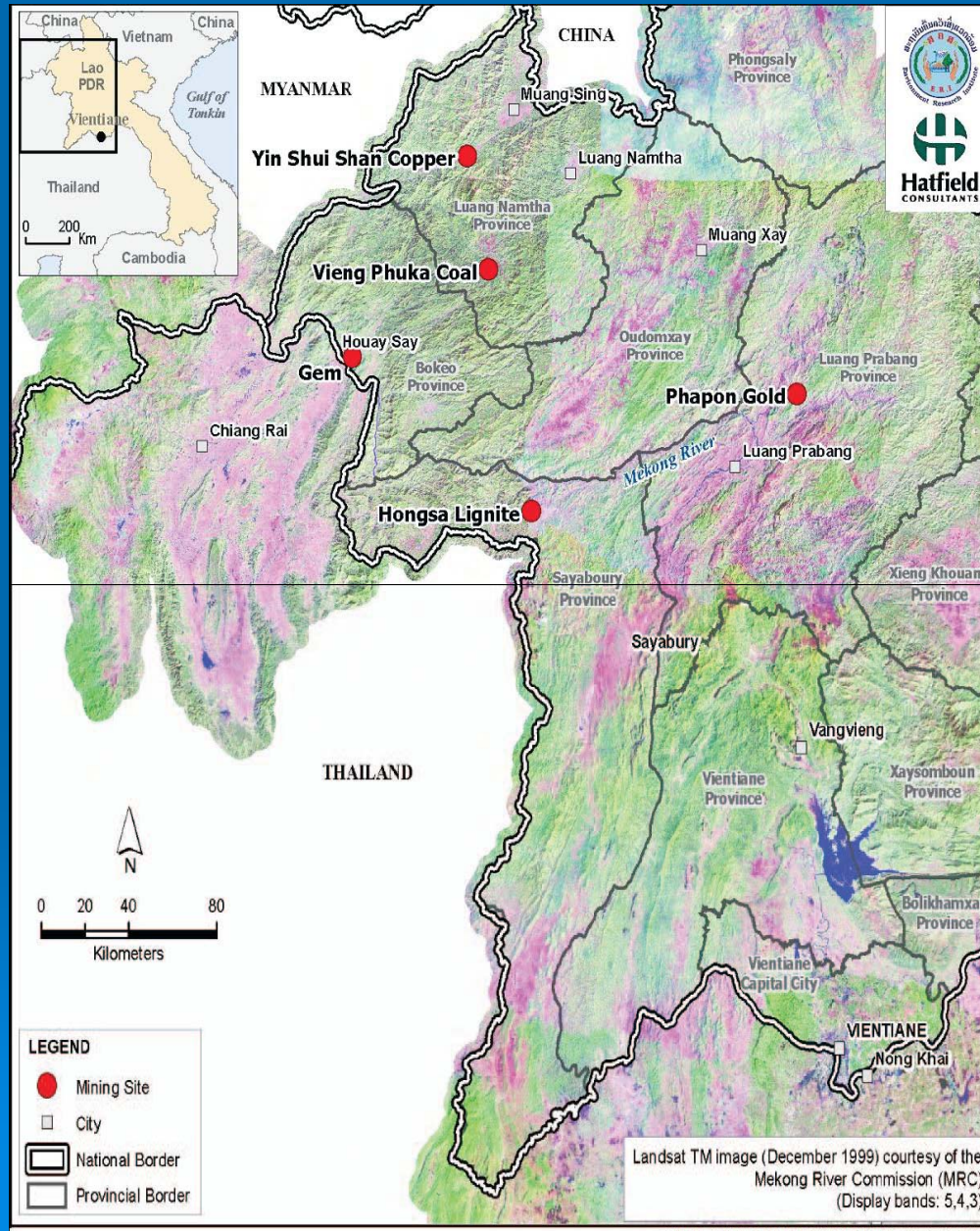
GoL Initiatives –

- Development of Third Party Monitoring Unit of Water Resources and Environment Agency to provide independent monitoring of mining operations;
- Increased linkages between Water Resources and Environment Agency and Department of Mining;
- Legislative changes



- **IEMAT Project** – Funded by the Canadian International Development Agency, the “*Improved Environmental Monitoring and Assessment Technologies for the Mining Sector*” Project is building provincial and central Water Resources and Environment Agency capacity for independently developing and implementing proper environmental monitoring programs for mining projects.
- **SEM-2 Project** - Since 2001, the Swedish International Development Agency (SIDA) has been supporting capacity building for effective environmental management in Lao PDR through the “*Strengthening Environment Management*” (SEM) Project. Phase II of the project (2005-2010) is designed to support Water Resources and Environment Agency in developing environmental management strategies for the year 2020 and the Action Plan 2006-2010.

Location of the five IEMAT pilot project locations



Sampling location along the Mekong river Bokoe Province



Sediment sample collection in Sapphire Mining in Bokeo



Water samples collection



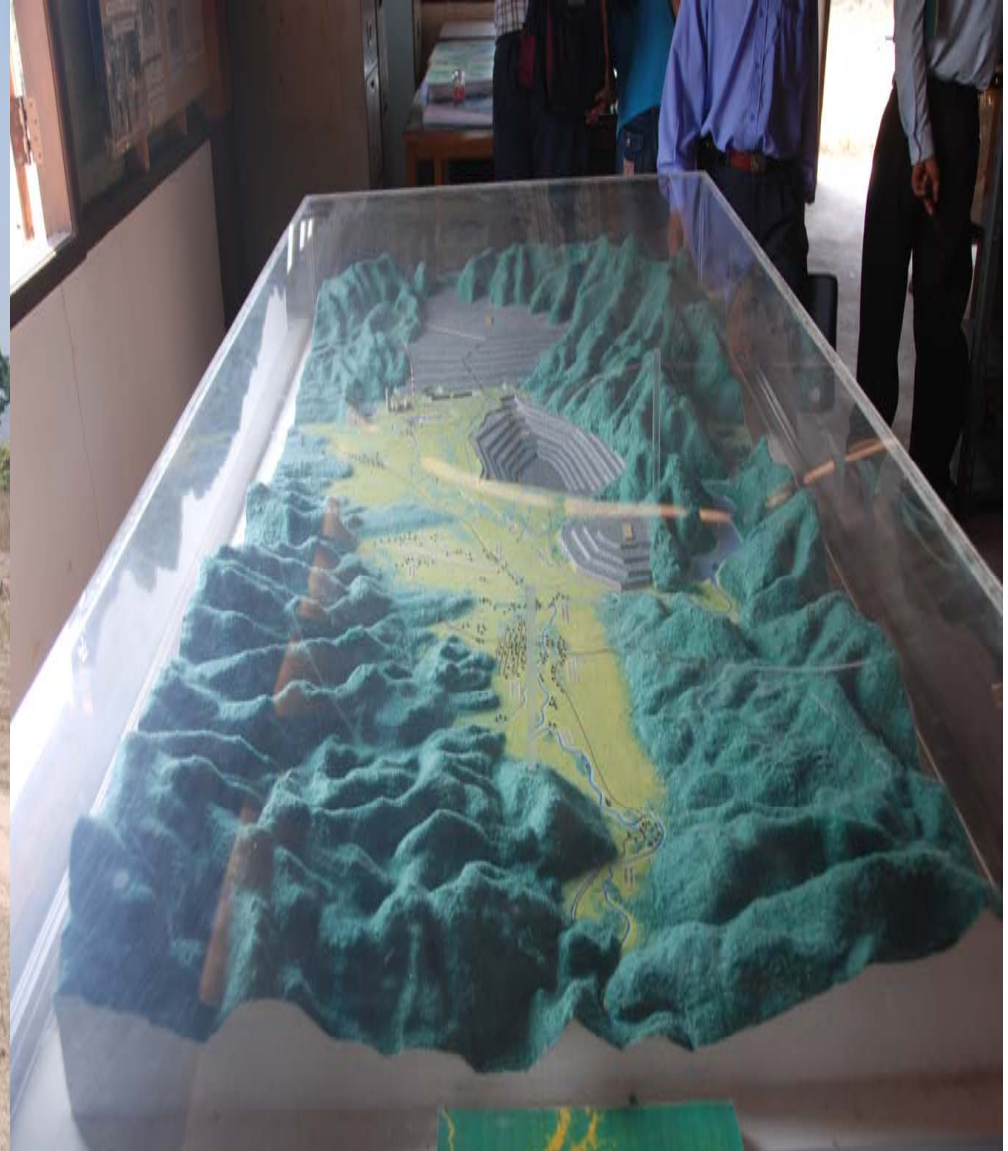
Copper Mine in Louang Namtha Province



Vieng Phou Kha Gold Mining



Hong Sa Lignite



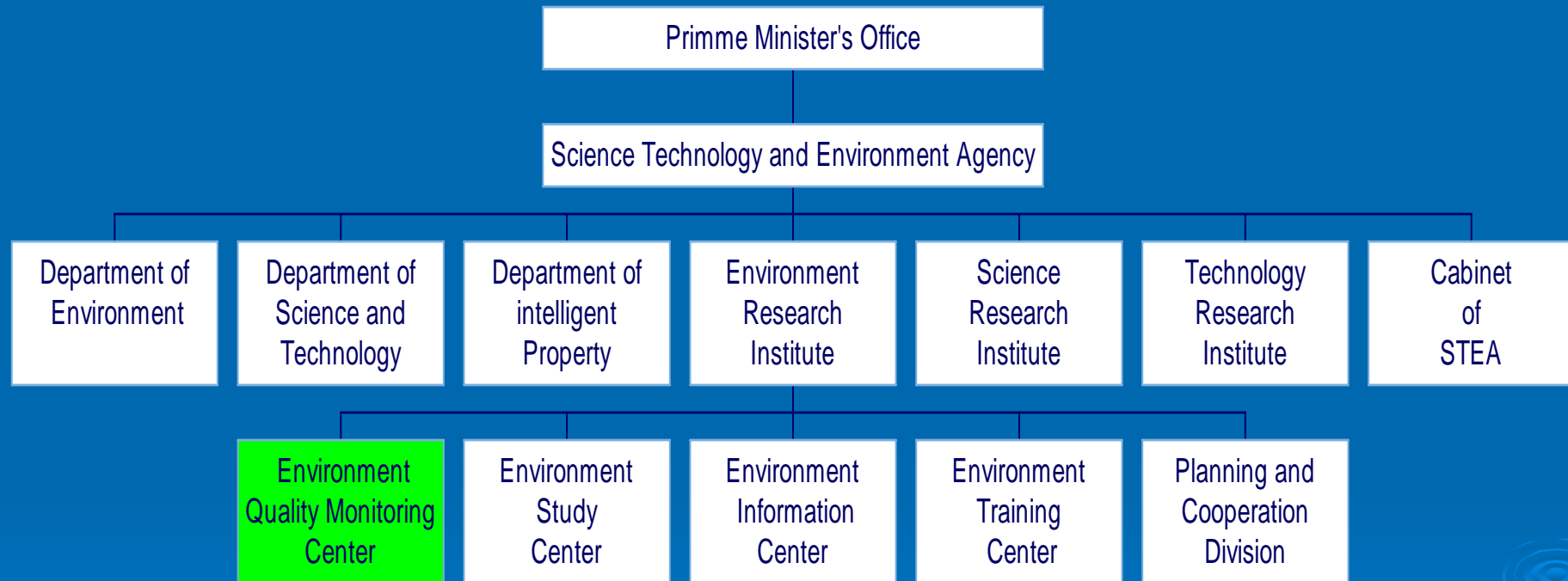
Abandon Gold Mining in Louang Prabang



Consultation with local community in Pa Pone Gold Mining in Louang Prabang



Science Technology and Environment Agency Chart



Thank you

