

# Environmental Impact Issues

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# TOPICS

- Mining situation in Laos
- Environmental in Mining Sector
- Mining Law and Environment
- Environmental Issues
- Conclusion



## The mining situation nowadays in Laos

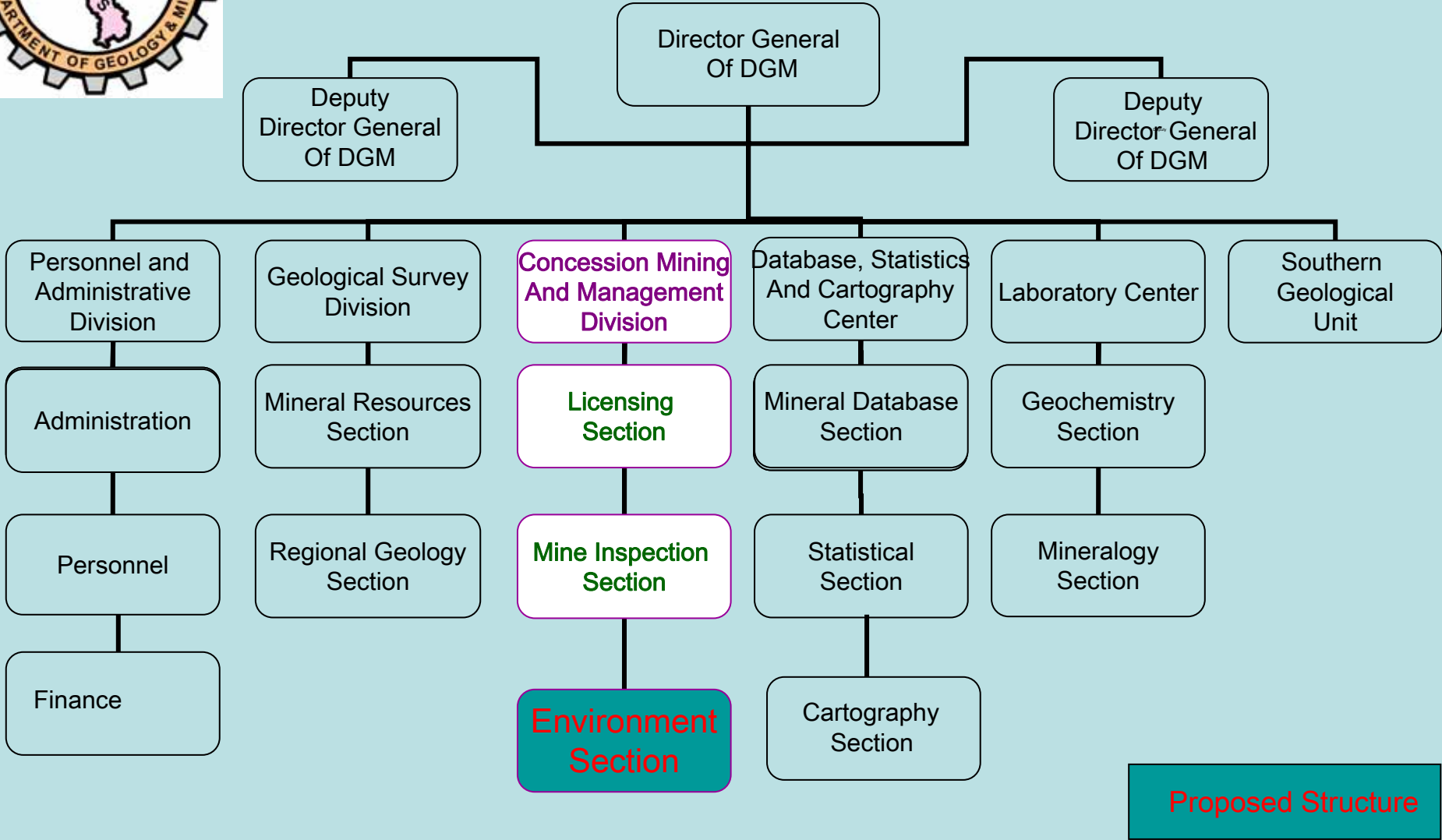
It is expected that mining will be an important component of the Lao's economy.

Laos is abundance on mineral resources such as gold, silver, copper, tin, lead, zinc, bauxite, coal, iron, barite, gypsum, potash, sapphire, construction materials and so on. It seems that nowadays focus is mainly on copper and gold.

There are two medium to large scale mines: Sepon project and Phou Bia ( both are Australian companies). 86 others companies including of which 33 are foreign (China, Thailand, Vietnam...), 53 Laotian national. These 86 companies are all medium or small scale plus artisanal miners.



# ORGANIZATION STRUCTURE OF DGM



**Proposed Structure**

**DGM is in charge of management of mineral resources development in Lao PDR**



# Environmental in Mining Sector

Past mining activities have been carried out largely as operations without appropriate environmental regulations. Luckily, during that period of time both the level State and private sector mining is quite small.

The initial formulation of draft guidelines and regulations of the environmental in mining sector specific to the condition of Laos began on March 1997 supported by UNDP.



## Background

- The formulation of the environmental guideline and regulation we attempted to incorporate, to the extent possible, an accommodation of those aspects of existing laws of the Lao PDR which dealt, either directly or indirectly, with environment issues applicable to the mining industry in Laos.
- Those Laws were: The Constitution of the Lao PDR, The Forestry Law of the Lao PDR, The Foreign Investment Law of the Lao PDR, The Health and Safety Law of the Lao PDR, The Land Law of the Lao PDR and The Environmental Law of the Lao PDR(1996 Draft).



## Need for Environmental Protection in the Mining Sector

- As we all aware that mining activities and processing of minerals can be served as future precious source of foreign currency earnings, contribute most profitable in form of direct and indirect revenue to the country. However, it can have serious and sometimes irreversible , environmental impacts if projects are not properly planned and managed.
- Some of those impacts have already been observed in Laos in association with past and current mining projects, including severe erosion, loss of vegetation, severe water pollution, massive siltation and toxic metal discharges.
- Mining activities can also have severe social and cultural impacts.



# Mining Law and Environment

- Companies seeking to invest in the mining sector of the Lao PDR will have to comply with the 1997 Mining Law which specifically provides that a mining project must assess its potential environmental impacts and take steps to minimize those impacts on the environment.
- The Lao Government encourage to establish practical and effective governmental oversight mechanisms concerning environmental impact assessment and environmental monitoring in the mining sector.



## Article 31 of the Mining Law

### Environmental Impact Assessment

Along with the feasibility study, the investor shall submit an environmental impact assessment which shall contain an elaboration on the following:

1. An estimation of the projected environmental impacts and proposed alternatives and measures to avoid or reduce the adverse impacts on the environment, ecology and communities; and
2. An evaluation of the loss to be incurred and the proposed rehabilitation, including the methods proposed to avoid economic hardship to those people who will be affected by the mineral development project, including plans providing for resettlement and the means of livelihood.



## Environmental Impact Statement (EIS)

We do not have yet EIA for mining sector, but we use the one that STEA has been created along with the Environmental Protection Law of 1997.

Focus on general principles: all medium and large scale mines will require a formal EIA; proponents of small scale mines should submit an IEE.

- Screening level of the impact
- Study and make comments on the IEE, ESIA and EMP and then send its to STEA



# Environmental Issues

- 3 issues are the most critical for successful environmental performance:
  - Mine planning
  - Social impact assessment and community consultation
  - Tailings and waste rocks containment

Given the wide variety of types of mines, mining operation methods and processes, it is not possible to provide a standardized list of the environmental impacts from all types of mining.



## Environmental Issues (cont.)

- Monitoring of mining companies' environmental performance is also a critical part of the DGM to ensure that the environment is protected and for the early identification of any short or long term trends that may be damaging to the environment.
  - To determine: what variables are to be measured, where the variables will be measured, when to measure, how to measure, the evaluation methods to be used, what analyses will be undertaken on the data and any additional information that may required.



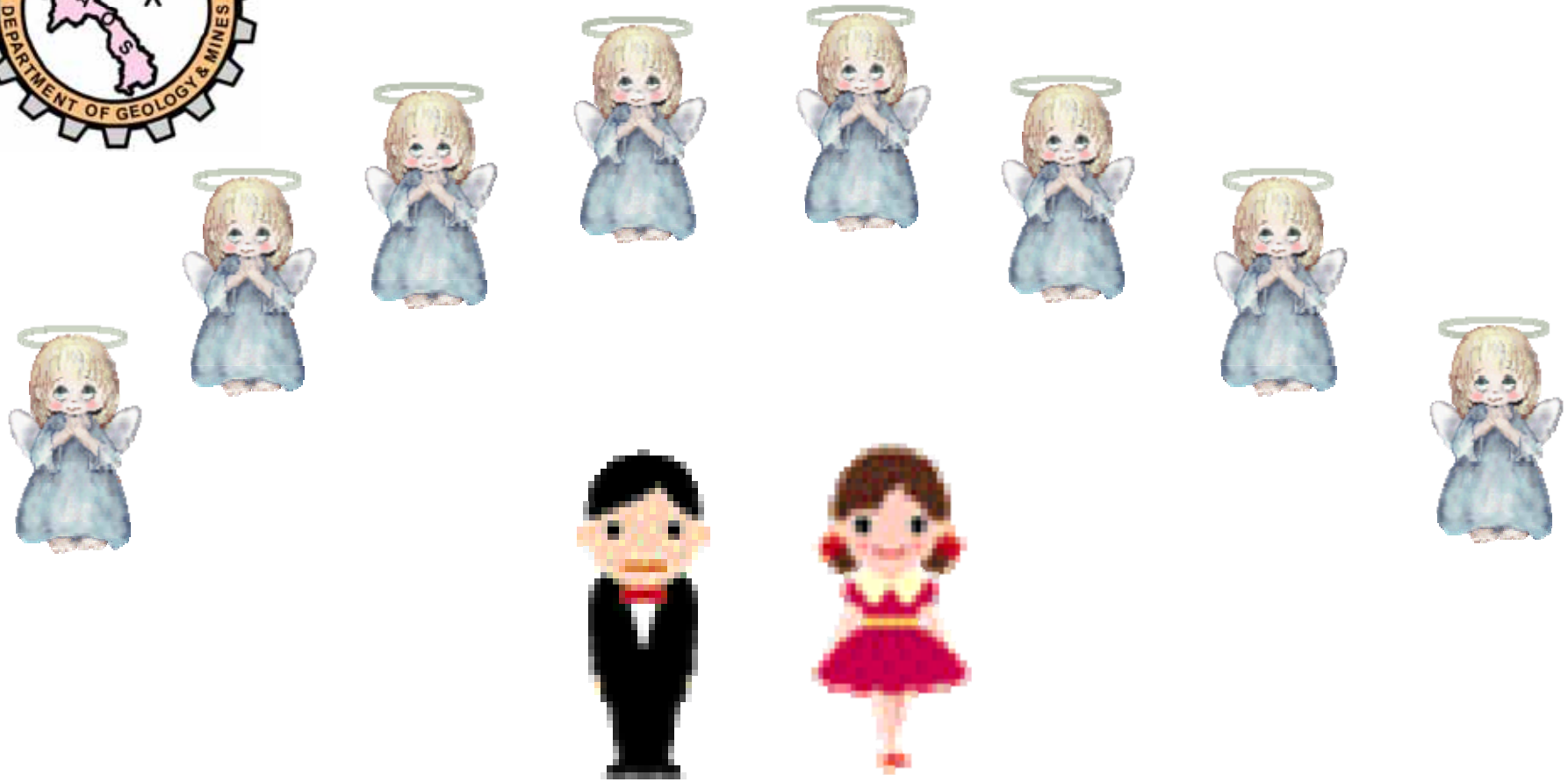
## Common Environmental Issues

- Overall the existing mining activities do not pose any significant environmental problems at the present time. In the future, however, if the mining goes deeper a significant environmental problems may arise with respect to subterranean groundwater pollution.
- Some mines are conducted without effective environmental controls, with no proper environmental mitigation activities and lack of a longer term rehabilitation and reclamation program.
- At present time social and cultural issues are minimal.



# Conclusion

Learning and applying the best practice as many countries have done with related to the national formulation policy, will allow the Government to ensure that the environmental concerns are being adequately considered and mitigated. An integrated plan of environmental assessment, planning and monitoring will play an important role in achieving ecologically sustainable development in the Lao PDR mining sector.



Thank you