

LAO PDR MINING SECTOR: SOCIAL AND ENVIRONMENTAL SUSTAINABILITY



Report of the World Bank Group Fact-Finding Mission

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EXECUTIVE SUMMARY

Background

This report sets out the results of a fact-finding mission on the social and environmental sustainability of the mining sector in the Lao PDR. In particular the report is concerned with the regulatory structures and processes that, at various stages of project development, seek to achieve social and environmental sustainability within the mining sector.

The report is based on a two-week mission to Lao PDR undertaken in February 2001 by Ramanie Kunanayagam (World Bank Group, Mining Department), Neil Boland (Environmental Specialist), and Andrew Walker (Social Specialist) and on a review of documentation obtained during this visit.

The mining sector in Lao PDR is very small at present. As a result there are relatively limited social and environmental impacts from mining activities and very limited experience in managing such impacts. Although the Mining Law was adopted in 1997, implementing decrees and regulations are still under development. Much of the discussion of “existing” processes in the report is based on our understanding of emerging processes rather than on a strong body of precedent and previous practice. Indeed it appears that, at this stage, no mining project has passed through all (or even most) of the various stages of assessment and approval set out in section 3.

While the somewhat fluid state of the regulatory environment presents certain difficulties when making definitive statements about issues of sustainability, it also presents significant opportunities to positively influence processes at an early stage of their development.

The report examines the opportunities and constraints relating to the development of a sustainable mining sector in Lao PDR in that country’s particular national context. A crucial factor in the national context is the relationship between provincial and central administrations. Laos has a long history of regional autonomy, and Lao provinces continue to play an important part in planning, administration and economic development. However, a lack of clarity exists regarding the roles of the various levels of government, particularly in relation to those sectors that are at an early stage of development, such as the mining sector.

The potential of the mining sector to the Lao PDR should not be underestimated. Currently, only about 1% of the country’s GDP comes from the sector. To date development has been slow due to:

- lack of exploration work (or collation and analysis of work done to date)
- lack of a regulatory framework
- lack of physical infrastructure including transport, power and communications
- difficulty with importing and exporting materials.

Although the Government of Lao PDR has made a commitment to development of the mining sector most operations remain government owned and profitability is marginal due to the above constraints. Recent discouraging experiences with foreign investors has tempered the enthusiasm of both Government and investor and a cautious atmosphere pervades the industry. The sector is at a watershed and future development hinges on the need to rebuild confidence on the part of both the investors and the Government.

Legislation

The key legislative tools with respect to environmental and social issues within the mining sector are the:

- *Mining Law 1997*
- *Environmental Protection Law 1999*
- *Regulation on Environment Assessment 2000*
- *Draft Implementing Rules and Regulations of the Lao PDR Mining Law 1997 (in prep.) (Draft Implementing Rules and Regulations)*

Key Agencies and Responsibilities

The Foreign Investment Management Cabinet (FIMC) is the key agency for proponents wishing to invest in the mining sector in Lao PDR. The FIMC acts as a “one stop shop” providing assistance to potential investors.

With respect to environmental and social issues the Science, Technology and Environment Agency (STEA) has an overarching responsibility for all development projects. This includes a coordination role with key line ministries. In the case of the mining sector this is the Ministry of Industry and Handicrafts (MIH). Within MIH the Department of Geology and Mines (DGM) is the lead agency concerned with operation level mining approvals and regulation.

Central to the approval and regulatory process is the negotiation of a Mineral Exploration and Production Agreement (MEPA). A MEPA is based on existing law but may depart from this in special instances. Important aspects of the MEPA, with respect to environmental and social issues, include provision to negotiate revenue flows from profits to provincial and district authorities and government equity in the project. A MEPA will contain a number of agreed conditions including commitments on operational and financial reporting, and payment of security deposits. The MEPA will also contain the Terms of Reference for an Environmental Impact Assessment (EIA).

Issues

The six key issues described below were identified during the fact-finding mission and subsequent review of literature.

EIA Evaluation

The *Regulation on Environment Assessment 2000* has been enacted to establish uniform environmental assessment requirements and procedures for all development projects in the Lao PDR. The regulation requires agencies to develop environmental assessment procedures, including procedures for public involvement and monitoring, which are consistent with the Regulation and are prepared in consultation with STEA. Although this provides a firm basis for future environmental and social management there is currently undeveloped capacity within the organisation to comply with the Regulation.

The EIA assessment process being developed relies on coordinated input from relevant agencies at central and provincial level. Although the process may change as experience with EIA grows and implementing of new legislation proceeds it is unlikely that the need for this coordination between agencies and levels of government will diminish. Therefore, there is a requirement to develop comparable skills across key agencies and at different levels of government.

Monitoring and Enforcement Capacity

In the short-term, shared monitoring and enforcement responsibilities and some overlapping responsibilities between agencies must be expected and fostering greater cooperation between agencies and levels of government is required. This approach requires a lead agency to ensure a single point of contact with operators. This will provide consistency in interpretation of legislation and operator confidence in the regulatory process. It seems that DGM have been granted this role, however, it may be in investors' interests to confirm the inspection and enforcement processes through the MEPA thus ensuring clarity for all parties.

Methods of strengthening the monitoring and enforcement capacity in the short-term are:

- professional review of monitoring designs, nominated standards and reporting
- adopting operator-financed third party auditing (Compliance auditing)
- requirement that operators develop and implement an Environmental Management System (EMS) to ISO14000 standards, including third party auditing.

Third party auditing could also provide an opportunity for regulators to actively participate in the audit teams, accelerating capacity building through practical training.

While the above measures may be appropriate for medium and large operations their application is doubtful in the case of small operators or some existing operations with little capacity. For these operations ready access to expertise in environmental management is required, in the short-term at least.

With respect to ensuring the reliability of laboratory facilities required to support government inspection and monitoring either additional funds (from private or donor agencies), or additional throughput to generate funds (commercialisation of the facility) are required. Training to increase the ability to provide support facilities in-country is also needed.

Social Impact Assessment and management

Within Lao PDR there is a broad framework in place requiring the assessment of social impacts and the development of plans for their amelioration. There are also some very good examples of SIA work in the hydro-electricity sector. However, specific work on SIA regulations and guidelines within the mining sector is at a very preliminary stage, notwithstanding some training undertaken by the UNDP Mineral Sector Development Project for staff of DGM in relation to "basic principles and legal frameworks" and "structure and uses" (Clark 2001b: 68). In the short to medium-term it appears unlikely that substantial SIA skills can be developed in DGM given the predominance of geology, mining engineering, and chemistry qualifications. However, in the longer term it would be desirable to introduce some dedicated SIA expertise into the proposed Mining Inspectorate within DGM (Appendix 2).

A more immediate solution would enhance the SIA skills of key staff within STEA, given the role of this agency in assessing and approving EIAs and reviewing the decisions of line ministries. The importance of social science based training within STEA has already been recognised in the NEAP (STEA 2000: 114) and, importantly, the inclusion of Lao social scientists "as an integral part of the EA teams on the various projects" is listed as an immediate priority action (STEA 2000: Table 1). If this course of action is taken it is important that STEA work closely with DGM on SIA issues to avoid the situation whereby SIA comes to be seen as a non-technical issue beyond the concern of the technical staff within DGM.

Central, Provincial and District Roles

The desire of the Lao PDR government to provide for coordinated “one-stop-shop” management of investment projects (through the central CIC/FIMC) appears to limit the role of provinces in project planning and implementation. However, the current emphasis on developing the planning responsibilities and capabilities of provinces and districts creates the opportunity for these levels of government to become more actively involved in developing management plans for the social and environmental impacts of resource projects. There is a risk that, in the absence of any clear instruction, provinces will play a relatively passive role and potential resource developments will be seen as lying outside their strategic planning purview.

Land, Title and Compensation

In general terms it is clear that a legal framework is in place for the provision of compensation for land holders affected by mining projects. However, there are two areas requiring further investigation, clarification and, in all likelihood, policy development. First, it appears likely that there are a range of land uses (in particular those associated with shifting cultivation, other forms of relatively impermanent upland cultivation, and collection of forest products) *for which the legitimacy of compensation is not recognised either in law or in practice*. Second, the processes for arriving at appropriate levels of compensation remain unclear and, in the mining sector, the body of precedent appears to be very limited. Significant work has been done in relation to the Nam Theun 2 re-settlement, however the applicability of this experience to smaller and less internationally scrutinised mining projects is questionable. Achieving further clarity on both these issues will probably require very specific monitoring and assessment of the local situations arising in relation to particular mining projects.

Investor Certainty

Although the process of gaining mining approvals in the mining sector is broadly understood there remains lack of clarity in actual implementation of the process. This is attributable to the following factors.

- In the mining sector there is a significant amount of new and untried regulation and legislation. In addition to the (still new) *Mining Law 1997* and *Environmental Protection Law 1999*, and *Regulation on Environment 2000* there are *Draft Implementing Rules and Regulations* and a draft (Mining Law) Implementation Decree to be considered.
- The ongoing development of STEA and its role in the mining sector, particularly the practical allocation of responsibilities between STEA and DGM.
- The distribution of responsibility between central and provincial authorities and the timing of provincial involvement in the approval process.
- The system is largely untried and implementation issues have not been identified and resolved.

Options

The following options to enhance social and environmental sustainability are suggested. It is recognised that further discussion is required with those agencies involved in the development of regulation of the sector in order to evaluate and further develop these initiatives for implementation.

Mining Sector Workshop

In order to make further progress on the issues identified a mining sector workshop is proposed.

It is proposed that the workshop focus specifically on building capacity in relation to the regulation of social and environmental impacts. Given their key regulatory role officers from DGM and STEA will be key participants at the workshop.

Training

Further specific training in the area of EIA, EMP preparation and review, and SIA is proposed. Considerable potential exists for aspects of this training to be undertaken under the auspices of SIDA's Strengthening Environment Management through STEA project.

In relation to achieving environmental and social sustainability the highest priority for training appears to be in enhancing the capacity of regulators to critically review and monitor EIA, SIA and EMP statements prepared by mining investors. Specifically skills in the following areas are required:

- preparation of Terms of Reference
- key issues in the preparation of EMPs
- assessment of EIA, SIA and EMPs
- auditing
- negotiation skills.

Training also needs to be provided to provincial authorities to prepare them for their role in the EIA/SIA assessment process. In relation to the development and implementation of training programs it is crucial that:

- these build on training initiatives already provided in the mining and other sectors.
- consistent training be provided across agencies and between levels of Government.

To best achieve these training outcomes it may be beneficial for a single agency to oversee the design and delivery of EIA/SIA assessment training. Consistency would be further enhanced by ensuring that any training is provided to mixed groups made up of representatives of different agencies and levels of Government. Secondment of officials between agencies for short periods would also promote consistency in capacity.

There is a potentially significant overlap between the training objectives set out here and those set out in the SIDA project on *Strengthening Environment Management through STEA*. Discussions should be held with representatives of the SIDA project to clarify areas of complementarity and mutual interest.

Extension and Institutionalisation of Sepon Lessons

There is considerable potential for the Sepon project to provide a benchmark for the assessment and management of social and environmental sustainability in Lao PDRs mining sector and to build capacity within the regulatory system.

Specific initiatives to be considered should include:

- use of the Sepon project as a case study for training in relation to:
 - (a) the approval process
 - (b) SIA and EIA
 - (c) monitoring

- documentation of the Sepon project's assessment of social and environmental impacts in the form of a booklet, brochure, poster and/or video
- discussions with Savanakheth province about piloting some planning activities in Vilabouly district, with a specific view to addressing potential impacts of the Sepon project
- encouraging EIA and SIA consultants working on the Sepon project to develop stronger links (eg training, collaborative work programs) with district and provincial authorities.

Realising these potential training benefits could best be achieved through a funded facilitation program coordinated by 1-2 professionals with strong communication skills and an appropriate knowledge of the Lao PDR environment.

Policy/Guideline Development

Significant benefits are likely to arise from some targeted initiatives in the development of policy and guidelines. In this regard, collaboration with the SIDA project should be explored at an early stage.

The following targeted policy developments specifically aimed at supporting elements of the existing regulatory and planning processes are proposed.

1. Development of EIA/SIA guidelines specifically for the mining sector. It is important that, in the first instance, these guidelines be relatively brief and user-friendly, and possibly include simple checklists for use by regulatory staff with limited experience in EIA or SIA. It is essential that the guidelines be prepared in both Lao and English. Discussions with STEA have indicated that there is considerable potential for the mining sector to be one of the priority areas of activity for the SIDA project. Further discussions should be held with STEA and SIDA on this issue as soon as possible.
2. There appears to be considerable potential to strengthen the links between the "mainstream" planning activities of districts and provinces and the specific planning undertaken by investors and regulators for mine project development. To this end further discussions should be held with STEA, MIH and the State Planning Committee on developing guidelines regarding the *relationship between provincial/district planning and major resource developments*.

Review of Fiscal Issues

A further fact-finding mission on the fiscal aspects of mining activity, undertaken by someone with appropriate legal and financial qualifications, is proposed.

In order to develop a better understanding of these issues a specific examination of the fiscal aspects of mining activity is required.

Monitoring and Enforcement

Opportunities exist to address the issues of inadequate capacity and varying capacity between agencies with respect to monitoring and regulation of the mining sector.

For medium and large-scale mines in the short-term:

- professional review of monitoring designs, nominated standards and reporting
- operator financed third party auditing
- requirement that operators develop and implement EMS to ISO14000 standards including third party auditing. Third party auditing could also provide an opportunity for regulators to actively participate in the audit teams thus accelerating capacity building through practical training.

For small-scale mines in the short-term:

- the provision of operator access to expertise in environmental management
- provision of compulsory training for mine managers in environmental and social impact awareness and basic management skills.

Both of the above options are outside the financial capacity of any government agency and therefore would need to be provided through a Donor funded program based within a government (most appropriately DGM) or Donor agency.

Another aspect to be considered in terms of the regulator's capacity is accessibility of information. Effective management of environmental and social issues is dependent on the ability to negotiate on appropriate actions, standards etc and a clear understanding of technical information by all parties is essential. To facilitate this, technical information should be required to be provided in Lao or at least a Lao summary should be provided.

Investment Certainty

The approval process should be clarified and documented and accessibility of information on legislation and policy requirements in the mining sector improved.

The drafting of a simple document outlining the approval process is required to build both regulator and investor confidence. Accessibility of information on legislation, policy and guidelines relevant to environmental and social issues in the mining sector could be improved by development of a simple Information Kit and guide, summarised from existing information.

Donor Coordination

Vientiane-based officers of donor agencies involved with the mining sector should meet regularly (every six months) to discuss mining initiatives. This could take the form of a semi-formal donor-based mining working group.

There appears to be significant potential for initiatives in other sectors (roads and hydro-electricity) to form a strong basis for policy and guideline development in the mining sector. Regular discussions between donor agencies on these issues would be highly desirable. Ideally the Lao Government should facilitate donor coordination to ensure ownership and therefore effectiveness of the various programs. However, in the first instance and in the context of this report, FIMC may have a role in the initiation of such a working group.

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GLOSSARY

ADB	Asian Development Bank
AusAid	Australian Aid Agency
CIC	Management Committee for Foreign and Domestic Investments and for International Co-operation
DGM	Department of Geology and Mines
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMS	Environmental Management System
FIMC	Foreign Investment Management Cabinet
IEE	Initial Environmental Examination
IMC	Investment Management Committee
MAF	Ministry of Agriculture and Forestry
MEPA	Mineral Exploration and Production Agreement
MIH	Ministry of Industry and Handicrafts
MOF	Ministry of Finance
MOJ	Ministry of Justice
MRCS	Mekong River Commission Secretariat
NEAP	<i>National Environment Action Plan</i>
SIA	Social Impact Assessment
SIDA	Swedish International Development Cooperation Agency
STEA	Science, Technology and Environment Agency
UNDP	United Nations Development Program
WB	World Bank

1. INTRODUCTION

This report sets out the results of a fact-finding mission on the social and environmental sustainability of the mining sector in the Lao PDR. In particular the report is concerned with the regulatory structures and processes that, at various stages of project development, seek to achieve social and environmental sustainability within the mining sector. The report seeks to identify initiatives that could be implemented to assist sustainable development of the mining sector. It is recognised that further discussion with agencies involved in the development and regulation of the sector is required to evaluate and further develop these initiatives for implementation. It should also be noted that the team focused on social and environmental issues; fiscal arrangements were not considered in detail and will need to be addressed before implementation.

The report is based on a two-week mission to Lao PDR undertaken from 11 to 24 February 2001 by Ramanie Kunanayagam (World Bank Group, Mining Department), Neil Boland (Environmental Specialist), and Andrew Walker (Social Specialist) and on a review of documentation obtained during this visit. A list of stakeholders consulted during the mission is provided in Appendix 1. In some instances key people were unavailable, or had limited time to devote to the project team, in these cases follow-up contact was made where possible. However, there is a need for further discussion with some agencies or organisations to further clarify opportunities, where relevant this has been noted in the text.

The report is divided into the following sections:

- Section 2: a brief overview of the national context and the mining sector in Lao PDR.
- Section 3: an overview of the regulatory processes for social and environmental management in the mining sector.
- Section 4: an analysis of the key issues to emerge during the fact-finding mission.
- Section 5: options to assist in enhancing social and environmental sustainability.

A number of issues need to be considered when reading this report:

- The mining sector in Lao PDR is very small at present. As a result there is relatively limited social and environmental impact from mining activities and *very limited experience in managing such impacts*.

- In general terms, legislative and regulatory development in Lao PDR is at a very early stage. As stated in the *National Environment Action Plan* (NEAP): “with the transformation from a centrally planned to a market oriented economy, Lao PDR is developing a new legal system” (STEA, 2000: 107 (emphasis added)). The national constitution was adopted in 1991 and legislative development has proceeded in a range of sectors, although implementing decrees and detailed regulations are still under development in many of these.
- The situation in the mining sector reflects the early stage of legislative development in Lao PDR. The *Mining Law* was adopted in 1997, however the implementing decree and regulations are still under development. The *Environmental Protection Law*, adopted in 1999 also significantly affects the mining sector; this has prompted significant administrative change, policy development, and regulatory elaboration in relation to the management of environmental impacts.
- Given the state of development of the fundamental legal and administrative frameworks *much of the discussion of “existing” processes that follows is based on our understanding of emerging processes* rather than on a strong body of precedent and previous practice. Indeed it appears that, at this stage, *no mining project has passed through all (or even most) of the various stages of assessment and approval set out in section 3*. Officials in the various regulatory bodies frankly recognise that procedures are currently evolving, that different approaches are being tested and that “current” procedures are likely to change. What might be perceived as unnecessary delay in finalising, for example, the implementing decree for the *Mining Law* probably reflects a desire to test a range of regulatory approaches before setting any particular approach in concrete.
- While the somewhat fluid state of the regulatory environment creates certain difficulties when making definitive statements about issues of sustainability, it also presents significant opportunities to positively influence processes at an early stage of their development. The options presented in section 5 comprise relatively modest initiatives that, in the view of the authors, are appropriate to the current state of regulatory development and technical capacity.

2. NATIONAL CONTEXT AND SECTOR OVERVIEW

2.1 National Context

The opportunities and constraints relating to the development of a sustainable mining sector in Lao PDR need to be understood in terms of that country's particular national context. Some of the key features of that context are:¹

- The Lao PDR is one of the poorest and least developed countries in the East Asia region. In 1998 it had an estimated per capita income of US\$320. Social indicators in the Lao PDR are among the worst in the region, and closer to the average for Sub-Saharan Africa.
- The Lao PDR covers 236,800 square kilometres and has a population of 4.9 million growing at 2.6 % per annum.
- Agriculture is the dominant sector of the economy, employing over 80 % of the labour force and contributing 53 % of GDP.
- Since the introduction of reforms under the New Economic Mechanism (NEM) in 1986, the Government has been transforming the economy from a centrally planned to a market-oriented system. This has facilitated a growing private sector, increases in agricultural and non-agricultural output, and increased foreign investment and trade flows. GDP growth averaged 7 % between 1992 and 1997. Following 1997, however, the macroeconomic environment worsened considerably, with inflation climbing to triple-digit levels, and exchange rate depreciation reaching alarming levels. GDP growth, according to preliminary Government estimates, recovered considerably in 1999 after slowing to 4 % in 1998.
- Lao PDR offers some comparative and competitive advantages in certain private sector development activities due to its relatively low labour and production costs, its natural resource base, and a low tax structure. However, the potential for the development of the private sector is limited by low economies of scale, a small domestic market, few domestic suppliers, occasional restrictions on the imports of inputs, general difficulties with importing and exporting materials, poorly developed infrastructure, and complex investment approval and implementation procedures. The pace of regulatory reforms, particularly in issuing implementing decrees and their enforcement following the passage of laws, has been slow.

¹ A number of these points are taken from the World Bank fact-sheet on Laos at:
<http://wbln0018.worldbank.org/eap/eap.nsf/65ee40ef9c4c89fd852567c900773b1e/00a1c4d451e20c65852567d7007b1a58?OpenDocument>

- One crucial feature of the national context is the relationship between provincial and central administrations. Laos has a long history of regional autonomy, and Lao provinces continue to play an important part in planning, administration and economic development. Since the establishment of the Lao PDR in 1975 there have been a series of changes in the relative roles of central, provincial and district government, with varying degrees of decentralisation and re-centralisation (Keuleers and Langsy, 1999). A lack of clarity exists regarding the roles of the various levels of government, particularly in relation to sectors, such as the mining sector, that are at an early stage of development.

2.2 Mineral Resources and Mining Activities

The mining sector in Lao PDR is relatively underdeveloped and, by international standards exploration work has been cursory. Nevertheless the country is believed to be reasonably rich in minerals with potential and proven deposits of gold, tin, iron, zinc, lead, copper, precious stones (sapphire, zircon and amethyst), coal, lignite, limestone, bauxite and gypsum identified. At the present time (early 2001) activity in the sector is slow: there is only one current Prospecting Licence, 13 current Exploration Licences and 28 current Exploitation Licences. A number of small to medium-scale mines are producing lignite, gypsum, tin, potash and salt (extraction of salt from saline groundwater is administered as part of the mining sector). Recently two mining operations—gem mining in Bokeo province (GemLao) and gold mining in Louangphabang province (Lao Gold Co)—have closed down due to legal and environmental problems.

Two larger-scale mining projects are currently in pre-development phases. The first is the Pan Australian project, 100 kilometres north-east of Vientiane. Pan Australian Resources N.L. are currently completing due diligence investigations to acquire a majority interest in Phu Bia Mining Ltd (wholly owned by Normandy Anglo), which holds a licence over a large contract area centred on the Phu Kham copper/gold deposit. The second is the Sepon project, a large-scale gold and copper resource near Sepon in Savannakhet Province. Oxiana Resources N.L., through its subsidiary Lane Xang Minerals Ltd, has acquired a majority interest in the resource and expects to commence construction on what would be the country's largest mining project in late 2001. Although both of these proposals are large by Lao standards they may be considered to be only medium size by international standards. Given the modest size of the economy even a medium sized development project has the potential to provide significant financial benefits at the local, provincial and national levels. In an effort to place new mining ventures in the national context and to give investors clear direction the Department of Geology and Minerals (DGM) of the Ministry of Industry and Handicrafts (MIH) is preparing an Implementing Decree which will define the level of environmental and social assessment required in terms of annual production.

The potential of the mining sector to the Lao PDR should not be underestimated. Currently, only about 1% of the country's GDP comes from the sector. To date development has been slow due to:

- lack of exploration work (or collation and analysis of work done to date)
- lack of a regulatory framework
- lack of physical infrastructure including transport, power and communications
- difficulty with importing and exporting materials.

Although the Government of Lao PDR has made a commitment to development of the mining sector most operations remain government owned and profitability is marginal due to the above constraints. Recent discouraging experiences with foreign investors has tempered the enthusiasm of both Government and investor and a cautious atmosphere pervades the industry. The sector is at a watershed and future development hinges on the need to rebuild confidence on the part of both the investors and the Government.

2.3 Key Agencies and Regulatory Framework

Legislation

The key legislative tools with respect to environmental and social issues within the mining sector are the:

- *Mining Law 1997*
- *Environmental Protection Law 1999*
- *Regulation on Environment Assessment 2000*
- *Draft Implementing Rules and Regulations of the Lao PDR Mining Law 1997 (in prep.)(Draft Implementing Rules and Regulations)*

The Lao PDR Government has promulgated other legislation that has relevance to the mining sector. This includes, but is not limited to:

- *Law on the Promotion and Management of Foreign Investment in the Lao People's Democratic Republic, Law No. 1, 1994;*
- *Industrial Waste Discharge Regulations No. 180/MIH;*
- *Factory Decree, 1992;*
- *Industrial Facilities, Decree No. 103/MIH;*
- *Forest Law, 1996*
- *Establishment of National Forest Reserves, Decree No. 164/PM, 1993*
- *Management and Protection of Wild Animals, Fisheries and on Hunting and Fishing, Decree No. 118/CCM*

- *Law on Water and Water Resources, Law No. 02-96, promulgated by Decree No. 126/PR, 1996;*
- *National Parks, Decree No. 164/PM, 1993;*
- *Land, Decree No. 50/PM (concerning, among other subjects, cultural heritage sites).*

In addition, the Lao PDR has acceded to several international treaties that will also affect mining operations, such as the *Convention on Biological Diversity* (“Biodiversity Convention”), the UNESCO *Convention Concerning the Protection of the World Cultural and Natural Heritage* (the “World Heritage Convention”) and the *Mekong River Commission Agreement*.

Key Agencies and Responsibilities

At a broad level the role of government in regulating the mining sector can be summarised as follows.

The Foreign Investment Management Cabinet (FIMC)² is the key agency for proponents wishing to invest in the mining sector in Lao PDR. The FIMC acts as a “one stop shop” providing assistance to potential investors through a number of its Divisions. This role has been specifically defined by the Management Committee for Foreign and Domestic Investments and for International Co-operation (known as the “CIC”), part of whose charter is to streamline domestic and foreign investment within the legal framework of Lao PDR (Prime Ministers Office 2000b).

With respect to environmental and social issues the Science, Technology and Environment Agency (STEA) has an overarching responsibility for all development projects (*Environmental Protection Law, 1999*). This includes a coordination role with key line ministries. In the case of the mining sector this is the Ministry of Industry and Handicrafts (MIH). Within MIH the Department of Geology and Mines is the lead agency concerned with operation level mining approvals and regulation. The relationship between these agencies and between different levels of government (central, provincial, district and local) is discussed in subsequent sections of this report.

The current structure of DGM, STEA and FIMC is illustrated in Appendix 2(a, b, c). Other agencies that commonly have a role in regulation of the sector are the Ministry of Water, the Ministry of Lands, and the Ministry of Forestry. Several other groups within MIH itself also have oversight responsibilities, such as the Industrial Processing Division.

² There is a proposal to merge the FIMC and the Domestic Investment Management Committee into a single entity, called the Investment Management Cabinet (IMC), in the near future.

3. THE REGULATORY PROCESS

The current status of the approval and regulatory process for large and medium-scale mining sectors is illustrated in Figure 1. Central to the process is the negotiation of a Mineral Exploration and Production Agreement (MEPA). A MEPA is based on existing law but may depart from this in special instances. Important aspects of the MEPA, with respect to environmental and social issues, include provision to negotiate revenue flows from profits to provincial and district authorities and government equity in the project. A MEPA will contain a number of agreed conditions including commitments on operational and financial reporting, and payment of security deposits. The MEPA will also contain the Terms of Reference for an EIA. The steps preceding and following negotiation of the MEPA are discussed in the following sections.

3.1 Application, Negotiation and the MEPA

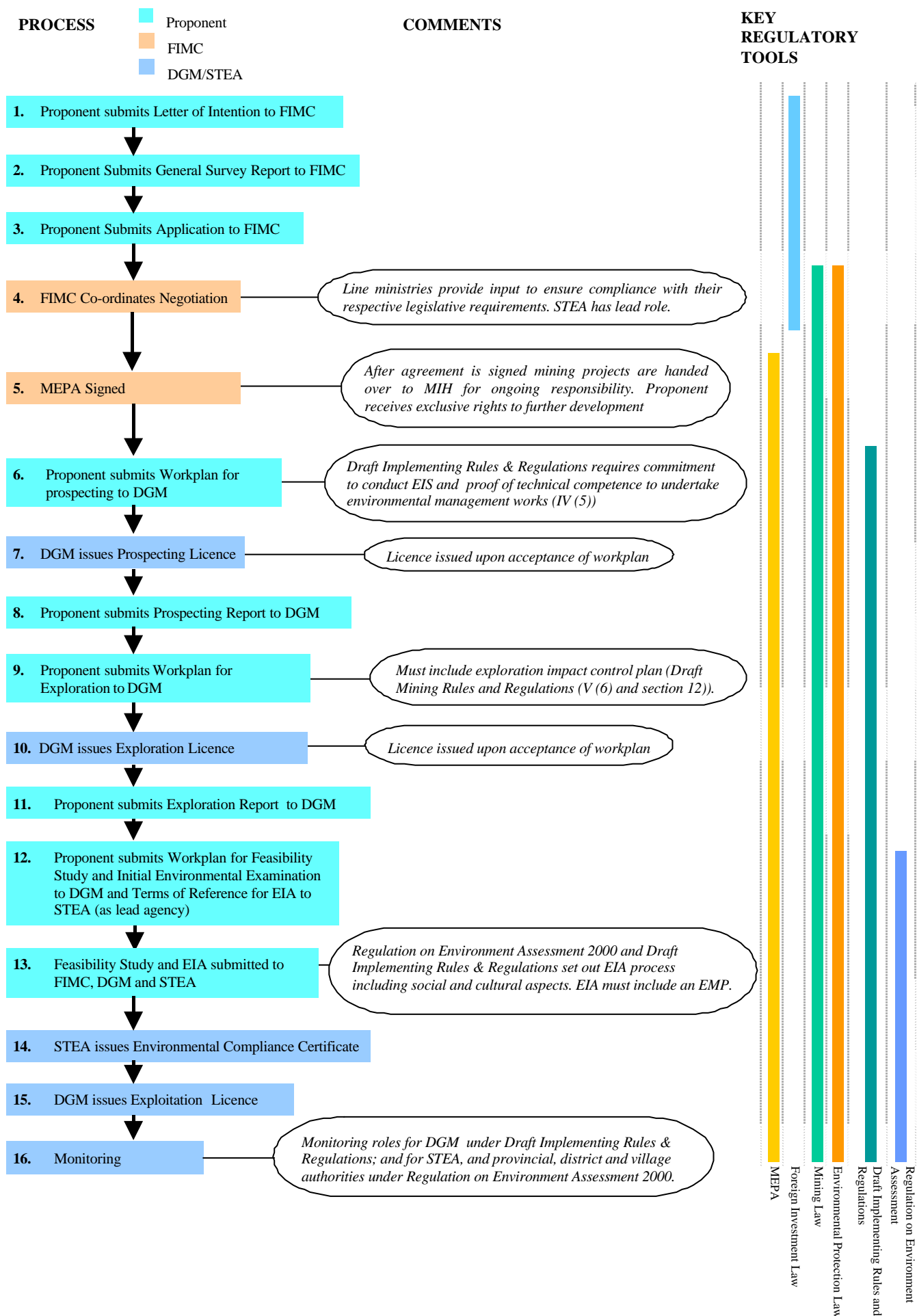
The formal application procedure commences when the proponent lodges a Letter of Intention at the Foreign Investment Management Cabinet (FIMC). This initiates:

- referral for comment to Science Technology and Environment Agency (STEA) and the Ministry of Industry and Handicrafts (MIH) and its Department of Geology and Mines (DGM)
- proponent access to DGM geological information
- approval for a short primary geological survey (in association with DGM)
- lodgement of a General Survey by proponent
- submission of an internal survey report by DGM.

This is followed by a proponent Application at which stage the Project Evaluation and Research Division of FIMC will, in association with STEA, invite comment from a small number of relevant ministries (for example MIH) and the relevant provincial authorities with respect to possible issues and impacts. Comments are referred to the CIC.³

³ In an effort to streamline this process a Prime Ministers Decree (Prime Minister's Office, 2000b) allows projects valued at less than US\$1M to be approved by the FIMC without reference to the CIC.

Figure 1: Mining Sector Approval Process (Large and Medium Scale Mines)



Given CIC approval a negotiating team consisting of key line ministries and others (for example; STEA, DGM, Ministry of Justice, Ministry of Finance, provincial authorities) is formed. The role of the negotiating teams is to ensure their relevant ministerial or agency responsibilities are satisfied during the negotiation of a MEPA and to advise the CIC accordingly. For example, STEA will consider implications under the *Environmental Protection Law* and DGM will consider the *Mining Law*. It should be noted that STEA has an overarching responsibility for environmental and social issues defined under the *Environmental Protection Law 1999, Regulations on Environment Assessment 2000*, and various planning instruments, and may take a lead role with respect to these issues in any negotiations.

To facilitate the negotiation process the proponent is provided with a draft MEPA, a substantial document (approx. 145 pages) covering exploratory, developmental, operational, financial, employment and legal aspects of the project (amongst others). A table of contents from a draft MEPA is provided in Appendix 3b.

Nominally two deposits are required following the signing of the MEPA. The first against agreed expenditure during the period of the MEPA, to be released as expenditure requirements are met. The second against successful implementation of all environmental requirements at the conclusion of the MEPA (for example decommissioning).

Up until the signing of the MEPA the proponent has no exclusive rights to the resource. Once a MEPA is signed it becomes a non-negotiable agreement and the proponent has exclusive rights to the further development of the resource. Any inadequacies in the MEPA identified at a later date are addressed on a voluntary basis. It can be interpreted from this that the MEPA has legal precedence over other relevant legislation.

At this stage of the approval process FIMC will hand over the lead agency role to DGM while maintaining the role of approval authority. Under the *Draft Implementing Rules and Regulations* (section 4 (b)) DGM has, on behalf of the government, the authority to enter into agreements specific to the evaluation, development, and exploitation of the nation's mineral resources. In discharging this responsibility, the minister shall consult with the Director General of the department and with FIMC.

3.2 Environmental Assessment

The *Regulation on Environment Assessment 2000* defines an Environmental Assessment process, the general sequence of which must be adopted by an agency (such as DGM) within its planning framework. This sequence is illustrated in Figure 2. An outline of the *Regulation on Environment Assessment* is provided in Appendix 3a.

In response, DGM has developed *Draft Implementing Rules and Regulations* (under the UNDP Mineral Sector Development Project (Clark, 2001)) for the mining sector. It should be noted that the *Draft Implementing Rules and Regulations* were prepared concurrent with the *Regulation on Environment Assessment 2000*, and may not be totally compliant in their current form. An outline of the content of the *Draft Implementing Rules and Regulations* is provided in Appendix 3c.

To date no detailed guidelines have been developed for procedures and methods of conducting EIA in the sector, although the *Regulation on Environment Assessment 2000* provides information on general contents. In addition the UNDP project has provided basic guidelines for content and guidance on environmental issues in mine planning, in a report entitled *Mining Inspection and the Environment* (Clark 2001a: section 4.2.1).

The requirements for preparation of an EIA are a component of the DGM's licensing process for an operation. Upon the signing of a MEPA a proponent is required to submit a prospecting workplan. Given a satisfactory workplan a Prospecting Licence is issued for the contract area. Upon completion of the prospecting phase and acceptance of associated reporting the proponent can apply for an Exploration Licence over a reduced contract area. During the exploration phase a proponent produces a Feasibility Study and an EIA (and Environmental Management Plan (EMP)).

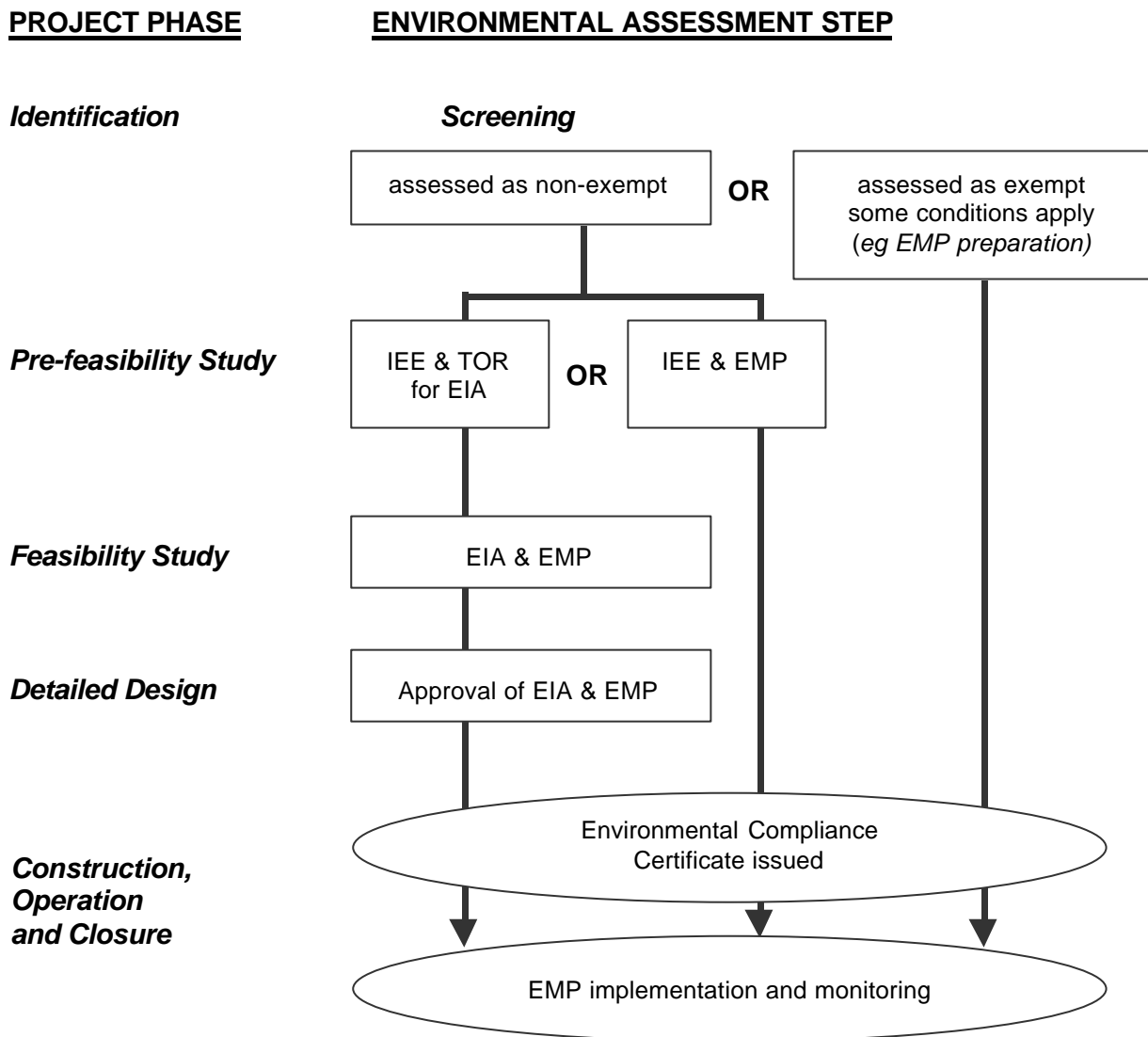
Under the *Draft Implementing Rules and Regulations* (Chapter VIII, section 17) all proponents of large and medium-scale mines are required to prepare an EIA and EMP (*ie* considered non-exempt). Small-scale miners (including artisanal miners) are required to submit an Initial Environmental Examination (IEE) outlining details of the operation, possible impacts and plans to mitigate these. An Implementation Decree currently (March 2001) in preparation provides a definition of large, medium and small-scale mines in terms of annual production.

Under the *Regulation on Environment Assessment 2000*, DGM⁴ has the responsibility of assessing IEE reports and providing a record of its assessment to STEA. STEA will follow the recommendation of DGM (unless the assessment is shown to be inadequate).

⁴ The *Regulations on Environment Assessment 2000* assigns responsibilities to the Development Project Responsible Agency and defines this as:

- any central or local government agency responsibility for different development projects of the government itself
- Office for Domestic Investment Management, responsibility for development projects proposed by persons, entities or private organisations from within the country
- Office for Foreign Investment Management, responsible for development projects proposed by foreign persons, entities or organisations
- other agencies with a governmental mandate to be responsible for development projects. (*Using this definition it is assessed that with respect to operational issues, DGM most ably satisfies this role in the mining sector*).

Figure 2: Regulation Defined Environmental Assessment Process
 (Source: Derived from *Regulation on Environment Assessment, 2000*)



IEE – Initial Environmental Examination
 EMP – Environmental Management Plan
 EIA – Environmental Impact Assessment
 TOR – Terms of Reference

Where an EIA and EMP are required the process is coordinated by STEA which reviews the Terms of Reference, coordinates input from concerned central and local agencies, and advises the proponent and DGM of their acceptability. Similarly STEA is responsible for reviewing and approving EIAs and EMPs, in the process coordinating input from relevant agencies and the affected public. STEA may approve the report and issue an Environmental Compliance Certificate, request additional studies, or reject the report. Once an Environmental Compliance Certificate has been issued by STEA, DGM can issue an Exploitation Licence allowing construction and mining to commence.

In practice it seems that for large-scale projects FIMC retains a dominant role in coordinating the above process with the key agencies or authorities (in terms of environmental and social issues), these being STEA, DGM and provincial authorities.

The level of involvement of provincial offices of STEA and MIH (DGM) in the assessment process is not confirmed. However this, plus the involvement of other provincial, district and local level stakeholders, is clearly desirable if issues, particularly social, are to be considered adequately. Chiefly as the result of recent hydroelectric projects in Lao PDR, STEA has developed a role in the overseeing of public consultation exercises conducted in relation to EIAs. This involves the establishment of a steering committee comprising STEA, MIH, FIMC and local, district, and provincial representatives.

Transition Period: During the transition period for the new legislative arrangements (*Mining Law, Rules and Regulations, and Implementation Decree*) operations which commenced the application process prior to April 2000 do not need to complete a Feasibility Study or EIA prior to issue of an Exploitation Licence. The exception to this are large-scale projects (as defined in the Implementation Decree in preparation) such as the Sepon Project.

3.3 Monitoring and Enforcement

Both the *Draft Implementing Rules and Regulations*, and *Regulation on Environment Assessment 2000* state that the proponent is responsible for monitoring during the project life. The Development Project Responsible Agency (assessed to be DGM) has an inspection role for a project with central approval. Local government agencies take on the role where projects have been approved at local level. In both instances STEA or the appropriate provincial Science, Technology and Environment Office has an overarching role that could include site inspections.

A key document in relation to the inspection role is the project Environmental Management Plan (EMP) and the proponent is required to establish an Environmental Unit to monitor and report on performance. It is important to note that STEA or the appropriate provincial Science, Technology and Environment Office must establish inspection procedures within 12 months of enactment of the *Regulation on Environment Assessment 2000* (enacted 3.10.00).

A Mining Inspectorate is planned within DGM to meet the requirements of the *Mining Law* (Article 54), the *Draft Implementing Rules and Regulations* (section 22), and *Regulation on Environment Assessment 2000* regarding operator compliance. To date the structure of the Inspectorate and its operational brief have not been fully developed and given the limited resources available it is not expected to be operational in the short-term (one to two years). Currently, inspections of sites are carried out by DGM staff once or twice a year. No proforma for these inspections are available but inspections to date have involved assessment of fulfilment of licence conditions (for example, existence of mine manager) and discussion of environmental issues (for example, providing suggestions for mitigation of existing impacts).

To date STEA's role has been to respond to requests from the public or from government. Any complaint with respect to an operating mine may be directed to STEA's provincial office or to the provincial or central authority and then referred to STEA or DGM.

The operators' monitoring regimes are expected to be defined in the project EMP with implementation financed by the operator. Under the *Draft Implementing Rules and Regulations* compliance with the EMP is monitored through Annual Environmental Protection Plans (AEPP) submitted by the proponent at the beginning of each calendar year. It is worth noting that failure to submit an AEPP is sufficient grounds for suspension or cancellation of a mining contract, licence, or agreement (*Draft Implementing Rules and Regulations*, section 23). Monitoring guidelines for the mining sector have not been developed. Guidelines for other sectors are presented in the *National Environmental Action Plan* (NEAP) (STEA 2000), but these are wide ranging and are in an elementary stage of development.

Under the *Mining Law* penalties for non-compliance include sanctions, educational measures, fines and criminal proceedings. STEA also has the ability to instigate legal action under the *Environmental Protection Law and Regulation on Environment Assessment* including temporary or permanent cessation of works and compensation for damages.

4. SUMMARY OF ISSUES

Six key issues emerged during the fact-finding mission and subsequent review of literature:

- EIA evaluation
- monitoring and enforcement capacity
- social impact assessment and management
- central, provincial and district roles
- land, title and compensation
- investor certainty.

4.1 EIA Evaluation

The *Regulation on Environment Assessment* 2000 has been enacted to establish uniform environmental assessment requirements and procedures for all development projects in the Lao PDR. The regulation requires agencies to develop environmental assessment procedures, including procedures for public involvement and monitoring, which are consistent with the Regulation and are prepared in consultation with STEA. Although this provides a firm basis for future environmental and social management there is currently undeveloped capacity within the organisation to comply with the Regulation for the following reasons.

- Coordination between agencies is weak.
- Few existing mining contracts have comprehensive EIA components and none contain an SIA (Clark, 2001b). Some training has been provided to DGM in aspects of EIA assessment under the UNDP Mineral Sector Development Project (Clark, 2001b). This included identifying SIA and EIA issues, preparing Terms of Reference, and acting on EIA results. In addition, the *Strengthening Environmental Management through STEA Program* developed by STEA and SIDA (Department of Environment, 2000) is specifically addressing EIA assessment capacity. Regardless of this, there remains a lack of practical experience in implementation of the EIA process.
- Differing skill levels exist between DGM (where some focused training has been provided), and STEA (where partnering training is currently being provided), and other agencies involved in EIA assessment. For example, although personnel of FIMC are skilled in negotiation and resolving issues they appear to have been offered no specific training in EIA assessment.

- There appear to be differing ideas on how to address the above skill needs, ranging from development of specific EIA guidelines for a range of industries (and by extension types of mining projects), to development of more “general” EIA guidelines, and increasing skills and restructuring the responsibilities of various agencies.

SUMMARY: The current *Strengthening Environmental Management through STEA Program* includes a partnering approach to development of these skills (Department of Environment 2000). This has the potential to provide STEA staff with both theoretical and practical abilities and, importantly, confidence in those abilities. The danger in providing this training to only one agency is that other key agencies (notably FIMC and DGM) will not develop similar capacity or may utilise different training opportunities providing a different focus on the issue. The EIA assessment process being developed relies on coordinated input from relevant agencies at central and provincial level. Although the process may change as experience with EIA grows and implementing of new legislation proceeds it is unlikely that the need for this coordination between agencies and levels of government will diminish. Therefore, there is a requirement to develop comparable skills across key agencies and at different levels of government. The Sepon Project provides an opportunity for experiential training in this area. If this opportunity is to be fully exploited it needs to be carefully planned and managed. That is, it needs to be a facilitated process, rather than an ad hoc series of seminars or workshops.

4.2 Monitoring and Enforcement Capacity

Currently, both STEA and DGM have monitoring/inspection roles although DGM has greater monitoring capacity due to the advantage of having historically undertaken this role, being the recipient of some training in monitoring, and possessing laboratory facilities. It seems that DGM have been granted this role through section 4 of the *Draft Implementing Rules and Regulations and Regulation on Environment Assessment 2000*. However, it may be in investors’ interests to confirm the inspection and enforcement processes through the MEPA thus ensuring clarity for all parties. However at the present time there are insufficient resources to implement the enforcement provisions described in mining and environmental legislation as personnel and equipment are not available to carry out inspections on a regular basis. Another aspect of monitoring is the availability of laboratory facilities. Although DGM have a fully equipped analytical laboratory capable of conducting assay and environmental determinations (soil and water) and staff are trained and willing, there is a lack of resources for supply of consumables and equipment maintenance. Currently even simple maintenance and support has to be provided from service agents in Thailand at considerable cost.

Another consideration is that many operators lack the capacity (financial and skills) to monitor, or even to respond to non-compliance issues (refer to case studies in Appendix 4). As a result agencies have adopted the approach of attempting to facilitate compliance through a policy of assistance. Discussion during the fact-finding mission suggests that a typical approach to a suspected non-compliance issue is to conduct a site inspection to collect information and undertake some limited monitoring. This is followed by preparation of a report and extensive discussions within the agency and with the operator to agree on a series of practical and achievable actions.

A case study of tin mining operations in the Khamouane province conducted during the fact-finding mission illustrated this point. Historically the mine has not treated tailings that have traditionally been discharged to the local drainage system. In response to DGM concerns regarding downstream water quality, discussions were held with management and a commitment to construct two tailings dams was obtained. A site inspection revealed that although management had attempted to comply with DGM requirements the tailings impoundments were inadequate in terms of design (incorrectly located and of insufficient size to accommodate tailings) and construction (dam walls were not competent and had subsequently failed). It seems that the mine's inability to meet its requirements stemmed not only from a lack of resources (financial and equipment) but also a lack of expertise. This reinforces the need to develop operator as well as regulator skill levels.

While it is understood that attempts to provide assistance may continue as long as the operator remains cooperative it is noted that breakdowns in communication have resulted in regulatory action including the revoking of licences.

Another issue related to enforcement is the ability of the regulator to respond to emergency situations such as chemical spills (on-site or in transit to sites), fatal accidents, or off-site impacts. Currently, agencies do not have the resources to undertake or even coordinate any emergency response plans and it is assumed that the operator must fulfil this role.

SUMMARY: The current regulatory framework for the mining sector (refer Section 3.3) reflects the involvement of a number of agencies and levels of government in the monitoring and enforcement of environmental and social aspects of operations. This highlights the need for either:

- clear delineation of responsibilities between each agency and level of government, or
- coordination between agencies and levels of government when carrying out monitoring to ensure consistency in procedures and interpretation of legislative requirements.

Consistency and the varying levels of expertise between agencies and levels of government could be addressed by ensuring that any inspection or audit of sites includes representatives from central and provincial government, STEA, and DGM (under the direction of the latter).

At the present time there are at least two projects moving through the approval process. Options include:

- professional review of monitoring designs, nominated standards and reporting
- adopting operator-financed third party auditing (Compliance Auditing)
- requirement that operators develop and implement an Environmental Management System (EMS) to ISO14000 standards, including third party auditing.

Third party auditing could also provide an opportunity for regulators to actively participate in the audit teams, accelerating capacity building through practical training.

While the above measures may be appropriate for medium and large operations their application is doubtful in the case of small operators or some existing operations with little financial capacity. For these operations ready access to expertise in environmental management is required, in the short-term at least. Specifically this is in the areas of design and construction of environmental solutions that utilise appropriate technology and include a site supervision role.

With respect to ensuring the reliability of laboratory facilities required to support government inspection and monitoring either additional funds (from private or donor agencies), or additional throughput to generate funds (commercialisation of the facility) is required. Training to increase the ability to provide support facilities in-country is also needed.

4.3 Social Impact Assessment and Management

Under Article 30 of the *Mining Law* 1997, applicants for a license must provide an evaluation of the social impact of the mine and, under Article 31, impacts on communities must be assessed as part of the EIA. At present these legislative provisions remain relatively undeveloped in terms of draft regulation or implementation (Clark 2001a: section 4.1.2) although the MEPA does set down some general requirements in relation to the management of social impacts.⁵ It is significant to note that the UNDP Mineral Sector Development project noted that “few of the existing mining contracts have comprehensive EIA components and *none to date contain an SIA*” (Clark 2001b: 31, emphasis added). To address this, the UNDP study recommended a legislative requirement for “Social-Cultural Impact Assessments” for mining projects, including a social development plan (Clark 2001b: 39-40).

⁵ For example, Article 17 (Clause 8); Article 24 (Clauses 14 and 15); Article 26 (Clauses 1 and 2).

In terms of the further development of a SIA framework it is worth noting that there currently appear to be two broad approaches to the assessment and management of social impacts arising out of resource projects in Lao PDR. The first focuses on SIA as part of the broader EIA process while the second takes a more informal approach to SIA, relying heavily on feedback from provincial and district administrations.

- Under the first approach, social impact assessment is seen as falling within the broader frameworks that are being developed in relation to EIA with particular attention given to the incorporation of public participation in EIA procedures. The general basis for this approach is set by the national Constitution which states that “environmental assessment give particular attention to the assessment of potential positive and negative socio-economic impacts of project development and to prevention and/or mitigation of harmful impacts” (STEA 2000: 6). The *Environmental Protection Law* 1999 does not expand on this in any detail, although Articles 16 and 29 make provision for protection and restoration of “archaeological, traditional, historical, (and) tourism sites.” As noted above the *Mining Law* sets out some more specific requirements. The *Draft Implementing Rules and Regulations* (section 9) for the sector provide for cooperation with proper authorities in developing community development plans for host and neighbouring communities (Clark 2001a: 29).
- Under the second, more informal, approach consideration and notification of social impacts is seen as being very much a responsibility of provincial, district and village administrations, through their regular “bottom-up” communication channels. This is a reflection of the strong communication channels with local communities at these levels rather than the presence of any specific social impact assessment capabilities within these levels of government.

Of course there is no necessary inconsistency between these two approaches and, indeed, in the following sections the potential for strong complementarity is identified. However, there does appear to be some risk that while *environmental assessment* is seen as an area requiring specific technical capacity development (and regulatory monitoring), *social assessment* may be seen primarily as an issue of “bottom-up” communication requiring minimal training of technical staff. To avoid this, specific, targeted action may be required in the mining sector to build on a range of existing initiatives. Some of these initiatives are discussed below.

- Under the *Environmental Protection Law* 1999 (Article 8) and *Regulation on Environment Assessment* 2000 each sector is required to develop “regulations on procedures and methods for environmental impact assessment” based on the general guidelines developed by STEA. STEA’s *Regulation on Environment Assessment* 2000 make some provision for social impact assessment (STEA 2001). Article 8 of the *Environmental Protection Law* also makes provision for public involvement in EIA.

- Currently, projects supported by the Asian Development Bank (ADB) have developed relatively detailed guidelines for environmental assessment (EA) in relation to the roads and electricity sectors (Department of Roads Environment Management Unit and Seatec International 2000; Seatec International 2000a; Seatec International 2000b). In general terms the guidelines (and proposed regulations) set out the requirements for Initial Environmental Examinations (IEE) and EIA. These guidelines make provision for the assessment of socio-economic factors such as resettlement and livelihood, public health and safety, and cultural issues. Draft regulations for EA in the electricity sector, for example, also require “appropriate public involvement ... at each phase of the EA process starting early in the pre-feasibility study” (Seatec International 2000a: Annex. 2-1-2 Article 7)
- As part of the ADB-supported initiatives a detailed discussion paper on “Methodology for Social Impact Assessment” has been prepared. *This paper may be a good foundation for the development of working guidelines within the mining sector.*
- The UNDP Mineral Sector Development Project has undertaken some training specifically in relation to assessment of social impacts and requirements for SIA. A number of discussion papers associated with the project indicate the need for assessment of “social and community infrastructure” (Clark 2001a: 43) and emphasise the need for community consultation and involvement (Clark 2001a: 48). In November 1999 a three-day workshop, in which there was considerable emphasis on SIA, was held for staff in DGM and other relevant agencies (Clark 1999). The material in this workshop may be a good basis for further SIA skills development within DGM.
- There has been extensive social impact work done in relation to the Nam Theun 2 project, particularly in relation to the Public Consultation and Participation Process (Nam Theun 2 Electricity Consortium 1998a; Sparkes 1997; Sparkes 1998). While this work has been the subject of considerable critique (for example, Guttal, 2000) it is clear that it currently represents “best practice” in relation to SIA in the Lao PDR and a range of lessons are potentially transferrable to other sectors. However, there is some risk of setting SIA standards at unrealistically high levels given that few other projects are likely to be in a position to attract SIA resources at the level of Nam Theun 2.
- The NEAP (STEA, 2000) does not identify any specific socio-economic objectives in relation to industrial development and mining. The emphasis is solely on preventing potential environmental damage (STEA 2000: 18, 92-93, 98). However, a number of general objectives are set in relation to social impacts, including a commitment to community based resource management and a commitment to protection of historical and cultural sites (STEA, 2000: 10; 13, 14, 16).

SUMMARY. Within Lao PDR there is a broad framework in place requiring the assessment of social impacts and the development of plans for their amelioration. There are also some very good examples of SIA work in the hydro-electricity sector. However, specific work on SIA regulations and guidelines within the mining sector is at a very preliminary stage, notwithstanding some training undertaken by the UNDP Mineral Sector Development Project for staff of DGM in relation to “basic principles and legal frameworks” and “structure and uses” (Clark 2001b: 68). In the short to medium term it appears unlikely that substantial SIA skills can be developed in DGM given the predominance of geology, mining engineering, and chemistry qualifications. However, in the longer term it would be desirable to introduce some dedicated SIA expertise into the proposed Mining Inspectorate within DGM.

A more immediate solution would enhance the SIA skills of key staff within STEA, given the role of this agency in assessing and approving EIAs and reviewing the decisions of line ministries. The importance of social science based training within STEA has already been recognised in the NEAP (STEA 2000: 114) and, importantly, the inclusion of Lao social scientists “as an integral part of the EA teams on the various projects” is listed as an immediate priority action (STEA 2000: Table 1). If this course of action is taken it is important that STEA work closely with DGM on SIA issues to avoid the situation whereby SIA comes to be seen as a non-technical issue beyond the concern of the technical staff within DGM.

4.4 Central, Provincial and District Roles

In the management of the social and environmental impacts of mining projects all levels of government in the Lao PDR currently have a role to play. The NEAP (STEA 2000: 11) “recognises the importance of active participation by provincial and other local level agencies in environmental management”. Specifically, in relation to the mining sector, STEA commits itself to “coordinated surveillance and monitoring of mining activities by provincial STEA office staff and provincial staff of the MIH” (STEA 2000: 93). During the fact-finding mission some assessment of the respective roles, and potential, of central and provincial government was made and some brief discussions were held with provincial officials about the role of district government. A number of issues emerged in these discussions and the subsequent review of documentation, each of which has a bearing on the sustainable management of mining operations.

- Since the establishment of the Lao PDR in 1975 there has been a series of changes in the relative roles of central, provincial and district government, with varying degrees of decentralisation and re-centralisation (Keuleers and Langsy 1999) and a lack of clarity exists regarding roles of the various levels of government, particularly in relation to a sector such as the mining sector, that is at an early stage of development.

- Current government policy within Lao PDR seeks to clarify the situation by allocating a *strategic planning* role to provinces. Although provincial plans must be consistent with national socio-economic development strategies, the province is recognised as the “strategic unit for development” (Prime Minister's Office 2000a; State Planning Committee 2000). The objective for districts is that they “take more initiative in establishing, implementing and monitoring their development plans” (Keuleers 2001: 35).
- As part of the provincial strategic planning role “Management Committees for Foreign and Domestic Investments and for International Cooperation” (CIC) have been established at provincial level. However, it appears that the role of the provinces in managing the planning and approval stages of investment activity remains limited since the Prime Minister’s Decision concerning the provincial CICs empowers them to approve only *domestic* investment projects of less than 1 billion kip (about US\$125,000) (Prime Minister's Office 2000b). The UNDP Mineral Sector Development Project recognises the current vagueness in the relationship between investing companies and provincial authorities (Clark 2001b, Appendix 2, Working Paper 3).
- At the same time, a range of people consulted indicated that they relied heavily on provincial input in relation to the *potential social impacts* of projects. This was due to the well-developed lines of communication between province, district and village rather than any specific social impact expertise or capacity being located within the provinces.
- It was also clear that the provinces play a role in the ongoing monitoring of projects. In relation to mining (and other industrial) projects, discussions in Savannakhet revealed that the provincial office of MIH had an active role in the monitoring and enforcement of environmental standards. Examples were given of regulatory action taken by MIH in relation to noise emissions and water pollution resulting from (small-scale) industrial activities. There is also a clear intention, both in legislation and among central and provincial staff, that STEA will play an increasingly important monitoring role at the provincial level.
- In discussions with officials from Savannakhet province it became clear that current planning activities (preparation of village, district and provincial strategic plans) do not yet incorporate planning for the potential impacts of major resource projects. For example no planning appears to have been undertaken to address the significant population increase that may eventuate in Vilaboulie district if the Sepon project goes ahead. Major resource projects are likely to generate significant influxes of people, both in the form of direct workforce, indirect service sector providers and, potentially, others seeking to benefit from compensation regimes (Sparkes 1997: 53-56; Sparkes 1998: 27). Similarly, from general discussions in relation to the tin mine in Khamouane province, it became evident that no planning has been undertaken on managing the large dependant population in the event that the mine is closed for environmental reasons. This

general deficiency has also been recognised at the central level with the NEAP signalling the need for incorporating sustainable environmental management in the national planning framework (STEA 2000: 107, 108). The Prime Minister's Office (2000a) has also noted that "the management and monitoring of larger economic projects through planning and budgeting has not yet been effective." The Nam Theun 2 Panel of Experts also recognised the importance of linking social impact activities with the planning and implementation activities of district authorities (Nam Theun 2 Electricity Consortium 1998b: 5)

- Within the MEPA (Article 25) there is already provision for "regional co-operation with regard to additional infrastructure." This could provide a basis for expanding the planning role of provincial and district bodies in relation to resource projects. Indeed, during discussions in Savannakhet province about possible mining projects, infrastructure development was identified as one area where some planning work had already been undertaken.
- Fiscal relations were not analysed in detail as part of the fact-finding mission. However, the clear impression gained during discussions at central level was that the central government is committed to maintaining strong control over the revenue streams that may arise from a major resource development project, in part so it can address issues of equity between relatively resource-rich and resource-poor provinces. The PM's Decree on the Implementation of the Budget Law specifically allocates revenue from "mineral export royalties", "minerals sale revenue" and other mineral royalties to the "government (that is, central level) budget" (Article 37). At the same time it grants provinces an important role in the formulation of "budget revenue and expenditure plans" (Article 20) and there is also provision for districts with particular economic potential to become a "budgetary unit, having the right, duty and responsibility to independently formulate and execute the budget" (Article 43). Significantly the MEPA (Article 24, Clause 1) makes provision for a "regional development fund" to be supported by one percent of the company's operating profits, although the MEPA only specifies that this fund will be administered "by the Government".

SUMMARY. The desire of the Lao PDR government to provide for coordinated "one-stop-shop" management of investment projects (through the central CIC/FIMC) appears to limit the role of provinces in project planning and implementation. However, the current emphasis on developing the planning responsibilities and capabilities of provinces and districts creates the opportunity for these levels of government to become more actively involved in developing management plans for the social and environmental impacts of resource projects. This more active role is likely to require specific delegation, perhaps on a project by project basis, but also perhaps through a general directive on the importance of addressing resource development projects in village, district and provincial plans.

There is a risk that, in the absence of any clear instruction, provinces will play a relatively passive role and potential resource developments will be seen as lying outside their strategic planning purview. There is also a risk that the undoubtedly good lines of communication between province, district and village will be used simply to channel potential impact information to higher authorities rather than these lines of communication being actively mobilised in the project planning and implementation phases. The planning activities of provinces in relation to major resource projects could be used as a basis for revenue sharing agreements such as that suggested by the UNDP project (Clark 2001b: 40 and Appendix 2, Working Paper 3), however these are complex fiscal issues that require further investigation.

4.5 Land, Title and Compensation

Mining projects raise complex issues in relation to compensation of local communities. In the Lao PDR these complexities are compounded by significant local variation in systems for land ownership and use, and a lack of overall regulatory consistency (for an overview see World Bank (1996)). Moreover local populations are often relatively dynamic with communities experiencing significant levels of voluntary relocation and in-migration and out-migration. Issues of individual and village rights to land are complex and in many cases poorly understood, and often closely related to broader cosmological orientations and beliefs.⁶ Such systems can also be surprisingly dynamic, in part as a response to changes in agricultural and other livelihood systems. Moreover, the fact that many resource projects have relatively long lead times means that significant numbers of people may move into affected areas in an attempt to receive a share of anticipated compensation.

While the fact-finding mission is not in a position to make definitive statements some broad comments on the current situation, and some of the dimensions of complexity, are appropriate. (For a more detailed discussion of some of these issues in relation to the Nam Theun 2 project see Sparkes (1997).)

- Discussions of compensation issues in Lao PDR appear to be underpinned by a general understanding that the land is owned by the “national community” as set out in Article 15 of the Constitution. Article 3 of the *Land Law* and Article 5 of the *Forest Law* reaffirm this fundamental point. An overriding issue to emerge in discussions was the view that all land is owned by the state, with the local people providing “facilities” for various types of development.

⁶ These issues do not seem readily amenable to the regularisation of tenure rights as the long experience in neighbouring Thailand demonstrates. “Establishing legal recognition of the customary or traditional land tenure systems of indigenous peoples” as recommended by the World Bank 1991 may simply not be practical.

- Individuals are, of course, granted use rights to land. Under Article 15 of the Constitution the state ensures the right to “use, transfer, and inherit (land) in accordance with the law” and this is reinforced by, in particular, Articles 5, 17 and 21 of the *Land Law*. Typically, in rural areas, customary and/or legal recognition of individual rights to land is likely to apply in relation to permanently cultivated fields. This is particularly the case in relation to paddy fields where there has been significant investment of labour and capital in levelling and bunding, but it is also increasingly the case in relation to permanently cultivated upland fields. Individual ownership of orchards (or perhaps particular trees of economic value) is also often recognised. It is important to note that locally recognised systems of individual tenure may not be accompanied by formal tenure documents, especially in more remote areas.
- Various forms of communal tenure often coexist with individual tenure. Typically, a village is surrounded by a village “domain” over which the village is regarded as having some form of authority. Where shifting cultivation is practiced, individuals or households within the village are allocated short-term use rights to pieces of land. However, when the land is left fallow it returns to communal ownership (as fallow periods shorten and periods of cultivation lengthen there is often a trend towards more individual forms of ownership). Forest land is also typically regarded as forming part of the village commons and locally developed rules often regulate access to timber and other forest products. Grazing lands, sacred areas, streams and ponds may also be regarded as forming part of the communal property of the village. Overall there is limited formal legal recognition of these more communal rights although Articles 5, 7, 13 and 30 of the *Forest Law* grant various rights in relation to the use of forest land. Under Article 30, for example, “traditional use” of forests is permitted, provided it abides by “village forest and forest land regulations.” At a policy level there is also increasing interest in community forest management.
- Rights to land can be terminated. Article 63 of the Land Law makes provision for the state to “requisition land... for public facilities use”. Importantly, Article 70 makes provision for compensation for damages when this occurs and Article 71 requires that a committee of interested parties be formed to determine the value of the compensation.
- In relation to the mining sector, Article 40 of the *Mining Law* provides that “where a licensee’s surface operations interfere with other person’s or entity’s land, buildings, or crops, compensation must be provided for their damage and/or removal.” Article 42 also mentions requirements for compensation and Article 47 requires licensees to maintain a fund to cover, amongst other things, various forms of compensation for adverse social impact.

- The MEPA also has some general provisions in relation to compensation. Article 18 (Clause 6) requires companies to pay compensation “as may be agreed between the Company and such other parties of Government and in accordance with the prevailing laws and regulations” in relation to the use of products or materials from outside the contract area, and Article 18 (Clause 7) states that “at the request of the Company, the Government shall cooperate in a joint endeavour to alleviate any interferences which may arise from others operating under conflicting rights”. In relation to the contract area itself the MEPA (Article 18, Clause 5) requires the company to take into account other rights “such as grazing, timber cutting and cultivation rights ... so as to interfere as little as possible with such rights.” Article 27 of the MEPA also places emphasis on local business development with Clause 3 stating that “the Company shall give first preference in its assistance hereunder to landowners in, and other people originating from, the area of the Enterprise.”
- Extensive work has been done on issues of compensation within the context of the Nam Theun 2 Resettlement Action Plan (Nam Theun 2 Electricity Consortium 1998a; Nam Theun 2 Electricity Consortium 1998b: Appendix S2). In general terms the policy states that: “Compensation based on the principle of replacement cost will be provided for agricultural lands, gardens, building land, fruit trees, houses, schools, hospitals, dispensaries, temples, cemeteries, markets, buildings and any other assets and activities that will be affected” (Article 4.1). Overall, the cost per resettled household is approximately US\$20,000 (Nam Theun 2 Electricity Consortium 1998a: 9-1). The Resettlement Action Plan provides extensive details on issues of eligibility, entitlements and implementation. The overall conclusion of the World Bank Panel of Experts was that the Resettlement Action Plan “has the potential to provide a model of resettlement with enhanced lifestyles matching and probably exceeding World Bank Operational Directives” (quoted in Nam Theun 2 Electricity Consortium, 1998a: ES-9).
- As a result of work done in relation to Nam Theun 2, a “Draft National Resettlement Policy for Major Projects in Lao PDR” has been developed (Nam Theun 2 Electricity Consortium 1998a: Appendix C). The policy sets out the “right to adequate compensation for loss and to income restoration.” (Article 3.6). The current status of this draft policy is unclear, with a number of people consulted indicating that it was considered to be overly influenced by the Nam Theun 2 experience and not necessarily appropriate for other projects in Lao PDR.
- During the fact-finding mission it was difficult to clarify what forms of compensation may be appropriate in the mining sector, nor does there appear to be a significant body of precedent.⁷ At present, it appears that an informal “MOU” is developed between the developer and the local village, indicating the villager’s

⁷ Even in relation to the Nam Theun 2 resettlement program, issues of cash compensation, although based on the general principle of “replacement cost”, are still not clearly defined (Nam Theun 2 Electricity Consortium 1998b: 19-20).

consent for the activity. It also appears that current compensation payments may be relatively token. Some uncertainty appears to exist in relation to particular types of land. It seems clear that paddy land is subject to compensation and that permanent upland fields are probably subject to compensation, especially if fruit trees are present. However various people expressed considerable doubt about the appropriateness of compensating farmers for shifting cultivation fields and fallow lands. In part this doubt probably reflects national policies that are relatively unsympathetic to shifting cultivation. Doubts were also expressed about the appropriateness of compensating local households or communities for loss of forest resources.

SUMMARY: In general terms it is clear that a legal framework is in place for the provision of compensation for land holders affected by mining projects. However, there are two areas requiring further investigation, clarification and, in all likelihood, policy development. First, it appears likely that there are a range of land uses (in particular those associated with shifting cultivation, other forms of relatively impermanent upland cultivation, and collection of forest products) *for which the legitimacy of compensation is not recognised either in law or in practice*. Second, the processes for arriving at appropriate levels of compensation remain unclear and, in the mining sector, the body of precedent appears to be very limited. Significant work has been done in relation to the Nam Theun 2 re-settlement, however the applicability of this experience to smaller and less internationally scrutinised mining projects is questionable. Achieving further clarity on both these issues will probably require very specific monitoring and assessment of the local situations arising in relation to particular mining projects.

4.6 Investor Certainty

External investor confidence is a major issue in all economies attempting to attract investment in the mineral sector. A lack of confidence can develop from:

- difficulty in securing tenure (unclear processes, beauracratc hurdles)
- delays in securing tenure (long or uncertain approval timeframes)
- uncertainty of tenure or the strength of approvals
- political instability (for example, labour unrest)
- community or NGO obstruction (lack of trust in investor).

Discussion with private sector operators suggests that the timeframe in securing tenure in Lao PDR is favourable by comparison with other countries in the region. Similarly fiscal regulation, such as royalty rates, corporate income tax rates and other financial incentives are also recognised to be competitive by international standards (Asia Times, September 27, 2000).

Political stability and community or NGO obstruction are not significant factors in the Lao PDR context. It is expected that as community awareness grows and the sector develops, NGOs will take on a “watchdog” role with respect to environmental and social issues. This can be a positive influence on the performance of mining operators and should not be seen as a negative factor.

Current local issues with respect to investor certainty appear to relate to:

- difficulty in securing tenure in terms of the apparent complexity of the *Mining Law 1997*, the point at which security of tenure is provided, and lack of clarity in the approval process
- uncertainty of tenure or the strength of approvals, specifically the relative strengths of the MEPA versus the *Mining Law 1997*
- uncertainty of the regulatory process, specifically consistency of the process.

Although the process of gaining mining approvals in the mining sector is broadly understood there remains lack of clarity in actual implementation of the process. This is attributable to the following factors.

- In the mining sector there is a significant amount of new and untried regulation and legislation. In addition to the (still new) *Mining Law 1997* and *Environmental Protection Law 1999*, and *Regulation on Environment 2000* there are *Draft Implementing Rules and Regulations* and a draft (*Mining Law*) Implementation Decree to be considered.
- The current development of STEA and its role in the mining sector, particularly the practical allocation of responsibilities between STEA and DGM.
- The distribution of responsibility between central and provincial authorities and the timing of provincial involvement in the approval process (refer Section 4.4).
- The system is largely untried and thus implementation issues have not been identified and resolved. It seems that in this climate it may be possible for determinations or advice of various reviewing agencies may be over-ruled by stronger agencies (for example, FIMC).

SUMMARY: Given the complexity of the above issues the lack of clarity is not a negative reflection on the capacity of the line ministries involved. It is probable that far better resourced agencies in other countries would experience similar difficulties under the circumstances. Formal agreement on the protocol to implement legislation and a program to increase awareness of line agencies, government and investors would substantially address this issue. However, whether these can be developed on a sector-wide basis or will need to be negotiated case-by-case is unknown. There is an expectancy in line ministries at provincial and central level that the Sepon Project will provide a benchmark for the approval process and the impetus for resolving any issues therein.

The key issues with respect to any perception of uncertainty of tenure from the proponents point of view stem from the fact that up until the signing of a MEPA the proponent has no exclusive rights to a resource. Considerable negotiation and preliminary survey work precede this. This issue may be overcome in part by greater clarity and confidence in the approval process however, some potential investors are likely to continue to look to government to provide greater resource security in the initial stages of negotiation. Any decision regarding granting of increased rights to a resource must be balanced by consideration of acceptable risk (of speculators locking up large areas of potential ground) and loss of potential investment.

5. OPTIONS

The following options to enhance social and environmental sustainability are suggested. It is recognised that further discussion is required with those agencies involved in the development of regulation of the sector in order to evaluate and further develop these initiatives for implementation.

5.1 Mining Sector Workshop

In order to make further progress on the issues identified in section 4 a mining sector workshop is proposed.

Given the complexity of the issues discussed in section 4 it is proposed that the workshop focus specifically on ***building capacity in relation to the regulation of social and environmental impacts***. Given their key regulatory role officers from DGM and STEA will be key participants at the workshop, however it is essential that appropriate representatives from a range of other agencies attend. Given the key role of provincial administration it is essential that appropriate representatives from the provinces attend. Industry representation is also essential. DGM has already agreed in principle to convene this workshop and discussions have been held with DGM with a view to obtaining formal agreement from the Minister for Industry and Handicrafts.

5.2 Training

Further specific training in the area of EIA, EMP preparation and review, and SIA is proposed. Considerable potential exists for aspects of this training to be undertaken under the auspices of the SIDA project.

There have been a number of recent training initiatives in relation to the regulation of the mining sector in Lao PDR. Most relevant is the work undertaken within DGM under the auspices of the UNDP Mineral Sector Development Project (Clark, 2001). This training has clearly been beneficial, although the fact-finding mission was unable to obtain any clear evaluation of the effectiveness of the training. However indications were given that some aspects of the training lacked relevance to the Lao PDR situation. The fact-finding mission was also provided with a copy of a proposal being developed by DGM seeking further training support from AusAid, predominantly in technical areas. Given AusAid's emphasis on poverty alleviation it seems somewhat unlikely that this bid, if submitted, will be successful. Unfortunately the fact-finding mission was not able ascertain whether an overall training audit of DGM staff had been undertaken although such an audit is implicit in the proposal being prepared for AusAid. It is also important to note that it is evident that the main government agencies involved in the regulation of the mining sector are investing heavily in English-language training.

While there is clearly a wide range of training and technical support needs, in relation to achieving environmental and social sustainability the highest priority for training appears to be in enhancing the capacity of regulators to critically review and monitor EIA, SIA and EMP statements prepared by mining investors. Specifically skills in the following areas are required:

- preparation of Terms of Reference
- key issues in the preparation of EMPs
- assessment of EIA, SIA and EMPs
- auditing
- negotiation skills.

This will require selection of key staff for specialist training followed by ongoing on-the-job training in which these key staff will work with experts on short-term placement in extending skills to other staff. It is relevant to note that the NEAP places strong emphasis on the importance of on-the-job training (STEA 2000: 113-114).

DGM and STEA are the key agencies in relation to the targeting of training. In the short to medium term it would appear appropriate for formal training of DGM staff to focus on *environmental* management issues given that this lies closest to their current areas of expertise. STEA already appears to have some capacity in the environmental assessment area and in their case a specific focus on *social* assessment may be more appropriate, with some specific focus on the mining sector. However, as noted above it is important that ongoing on-the-job training in aspects of social assessment also involves DGM staff. Given their crucial coordinating role it *may also be appropriate to initiate discussions with FIMC* on the possibility of enhancing their capacities in relation to EIA and SIA. Training also needs to be provided to provincial authorities to prepare them for their role in the EIA/SIA assessment process. It appears that no such training has been provided to date. Greater familiarity with the assessment process would enhance their planning capabilities especially with respect to resource projects (see section 4.4). In relation to the development and implementation of training programs, it is crucial that:

- these build on training (and policy/guideline development) initiatives already provided in the mining sector and in other sectors. There is already a considerable body of material that could usefully be reviewed and further developed as part of ongoing training initiatives. *Given the bulk of existing material the production of additional resource material would be undesirable.* Considerable benefit would be gained from taking existing material and exploring with DGM and STEA staff how this material may be applied to specific mining projects.

- Consistent training be provided across agencies and between levels of Government. This is to ensure that:
 - (a) There is a common understanding of processes under various legislation and of how key pieces of legislation interact.
 - (b) Conflicts between agencies with respect to procedures or techniques are minimised.
 - (c) There is consistent regulation within the mining sector (providing clear advice and direction to operators/investors).
 - (d) There is consistent regulation across industries.

To best achieve these training outcomes it may be beneficial for a single agency to oversee the design and delivery of EIA/SIA assessment training. Consistency would be further enhanced by ensuring that any training is provided to mixed groups made up of representatives of different agencies and levels of Government. Secondment of officials between agencies for short periods would also promote consistency in capacity.

Clearly there is potentially significant overlap between the training objectives set out here and those set out in the SIDA project on *Strengthening Environment Management through STEA* (State Planning Committee 2000).⁸ Indeed, discussions held with STEA indicated that the mining sector could well be one of the focus areas of activity for the SIDA project. *As a first step, discussions should be held with representatives of the SIDA project to clarify areas of complementarity and mutual interest.*

5.3 Extension and Institutionalisation of Sepon Lessons

There is considerable potential for the Sepon project to provide a benchmark for the assessment and management of social and environmental sustainability in Lao PDRs mining sector and to build capacity within the regulatory system.

Specific initiatives to be considered should include:

- Use of the Sepon project as a case study for training staff of a number of agencies and levels of Government in relation to:
 - (a) the approval process

⁸ Output 1.5 of the SIDA project reads: “Established and tested procedures, with criteria, standards, division of tasks and responsibilities between participants, for the screening and approval of Environmental Impact Assessments regarding projects in different sectors. ... *It is intended to select examples from technical sectors which are not covered by the ADB “Strengthening Environmental Framework” project or other donors.*” (Department of Environment, 2000; emphasis added.)

(b) SIA and EIA

(c) monitoring.

- Documentation of the Sepon project's assessment of social and environmental impacts in the form of a booklet, brochure, poster and/or video.
- Discussions with Savanakhet province about piloting some planning activities in Vilaboulie district, with a specific view to addressing potential impacts of the Sepon project.
- Encouraging EIA and SIA consultants working on the Sepon project to develop stronger links (eg training, collaborative work programs) with district and provincial authorities.

Realising these potential training benefits and ensuring practical institutionalisation of the lessons learned will require considerable human resources and is likely to be outside the financial capacity of any government agencies. It could best be achieved through a funded facilitation program coordinated by 1-2 professionals with strong communication skills and an appropriate knowledge of the Lao PDR environment.

5.4 Policy/Guideline Development

Significant benefits are likely to arise from some targeted initiatives in the development of policy and guidelines. In this regard, collaboration with the SIDA project should be explored at an early stage.

As identified by Tan (nd), many of the provisions in existing environmental legislation are relatively general and do not provide direct guidance on how better management and coordination is to be achieved. To this end some targeted policy developments specifically aimed at *supporting elements of the existing regulatory and planning processes* (rather than attempting to graft on new elements) are proposed.

- First, development of EIA/SIA guidelines specifically for the mining sector. General EIA guidelines have been prepared by STEA, and some specific work has been undertaken in the road and hydro-electricity sectors. Guideline development in the mining sector should build on these initiatives and on the work undertaken in the UNDP Mineral Sector Development Project. It is important that, in the first instance, these guidelines be relatively brief and user-friendly, and possibly include simple checklists for use by regulatory staff with limited experience in EIA or SIA. It is essential that the guidelines be prepared in both Lao and English. Discussions with STEA have indicated that there is considerable potential for the mining sector to be one of the priority areas of activity for the SIDA project. *Further discussions should be held with STEA and SIDA on this issue as soon as possible.*

- Second, there appears to be considerable potential to strengthen the links between the “mainstream” planning activities of districts and provinces and the specific planning undertaken by investors and regulators for mine project development. To this end further discussions should be held with STEA, MIH and the State Planning Committee on developing guidelines —(possibly supplemented by some form of decree)— regarding the *relationship between provincial/district planning and major resource developments*.

5.5 Review Of Fiscal Issues.

A further fact-finding mission on the fiscal aspects of mining activity, undertaken by someone with appropriate legal and financial qualifications, is proposed.

The current fact-finding mission identified that there are complex fiscal issues involved in relation to the mining sector. In general terms these issues are concerned with the distribution of benefits flowing from mining projects. These issues are significantly affected by recent policy and regulatory development in relation to budgetary and planning processes at various levels of government. In order to develop a clearer understanding of these issues a specific examination of the fiscal aspects of mining activity is required. Some work has already been done on these issues in the context of the UNDP Mineral Sector Development Project and a review of this material (as well as ascertaining its current status within the Lao PDR administration) should be the starting point for the proposed review.

5.6 Monitoring And Enforcement.

Opportunities exist to address the issues of inadequate capacity and varying capacity between agencies with respect to monitoring and regulation of the mining sector. These are short to mid-term options (1-5 years) and could provide a stop gap while capacity is built through continued training (refer to section 5.3) and experience (refer section 5.3).

Options to address lack of capacity in monitoring and enforcement in the short-term include:

- a) Medium and large-scale mines:
 - professional review of monitoring designs, nominated standards and reporting
 - operator financed third party auditing (Compliance Auditing which includes Lao PDR legislative requirements)
 - requirement that operators develop and implement EMS to ISO14000 standards including third party auditing. Third party auditing could also provide an opportunity for regulators to actively participate in the audit teams thus accelerating capacity building through practical training.

b) Small-scale mines

- the provision of operator access to expertise in environmental management, specifically in the areas of design and construction of environmental solutions that utilise appropriate technology and include a site supervision role
- provision of compulsory training for mine managers in environmental and social impact awareness and basic management skills.

Both of the above options are outside the financial capacity of any government agency and therefore would need to be provided through a Donor funded program based within a government (most appropriately DGM) or Donor agency.

Training requirements to build on existing regulatory capacity in the long-term have been broadly identified in section 5.2. Another aspect to be considered in terms of the regulator's capacity is accessibility of information. Most of the available information and research on mining sector policy, regulation, and management has been produced by donor agencies and is presented in English. In addition proponents have generally provided documentation in English (with approval of the regulator). Many of those in agencies with responsibilities in the mining sector speak English as a second language, however effective management of environmental and social issues is dependent on the ability to negotiate on appropriate actions, standards etc and a clear understanding of technical information by all parties is essential. To facilitate this, technical information should be required to be provided in Lao, or at least, a Lao summary should be provided.

5.7 Investment Certainty.

The approval process should be clarified and documented and accessibility of information on legislation and policy requirements in the mining sector improved.

The drafting of a simple document outlining the approval process is required to build both regulator and investor confidence. To achieve this key agencies need to meet and confirm the steps and responsibilities (agency, level of government and investors) in the process. Key participants would be CIC, FIMC, Ministry of Justice, MIH(DGM), STEA, and Industry. Accessibility of information on legislation, policy and guidelines relevant to environmental and social issues in the mining sector could be improved by development of a simple Information Kit and guide, summarised from existing information. Ultimately, this information should be made available through the internet.

5.8 Donor Coordination

Vientiane-based officers of donor agencies involved with the mining sector should meet regularly (every six months) to discuss mining initiatives. This could take the form of a semi-formal donor-based mining working group.

The fact-finding mission has identified that there are a range of donor initiatives both directly and indirectly related to the mining sector. While there is no clear evidence of unnecessary duplication or overlap there does appear to be significant potential for greater coordination and exchange of skills, experience and outputs. In particular there appears to be significant potential for initiatives in other sectors (roads and hydro-electricity) to form a strong basis for policy and guideline development in the mining sector. Given that the next few years are likely to witness significant developments (in terms of both investment and regulatory/policy development) in the sector regular discussions between donor agencies on these issues would be highly desirable. Ideally the Lao Government should facilitate donor coordination to ensure ownership and therefore effectiveness of the various programs. However, in the first instance and in the context of this report, FIMC may have a role in initiation of such a working group.

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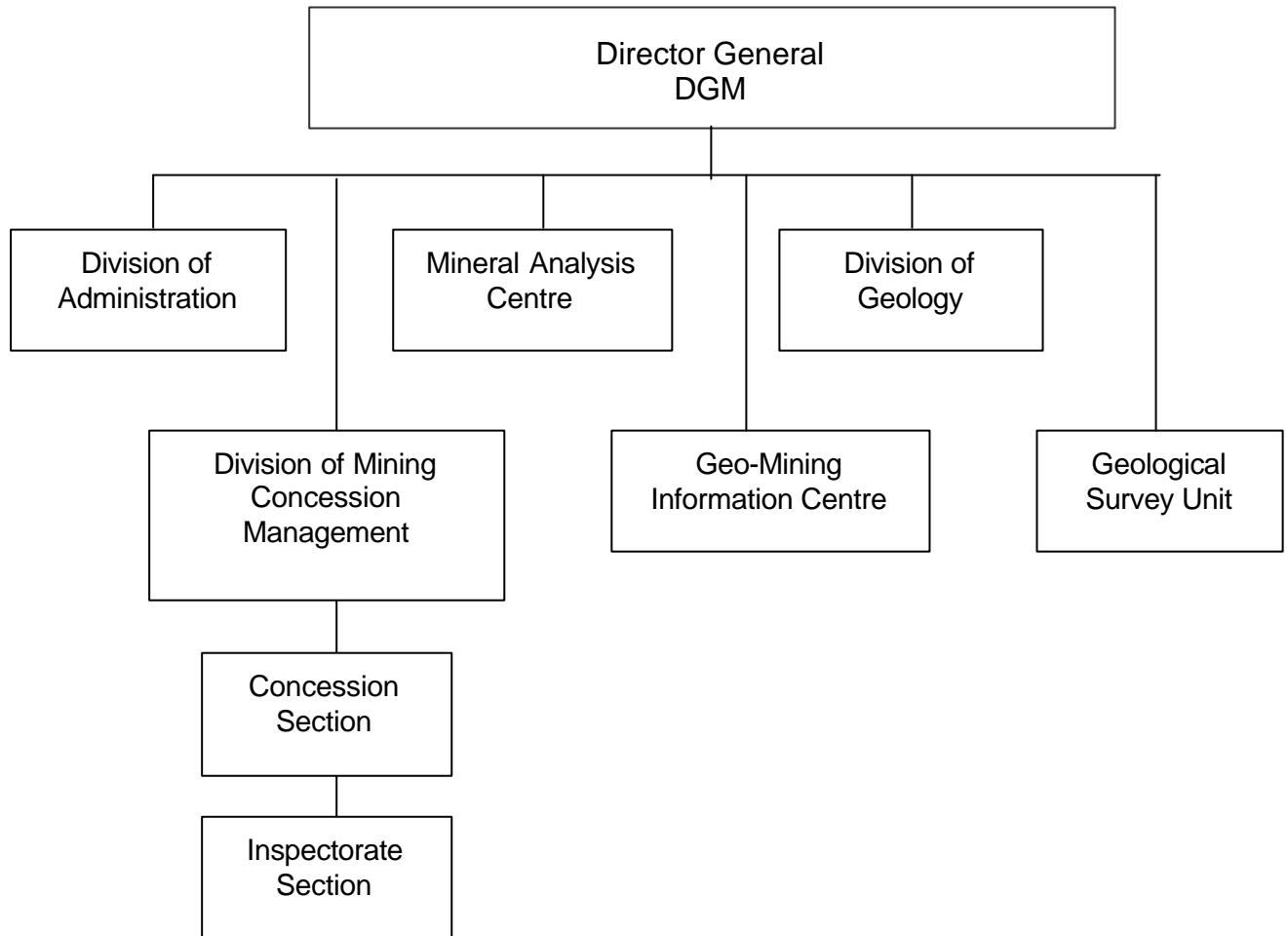
Appendix 1: List of Stakeholders and People Met With

Name	Position	Affiliation
CENTRAL AUTHORITIES		
Dr. Sonephet INTHAVONG	Deputy Director General	Foreign Investment Management Cabinet (FIMC)
Mr. Bounthueng PHENGTHAVONGSA	Director General Dept. of Geology and Mines	Ministry of Industry and Handicrafts
Dr. Simone PHICHIT	Director of Mining Concession Management Division	Department of Geology and Mines
Mr Eravanh BOUNGNAPHALOM	Deputy Director of Mining Concession Management Division	Department of Geology and Mines
Mr Oudom PHOMMACHANH	Deputy director	Geo-Mines Information Centre
Dr Soukata Vichit	Director General, Department of Environment	Prime Minister's Office. Science, Technology and Environment Agency
Dr Phengsy SIRITHONGDY	Deputy Chief of Laboratory Division	Ministry of Industry and Handicrafts
SAVANNAKHET PROVINCE		
Mr Soukaseum BODHISANE	Vice-Governor	Savannakhet Province
Mr Bounkhouang KHAMBOUNHEUANG	Company Director	Department of Provincial Agriculture and Forestry
Mr Ppanom PHONGMANY	Deputy Director	Savannakhet Provincial Health Department
Dr Phengta PHILAKHAMPONH	Director	Ministry of Industry and Handicrafts
Mr Lam Ngeunh TANELAMANY	Deputy Chief Finance Service	Savannakhet Province
AGENCIES		
Derek Ratcliff	EIA Adviser to STEA	AF SMG/Scs Natura
Seppo Karppinen	Program Officer	United Nations Development Program
Philippe Devaud	Assistant Resident Representative/Program	United Nations Development Program
Ms Khemphet PHOLSENA	Vice President	Lao's Women's Union
Peate Pinisch		SIDA
Roland Eve		WWF

Name	Position	Affiliation
PRIVATE SECTOR		
Mr Saman ANEKA	External Relations and Human Resources Manager	Lane Xang Minerals Limited, a member of Oxiana Resources N.L
Peter Goldston	Technical Director	NTEC
Loy Chansavat	Adviser	NTEC
Ed Wronski (PhD)	Adviser and Specialist	ECOLAO
Gary Oughton	Resources Management Adviser	ECOLAO
Tony Sargent		ECOLAO
Lynda Worthaisong	First Secretary (commercial/economic)	Australian Embassy
Patrick Keuleers	Resident Project Adviser	Department of Public Administration
Christer Holtsberg	Charged Affairs	Embassy of Sweden
Klas Rasmusson	First Secretary	Embassy of Sweden
Dr. Giovanni Deodato	WHO Representative	World Health Organisation
Dr. Dean A. Shuey	Program Management Officer/ Health Care Financing and Reform	World Health Organisation
Michael Harris	Managing Director	Mineuex Pty Ltd
Ralph Child	Development Manager	Pan Australian Resources N.L.
Peter Albert	General Manager Sepon Project	Oxiana Resources N.L.
Mike Jones	Principal	NSR Environmental Consultants Pty Ltd

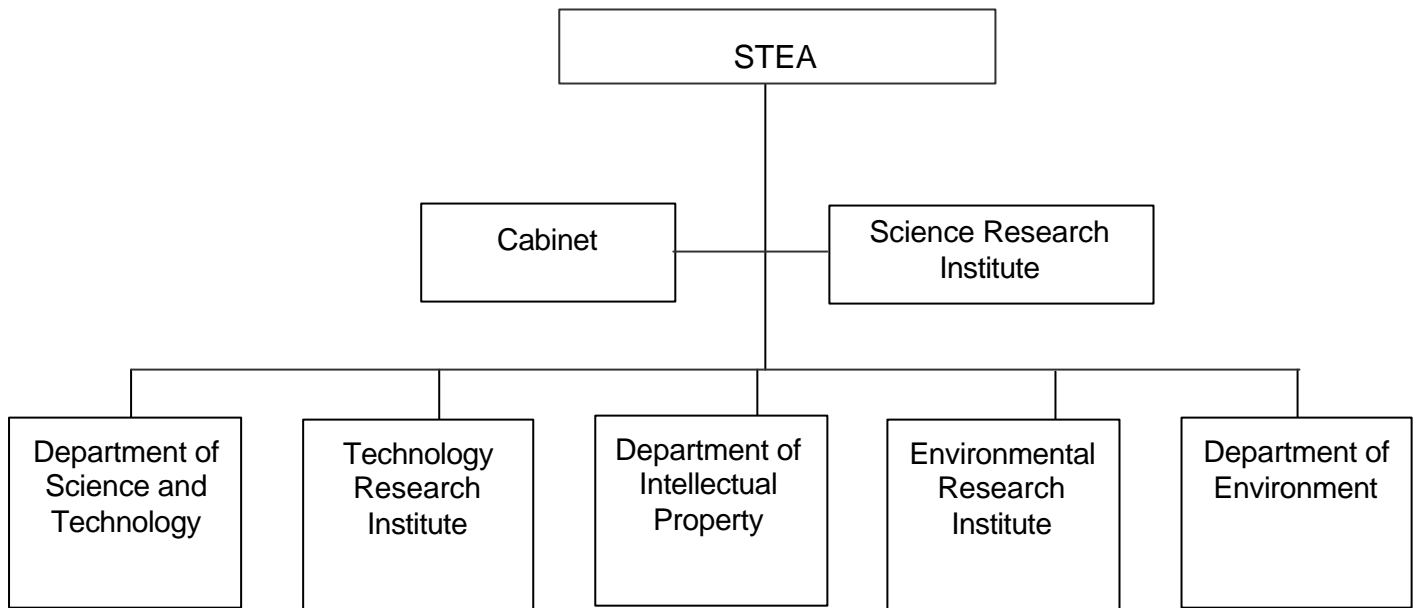
Appendix 2a: Structure of the Department of Geology and Mines

(Source: DGM, 2001)



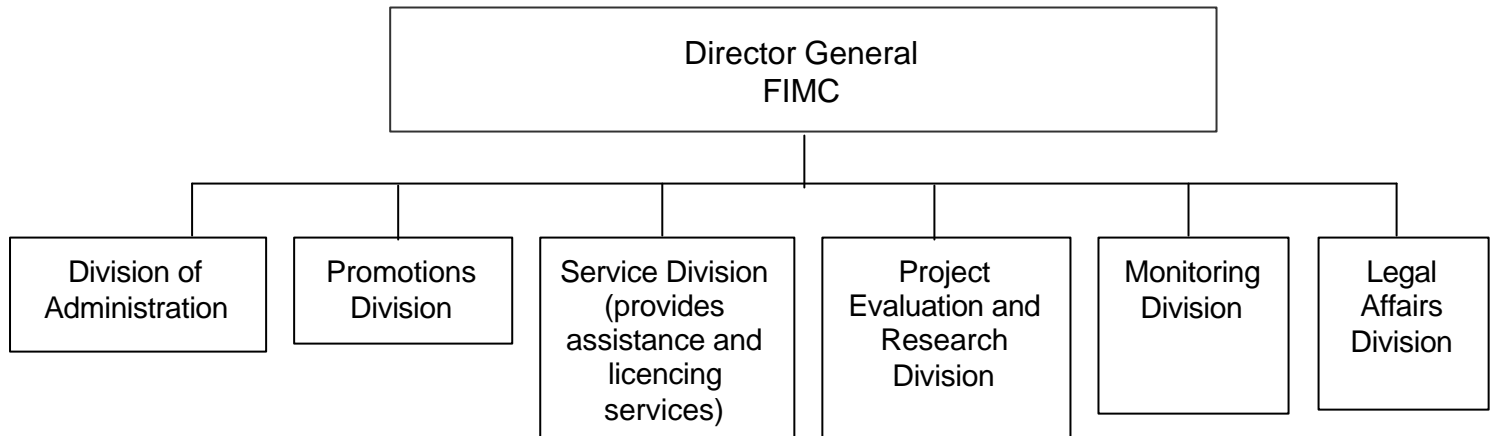
Appendix 2b: Structure of the Science, Technology and Environment Agency (STEA)

(Source: STEA, 2000)



Appendix 2c: Structure of the Foreign Investment Management Cabinet (FIMC)

(Source: Derived from discussion with FIMC, March 2001)



Appendix 3a:

Outline of Regulation on Environment Assessment in the Lao PDR

Part I: General Principles

- Article 1: Objectives of the Regulation on EA in the Lao PDR
- Article 2: Definitions

Part II: General Principles, Environmental Assessment Process and Procedures in the Lao PDR

Subpart 1: General Principles

- Article 3: EA Should undertake using following general principles
- Article 4: Responsibilities for and costs of conducting EA
- Article 5: Linkages between the steps in the EA process and the phases of the project cycle
- Article 6: Public involvement (PI)

Subpart 2: Procedures and Process for Environmental Assessment

- Article 7: Project Description
- Article 8: Project Screening
- Article 9: Initial Environment Examination (IEE)
- Article 10: Review and approval of IEE reports
- Article 11: Scoping of the TOR for conducting an EIA
- Article 12: Content and Format of the EIA Report
- Article 13: Review and Approval of the EIA Report
- Article 14: The Environment Management Plan (EMP)
- Article 15: Monitoring and Evaluation of the Project Environment

Part III: Awards and Sanctions

- Article 16: Awards
- Article 17: Sanctions

Part IV: Final Provisions

- Article 18
- Article 19
- Article 20

Annex 1: not used

Annex 2: Definitions

Annex 3: General contents and format of an IEE report for development projects in Lao PDR

Annex 4: General contents and format of an EIA report for development projects in the Lao PDR

Annex 5: General contents for an environmental compliance certificate upon project environmental screening

Annex 6: General contents for Environmental Monitoring Report

Annex 7: Forms for inviting comments on IEE, TOR and EIA

Appendix 3b:

Outline of Mineral Exploration Agreement between the Government of Lao PDR and

ARTICLE

Introduction

1. Definitions
2. Appointment and Responsibility of the Company
3. Mode D'Operation
4. Contract Area
5. Reports, Security Deposit, and Confidentiality
6. Reconnaissance Period
7. Exploration Period
8. Feasibility Study Period
9. Construction Period
10. Operating Period and Processing
11. Marketing
12. Import and Re-export Facilities
13. Taxes and Other Financial Obligations of the Company
14. Records, Inspection and Work Program
15. Currency Exchange
16. Joint Oversight Committee
17. Employment and Training of Laotian Nationals
18. Enabling Provisions
19. Force Majeure
20. Default
21. Settlement of Disputes
22. Termination
23. Co-operation of the Parties
24. Promotion of National Interest
25. Regional Co-operation in regard to Additional Infrastructure
26. Environmental Management and Protection
27. Local Business Development
28. Miscellaneous Provisions
29. Assignment
30. Financing
31. Term
32. Governing Law

- Annex “A” – Contract Area
- Annex “B” – Map of Contract Area
- Annex “C” – List of Pre-existing Exploration and Mining Authorisations
- Annex “D” – Land Rent for Various Stages of Activities
- Annex “E” – Feasibility Study Report and Environmental Impact Statement
- Annex “F” – Royalty on Mineral Production
- Annex “G” – Minimum Expenditures, Relinquishment of Land Area, and Maximum Land Area to be Held in Each Period of the Enterprise
- Annex “H” – Rules for Computation of Income Tax Appendix 3c:
Outline of the *Draft Implementing Rules and Regulations* of the Lao PDR *Mining Law* for Environmental Protection

Appendix 3c:

Outline of the *Draft Implementing Rules and Regulations of the Lao PDR Mining Law for Environmental Protection*

- Chapter I: Introductory Provisions**
 Section 1: Title
 Section 2: Declaration Policy
- Chapter II: Definitions**
 Section 3: Definition of Terms
- Chapter III: Government Authority**
 Section 4: Authority of the Department
- Chapter IV: Environmental Certificates**
 Section 5: Statements of Commitment and Technical Competency
- Chapter V: Mandatory Requirements and Terms and Conditions**
 Section 6: Mandatory Requirements for Obtaining a Licence(s);
 Environmental Compliance Certificate
 Section 7: Terms and Conditions of Licence
 Section 8: Compliance with Safety, Health and Environmental Laws
- Chapter VI: Development of Host and Neighbouring Communities**
 Section 9: Host and Neighbouring Communities
- Chapter VII: Environmental Protections**
 Section 10: General Provision
 Section 11: Environmental Protection Objectives
- Chapter VIII: Exploration Impact Control Plans, Environmental Impact Assessments and Environmental Management Plans**
 Section 12: Exploration Impact Control Plans
 Section 13: Environmental Impacts Statements
 Section 14: The Environmental Management Plan
 Section 15: Existing Mining Licences? Mine Operations –
 Environmental Management Plan
 Section 16: Processing of the EIS
 Section 17: Who is required to submit an EIS

Chapter IX: The Environmental Impact Assessment Process

Section 18: The Environmental Impact Assessment Process

Chapter X: Annual Environmental Protection Plans

Section 19: Annual Environmental Protection Plan (AEPP)

Section 20: Processing of the Annual Environmental Protection Plan

Section 21: Environmental Management group

Section 22: Environmental Inspections and Monitoring

Section 23: Suspension, Cancellation or Disapproval of Contract,
Licences or Agreements

Section 24: Mines Environmental Award

Chapter XI: Penalties

Section 25: Penalties

Chapter XII: Rehabilitation

Section 26: Environmental Rehabilitation Fund

Section 27: Final Mine Rehabilitation Plan/Decommissioning

Section 18: Suspension/Cancellation of Contracts

Appendix 4: Case Studies

1. Dong Heng Gypsum Mine

- The visit to the Dong Heng Gypsum Mine was undertaken on Monday 19 February, 2001. The mine is located about 70 km from Savannakhet, a short distance from Route 9 (which runs from Savannakhet to the Lao-Vietnam border).



Open Cut Pit at Dong Heng Gypsum Mine

- **Description of mine:** According to Clark (2001a: 119) gypsum was discovered in the area in the late 1970s and mining begun in 1980. The mine is operated by the State Mining Enterprise for Gypsum and it produces approximately 100,000 tonnes of gypsum per year, which is exported to Vietnam. The gypsum is mined in an open pit and transported to a central dumping area before being loaded onto trucks for transport to Vietnam. Potash has also been found in the area but it is not yet clear what the potential is.
- **Environmental impacts:** During discussions the mine manager indicated that environmental impacts are relatively limited, with blasting, for example, kept to a minimum. However during the rainy season water is pumped from the pit into nearby streams. The Mine Manager indicated that there is no monitoring of this water, nor are there settling ponds. According to Clark there are relatively minor issues of ground water contamination with the pit reaching the water table at some points.
- **Social impacts:** The mine was established in an area that was largely unoccupied. At the time of establishment compensation was paid to the owner of one hectare of paddy land. Since the establishment of the mine a substantial community has built up in the vicinity of the mine, as a result of infrastructure associated with the mine: a road connection, school, health clinic, water supply and electricity. The mine also hosts a weekly visiting market.
- **Implications for regulatory process:** The mine manager indicated that 6 monthly reports are submitted to the Province, MIH and DGM. In discussions with DGM it emerged that these reports do not yet follow a standard format and there is relatively little information on environmental impact. Nevertheless the overall impression gained from this brief visit was of a very well run mining operation, with limited environmental impact and significant positive social impact.

2. Lao Tin Exploration

- The visit to the Lao Tin Exploration mine was undertaken on Thursday 15 February, 2001. The mine is located in the Nam Pathene Valley approximately 60 km north of Thakhek in Khamouane Province.



Breeched tailings impoundment at Nam Pathene Tin Mine

- **Description of mine:** The current mine was established in the 1950's but there has been continuous tin mining in the area at least since the early twentieth century. The mine is a joint venture between Lao PDR and North Korean State Tin. It produces 400,000 tonnes of product per annum. However, current technology enables recovery of only about 65-70% of tin.
- **Environmental impacts:** The clearing and mining of river terraces during the dry season results in significant sedimentation of downstream areas when wet season rains flood the area. Due to lack of funds, no rehabilitation (recontouring or revegetation) of mined areas is currently undertaken. It is planned to initiate a rehabilitation program in the next 3-5 years.

After processing tailings are released to a tailings dam or direct to the local river system. At the regulator's suggestion and with the aid of a local NGO attempts were made to construct two tailings dams. Capacity of one of these was constrained due to the proximity of the Nam Pathene village that has developed at the site as the result of the presence of the operation. Both dams failed due to poor design and construction techniques (both the result of a lack of resources).

- **Social impacts:** The mine employs approximately 300 people drawn from 4 local villages. In addition, it is estimated that between 80 and 130 artisanal miners work the leases and sell ore to the mine for processing (representing 15-20% of the mine's production). The mine interacts closely with the local community through monthly "discussions" with local representatives. The main issue raised by the community is the discharge of tailings to the local river system.

In addition to providing direct employment the mine pays tax to the local authority and has contributed funds to road construction and maintenance and the building of a local school.

- **Implications for regulatory process:** The mine has had on-going discussions with DGM regarding its tailings management. It was in response to a DGM annual inspection and subsequent negotiations that tailings dams were constructed. DGM also required the mine to install irrigation for affected landholders.

Negotiations are continuing with the aim of finding practical solutions that can be achieved without affecting the viability of the operation.

- **Summation:** The mine has significant environmental impacts on the local river system, however this needs to be balanced against the social benefits it provides (supporting a community of an estimated 2000 people). The question of whether the impacts are acceptable given the social benefits needs to be considered in terms of the permanency of the impacts (can the system recover) and the spatial extent of the impacts (how far downstream impacts are felt).