USAID FIRMS PROJECT

Best Practice Frameworks - Khyber Pakhtunkhwa

Support for Development of Subsidiary Legislation: KPK Mining

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Abstract:

Since 2013, the Government of Khyber Pakhtunkhwa (KPK) has taken active measures to identify strategies that will enhance its mineral development, promote sustained investment and ensure benefit to citizens of the province. In May 2014 KPK introduced its own "Minerals Policy" as a complement to the 2013 National Minerals Policy. The KPK Minerals Policy sets out important localized objectives, priorities and Government commitments toward improving mineral sector operations.

KPK distinguishing itself from the national policy is timely and should help the province to focus on not only broader sector issues but how KPK in specific can harness the benefits of its own resources. In order to achieve its provincial objectives, it is essential that institutional arrangements, legal and regulatory frameworks and human capacity are sufficiently in place throughout KPK to support sector development. It is just as important that, where necessary, access to foreign capital, equipment, machinery and specific sector expertise is accessible.

Commencing April 26, 2014, consultant was contracted to work with the KPK Government to work with the KPK Mines and Minerals Development Department (MMDD) to review the status of the sector, identify institutional, legal and regulatory areas for improvement, prepare a model minerals development agreement as well as amendments that support best practice Mining Concession Rules to govern the award of mineral licenses and leases in the most efficient way. This Final Report is a compilation of this work but also brings additional analysis and updating to earlier deliverables; there have been six deliverables under this Subcontract:

1. Comment/Review 2(A) Items A-C
2. Outline of Final Report
3. Mining Concession Rules (draft)
4. 2(A) Item D (Model Contract)
5. Comment/Review 2(A) Items E-G
6. Final Report/Final Draft Mining Concession Rules

For reference, summary findings on "A-G" include, as summarized:

a. Evaluation of regulatory regime.
b. Strategies for efficient management, regulation and promotion of minerals.
c. Review of existing regulatory and institutional framework governing the mining industry in KPK.
d. Model mineral agreement/contract template and international tender process.
e. Identify key regulatory constraints to mining and quarrying in KPK.
f. Analyze support services (prospecting, inspection) services provided by KPK.
g. Recommendations to address gaps in current environmental and safety laws relevant to mining, regulatory and institutional arrangements relevant to mining business in KPK.

Consultant worked under the supervision of Mr. Farhan Shah (BEE Specialist). ***Appreciative thanks** to the Mines and Minerals Development Department of Khyber Pakhtunkhwa, notably Secretary Mian Wahid Uddin, as well as private sector operators, non-government and civil* *society organizations for collaborating with the FIRMS Team and for their sharing significant thoughts and insights on mineral sector operations.*

NOTE: The timeframe for this consultancy has been compressed and included the Holy Month of Ramadan. Proposed changes and comments from FIRMS or KPK authorities have not been provided to the Consultant with respect to earlier submitted deliverables including the draft Mining Concession Rules, summary findings under Sub-Task 2A (a)-(g) and draft Final Report Outline under this Subcontract.

Acronyms

ASQ	Artisanal, Small-Scale and Quarries
BEE	Business Enabling Environment
CDA	Community Development Agreement
EITI	Extractive Industries Transparency Initiative
GIS	Geographic Information System
GSP	Geological Survey of Pakistan
KPK	Khyber Pakhtunkhwa
MMDD	Mines and Minerals Development Department
MWG	Minerals Working Group
NGO	Non-governmental organization
QEIT	Qualified Extractive Industry Taxpayer
SOW	Scope of Work
US	United States
USAID	United States Agency for International Development

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Executive Summary

In June 2014 the Government of Khyber Pakhtunkhwa (KPK) announced the adoption of the province[1]'s first Minerals Policy. The KPK Minerals Policy is comprehensive and covers all key aspects for the development of the minerals sector including objectives, legal and regulatory aspects, institutional roles, license and lease types, social and environmental protection issues and revenue management. Ensuring that the regulatory and institutional support required to implement the policy objectives presents the next significant reform challenge and adoption of the Minerals Policy is a significant first step toward continued reform and development.

KPK Mineral Categories

- Dimension Stone
- Gemstones
- Industrial Rocks
- Fuel Minerals
- Metallic Minerals

As host to an impressive array of mineral resources including oil and natural gas, primary mining and quarrying in the province is marble and granite, coal (ranging from lignite to bituminous), limestone, and artisanal gemstone mining. KPK divides its minerals into five categories:

Dimension Stone

Gemstones

Industrial Rocks (i.e., rock salt, limestone, phosphates, gypsum, soapstone)

Fuel Minerals

Metallic Minerals (southern province, i.e., coal, base metals, lead) and construction materials.

The KPK Minerals Market

Mining is ongoing in KPK; the Mines and Minerals Development Department has issued tender documents for large-scale mineral investments. Still, minerals' development in the province is conducted in the context of an incomplete market where legal and regulatory frameworks are being revised, mine operators are not yet held to international mining standards, and civil society engagement is minimal. Despite clear and transparent criteria by which to monitor mineral investments, governance of mineral investments and general compliance reflect an incomplete set of modern market measures.

Considerable opportunity for KPK exists in not only expanding mineral development and strengthening resource management, but in developing midstream and downstream linkages referred to as "Mineral Value Chain" investments. The 2014 KPK Minerals Policy emphasizes value-chain development and integration of KPK mining into provincial development, for example through resource/development corridor strategies. These approaches encourage thoughtful regulation that addresses not only mining but broader development impacts of mining that can create jobs, infrastructure construction and improve quality of life.

Tender, award and management of mineral rights

The KPK Government has also focused on amending the 2005 Mining Concession Rules in order to facilitate a modern and competitive mining market. This will include publishing clear process for how mineral rights will be awarded including eligibility criteria for investors. For large-scale international tenders, a two-stage tender methodology,[2] increasingly used throughout global mining markets, is being introduced. The two-stage tender allows for the

[1] The population for Khyber Pakhtunkhwa (KPK) is approximated at 18 million, an estimated 10-13% of the Pakistan population.

[2] Pre-qualification for short list and final award using technical and financial bid submissions.

tender to be "paced" over two phases rather than one, and provides stop-gaps that allow KPK to identify the most qualified bidder to mine its limited resources.

While it is important to ensure that a legally sufficient tender and award of mineral rights process is in place, it is just as important that local capacity is firmly in place to monitor and evaluate the implementation of those rights. Removal of discretion in how operations are awarded and monitored is essential. Where tenders may be prepared and implemented by outside experts without adequate local participation, the risk of inadequate monitoring of how those rights are administered greatly increases.

Minerals regulation

While regulatory guidance is in place, underlying legal, regulatory and financial frameworks may be strengthened and updated to ensure transparent operations, optimize revenue generation, and require citizen, worker, and environmental protections. For example, an important first step in defining KPK mineral operations to be regulated is the establishment of a viable cadastre system– whether computer based (i.e., "Flexi-Cadastre") or paper-based.

As part of the KPK Minerals Policy, Government committed to the development of a "Revenue Management Program" to ensure that fees, royalties and penalties collected as a result of mining in KPK are equitably shared for the benefit of the province's citizens. This may include contributions to budget, infrastructure development, education, capacity building and targeted mine community support. As part of regulatory strengthening, a reassessment of the royalty schemes and overall fiscal framework for KPK mining will be useful.

Institutional arrangements

The Constitutional arrangement that posits mining as a provincial subject in Pakistan is significant but not unique. What is essential is that the provincial approach to mining, notably large-scale mining where foreign investments are sought, is coordinated with federal requirements and approaches. Investors will not invest only in "KPK" but in "Pakistan" and will need to have a comprehensive regime that includes their mining investments as well as any downstream investments. Clarity on the role of the Geological Survey of Pakistan and how the KPMMDD Exploration Director interact is critical.

The KPK Mines and Minerals Department (KPMMD) is active and well-staffed; some restructuring of institutional functions and departments will help to compare to international market standards. Introduction of legal, financial and investment promotion departments as well as targeted artisanal, small-scale and quarry support is recommended. Improved clarity on the role of the geological survey function of the KPMMDD, and targeted capacity building on inspectorate, cadastre and related mapping and registry will also be important.

Beyond KPMMDD operations, increased emphasis on the role of other KPK Government departments relevant to mineral development including environment, industry, land, and labor may be given. The Mining Commission (Mines Committee) provides an opportunity to link these departments. Inter-departmental relations are important throughout the value chain as mining directly and indirectly impacts overall economic and social development. Also essential to modernizing how the sector unfolds will be increased and regularized participation of district governments, civil society and mine operators.

Strategies for effective regulation, management and promotion of the KPK Minerals Sector

Some attention to objectives of mining-related regulation as well as clarification of institutional roles and distinction amongst process (filings) and operational (i.e., monitoring) aspects of licenses/leases, investment promotion may be introduced. Establishing clear functions and operational capacity at the KPMMDD as well as other KPK departments is important to build local and outside investor and citizen confidence that the sector is being properly managed. In order to achieve this, regularized outreach to mine communities in KPK and the mine investment community in Pakistan and abroad is important. Demonstration of, for example, web-based information, model contracts and clear rules of operation will promote KPK as a viable mining destination that is transparently implemented and can have real financial return.

Information and outreach

In order to promote the sector both within and without KPK, information exchange must be regularized amongst all key stakeholders including those most remotely located but impacted by mining. If to attract foreign capital in a highly competitive global mining market, publication about KPK minerals, what and where they are, doing business in KPK and other basic investment information must be made available to the international mining community.

Quality investors need to know that whatever work they conduct, that they have security of tenure and that the award of rights is transparently conducted. Investor incentives are helpful to develop nascent mineral markets but should be clearly legislated for consistent application to all relevant investors. Legitimate investors will appreciate and be committed to worker protection and safeguarding human rights as inherent to conducing mining operations in KPK.

Key regulatory constraints to mining and quarrying in Khyber Pakhtunkhwa

Regulatory guidance for mining and quarrying is fundamentally the same. However, in light of the portion of the KPK minerals market that encompasses quarrying and the importance of quarry materials in the province, some specific attention to how quarrying is carried out in KPK is recommended. Stakeholders express concern that the foremost regulatory issue is the manner in which mine and quarry rights are awarded and, at least in perception, the discretion or lack of clarity on how rights are awarded. International experts further cite a lack of monitoring awards once granted which contributes to excessive environmental degradation, poor mineral quality, and dangerous working conditions.

An important regulatory constraint for all stakeholders is the lack of comprehensive sector approach – this would include not only mining priorities but environmental, social, land access, and fiscal. KPMMDD may take the lead to identify areas and government departments that should more regularly be conversing and coordinating on mining and quarrying developments. This will further include "downstream" aspects including mineral transport, sale, storage, processing and export.

Mining "Support Services" for Prospecting and Inspection

Use of the term "prospecting" in KPK in fact refers to two aspects of mining: (1) prospecting or "survey" work undertaken by KPMMDD itself; and (2) prospecting activities being undertaken by the private sector. It is important that these distinctions are clear. Outside investors have expressed the perception that KPMMDD itself seeks to be a mining company at some level; this is not in fact the case according to KPMMDD management but perceptions matter for investors. The present institutional arrangements at KPMMDD to support prospecting and inspection may be clarified for new investors to clearly understand the divisions of responsibility amongst the various KPMMDD departments in line with best international practices.

Protocols and support services for prospecting and inspection in KPK are in place. They may be updated to reflect modern mining practices, methodologies and an enforcement regime that includes meaningful penalties. Perhaps most important for KPK to capture the benefits of prospecting is to shore up its Cadastre functions. Information and data collected during prospecting is valuable toward building an up-to-date picture of KPK mineral resources, probably geological locations of reserves and to define which areas within KPK are likely to hold best commercial potential.

Environment and mining

Increasingly, mining markets throughout the world are focused on the environmental impacts of mining and related mining activities such as mineral processing and infrastructure development. In addition, “environmental impacts” has evolved to include in great detail “social impacts” resulting in a more harmonious assessment of the overall impacts of mineral development not only to the natural habitat but to its residents and surrounding communities.

The KPK Mining sector has not developed a robust environmental or social impact assessment process and must. No matter its size, mining is an unnatural disturbance of the environment and brings with it a myriad of social change that effect economy, employment, cultural norms and more. Assessment of potential impacts must not only identify likely and possible impacts but provide recommendations for how these impacts will be avoided or at least mitigated.

As an immediate measure, it is recommended that KPMMDD institute an environmental and social impact assessment process that includes operators’ developing environmental and social management plans. It is also recommended that broader institutional governance of these issues be facilitated bringing together KPMMDD as well as the Environment Department, Labor and Welfare Department and other relevant KPK agencies including any at the mining District Level. What must be reconciled is the role of federal agencies in these topic areas which are “cross-cutting” and not only impact KPK.

Safety and mining

Mine safety aspects in KPK can be more rigorously assessed and addressed. Foremost in this process is including the state of mining conditions with emphasis on the individual miner safety. Assessment and procurement of protective gear for miners should be mandatory. Present Inspectorate functions are clear and may be strengthened through broader inspector training, scheduled and more regularized mine/quarry inspections, and a comprehensive review of enforcement mechanisms including level of penalties to be more in line with international best practice.

1. Review of the Khyber Pakhtunkhwa (KPK) Minerals Value Chain

Conditions and procedures to attract sustained private investment in the KPK minerals market need to be competitive in the current global mining market context. Notably in South, West and Central Asia, there is increased interest in an array of mineral resources as well as from investors beyond Asia's borders. Regulatory regimes supporting mineral sectors are typically complex - this does not mean that complex regimes are essential. It does mean that mineral regulatory regimes continue to evolve and should provide fundamental regulatory safeguards that investors have come to expect.

An approach that may be taken in reviewing the KPK regulatory regime and how it may be divided into areas for improvement follows the "Extractive Industry (Minerals and Hydrocarbons) Value Chain" prepared by the World Bank:

Award of Contracts and Licenses

Regulation and Monitoring of Operations

Collection of Taxes and Royalties

Revenue Management and Allocation

Implementation of Sustainable Development Policies and Projects

Minerals Value Chain

1. Award of Contracts and Licenses
2. Regulation and Monitoring of Operations
3. Collection of Taxes and Royalties
4. Revenue Management and Allocation
5. Implementation of Sustainable Development Policies and Projects

1.1 Status of mining and Value Chain Development in KPK

Processing of minerals may be locally enhanced and benefits of same contained within KPK. In today's market there is not yet a coordinated approached to "value chain mining" but the recently adopted KPK Minerals Policy supports same. For now, mine and quarry operators tend to extract the product and either directly sell or use "middlemen".

KPK mining includes marble, granite and precious gems that are not necessarily being produced using best methodologies. As a result, product quality is diminished and environmental degradation comes along with poor mining practices. Most of KPK chromites is sold to China; China indicates that the chromites must be tested and the "SGS" lab in Pakistan is used. KPK MDD is concerned that where they believe the quality if 25%, SGS will report 17%, diminishing the value of the chromites. Similarly, marble and granite are used within the province but also exported.

Some immediate actions that may be taken include the development of comprehensive "mineral value chain" regulation. Notably for quarry miners but for all mining in KPK is the lack of comprehensive and consistent regulatory guidance from "mine to market". As part of the tender process, KPK may introduce incentives for operators to include processing as part of their mine operation within KPK, examples:

- Coal mining that includes washing, coal-fired power generation

- Marble and granite that includes cutting, polishing
- Gemstones that includes cutting, polishing, jewelry and other product production

Attracting mine companies that will not only build long-term mining operations, but will integrate their development and activities as part of the overall community development is a priority for KPK. Stand-alone investments have not proven to be effective for the long-term in providing full benefits to communities; comprehensive “value chain” investments must be encouraged.

1.2 Challenges and Opportunities to develop the KPK Mining Value Chain

Mining is different from other industries and requires specific strategies to ensure efficient development. KPMMDD has already taken an essential first step toward adopting the province’s first Minerals Policy in which strategic objectives for sector development are clearly published. Some of the challenges for KPK in implementing a comprehensive, “value chain” approach to mining are discussed below.

1.2.1 *Challenge:* Smaller KPK operators lack financing, infrastructure to support full value chain

Opportunity: Facilitation of “Clusters”. Some consideration of how KPMMDD may work with existing artisanal and quarry operators (illegal and not) to formally “cluster” operations so that they remain as stand-alone business entities but can benefit from sharing of resources such as electricity, transportation and equipment. “Clustering” is a common notion in African artisanal mining and in some cases “cooperatives” have been formed so that operators sell their product to one sales center in order to achieve fair and consistent pricing. Mine operators are typically resistant to this model but once in place, the financial benefits are usually apparent.

“Pros” of Cluster	“Cons” of Cluster
Sharing of limited infrastructure	May result in “mafia” cluster operations
Saving costs by sharing equipment	Stalled development with no skills’ improvements
Regional cooperation can promote stability	Infrastructure still too limited to adequately service cluster

1.2.2 *Challenge:* Informal, unregulated mineral transport and warehousing/storage networks

Opportunity: Midstream development. Throughout KPK there is considerable business opportunity in transportation and storage of mineral products. Presently these “midstream” businesses are conducted per mine and are not sufficiently formalized to themselves generate revenue for KPK. Mine operators rely on existing local networks that do not necessary safeguard mineral quality or environmental disturbance (i.e., coal dust). Assistance to formalize these operations, provide safe passage and possibly to assist in establishing warehousing and storage will help mine operators and can create “black market” jobs.

1.2.3 *Challenge:* Uncoordinated business setting to effectively link mining value chain phases.

Opportunity: KPK Government can facilitate and encourage downstream development. The KPK Minerals Policy emphasizes the need to link mineral production with downstream activities (i.e., cutting, processing). Here, leveraging private sector will be essential to “share the risk” of investments required to support downstream activities. Environmental issues as well as quality control are two areas where KPMMDD can lead regulatory reform. KPK MMDD may initiative certain actions that will facilitate and encourage value chain approaches to minerals, i.e,

a. Introduce leasing and credit facilities for small and medium mines/quarries that are conditioned on not only extraction but on processing, downstream activities.
b. At least quarterly conduct KPK and other city-based conventions of mining professionals from all facets of the value chain, introducing different players on a regular basis.
c. Consider fiscal incentives to operators that will not only extract and export minerals but will process minerals within KPK and create local employment opportunities.

1.2.4 *Challenge:* Historically, an ad hoc approach has been taken to developing KPK minerals.

Opportunity: Resource/development corridor. The KPK Minerals Policy commits to the development of minerals while promoting development of related infrastructure such as electricity, roads, etc. KPMMDD may lead other departments in taking a holistic look at the KPK province and identifying opportunities for immediate resource corridor development identifying key mining projects as "anchors of provincial development". An example is most likely to start around the marble/granite quarries where road and power improvements will assist quarry operators.

1.2.5 Challenge:

It is common in KPK and throughout Pakistan to use "Middlemen" who often purchase minerals and resell them; there is no licensing or other standard in place to guide this segment of the business. These buyers often stockpile resources awaiting higher prices and also purchase from illegal operations.

Opportunity: Introduce licensing and monitoring of Middlemen. Where these midstream operators are working, introduction of eligibility and incentives for good financial and technical performance should improve quality of minerals being sold out of KPK and provide incentives for middlemen and operators to conduct downstream mineral operations within the province.

1.2.6 *Challenge:* Incorrect/insufficient public information and outreach concerning minerals

Opportunity: Information Exchange. In order to effectively manage and promote KPK minerals, a variety of informational activities may be undertaken – and will be welcome by KPK citizens – that ensure broad-based understanding of sector developments.

a. *Upgraded KPMMDD Web-site.* An immediate measure that may be taken is the upgrading of the KPMMD web-site to present an overview of KPK minerals, an inter-active "questions and answers" page for interested investors, civil society forums and other information that will build outsiders' understanding of the province, available minerals, and conditions for doing business in KPK.
b. *Inter-Department Minerals Commission*. KPK has established an inter-department mines committee. Building the "know how" and sector understanding of members of that committee may commence with an "Induction package" that simply includes basic information about mining, comparative international experience, and basic policy documents. The regularization of meetings will provide an opportunity for KPMMDD to present on specific topics at each meeting, i.e., one on royalties, one on health and safety, one on environment and mining, etc.

c. *Community engagement.* Rather than await conflict, KPMMDD can take the lead to formalize engagement with mine communities to identify critical issues and develop practical responses to them. In most mine communities, issues of compensation for land use and access, job creation, and community financial and development benefits of mining are typical issues. KPMMDD may introduce a community liaison officer as part of its field offices that will link to other field offices toward preparing a consistent approach toward community engagement.

   - Community Development Agreements. As mining investments increase and the scale of mining is larger, use of the "Community Development Agreement" (CDA) as a formal tool to link the mine operator and community for the life of the license/lease may be considered. The CDA is increasingly being used for large-scale foreign investments to ensure that the rights and responsibilities of the mine operator and the community are clear.

d. *Regularized mine operators and investor meetings.* KPK has an established mine operators group primarily engaged in quarrying and artisanal mining; this is a useful place to formalize communications and information exchange. It will also be useful to regularly engage with the Chamber of Commerce and other business groups. In fact, as international tenders are being conducted, it may be helpful for KPK to include in the tender documents a list of the existing mine operators and interested KPK investors for foreign bidders to be aware of and with whom to possibly partner.

e. *Minerals Working Group.* Informally a Minerals Working Group (MWG) was established in 2012 in order to join federal and all provincial Government stakeholders together to assess and address mining issues in Pakistan. The concept of the MWG has been successfully implemented in other mining countries and should be pursued. More formalization of the group is recommended[3] including the appointment of rotating leadership, scheduled meetings, and publication of key work.

1.2.7 *Challenge:* Inexperienced KPMMDD and other government, company capacity.

Opportunity: Formal Capacity Building.

a. *Regulation.* Effective regulation will only come via effective regulatory drafting and implementation which means considerable capacity building relevant to modern mining. Understanding the basic market operations for minerals is essential to preparing a practical and competitive regulatory regime. In order to provide a practical scope of work toward strengthening capacity, KPMMDD may take the following measures.

   - Conduct a web-based "regulatory literature review" of comparable mining markets to learn about how various countries regulate this sector.
   - Develop a regulatory drafting schedule (primary and secondary regulations)
   - Develop supporting procedural framework and drafting (the guidelines and processes for implementing regulatory requirements)
   - Develop Cadastre, Inspectorate, and Legal capacity (to understand and enforce modern mineral regulatory requirements)

[3] World Bank funding for the MWG is scheduled to stop June 30, 2014; the Asian Development Bank has discussed taking over the funding; to be confirmed.

b. *KPK Government strengthening of KPK academic and vocational training.* Through curriculum development, exchange programs and even mine simulation (Kabul has set up a mine simulation center), KPMMDD as well as private sector operators and students may receive "hands on" capacity building to better understand the health, safety and mineral quality aspects inherent to mining.

c. *Inspectorate improvements.* As discussed in this report, more concentration on inspectorate improvements in KPK will benefit citizens as well as profit margins for operators. Instillation of modern market and technical methodologies as well as public reporting and tracking of mine and quarry operations will establish important baseline information for long-term development that is inherent to minerals development.

1.2.8 *Challenge:* Public perception of mining tends to distrust investments; discretion in the system does exist.

Opportunity: Mitigate opportunities for discretion in KPK mining and enhance public information. Worldwide, minerals markets are challenged to ensure that mineral investments are transparent and that award and monitoring of investments are not discretionary; a "fair and even playing field" for all investors is sought. Public information about the system for investments contributes to monitoring. Approaches that are used in various mining environments:

a. *Information sharing.* Information exchange actions help to promote transparency in how KPK is conducting its mineral business. Examples of information that will promote confidence that the KPK Minerals Sector is being conducted in a transparent manner include:

- *Establishment of clear rules for use of license registries including public access* as well as publication of key license/lease terms.
- *Defined royalty system,* ideally published as part of law or regulations.
- *Publication of license and investment information*. Standard mine contract and publication of terms in provincial gazette. Formalized procedures for public access to cadastre and mine contract information

b. *Reduced discretion and conflict of interest*. The historic nature of mining in KPK is that there are familial, clan and tribal affiliations that are not necessarily compliant in a modern mining market. Discussion between KPMMDD and these operators is important to identify whether action is required and what action will have meaning to ensure that these traditional operations abide by new market rules. Other areas to be addressed include:

- Participation of community elders in sector decision making may continue but this role should be clearly defined for all to understand;
- Government officials should not be permitted to hold licenses or to even invest in mining until at least one year after leaving office; and
- Reduced discretion of licensing authority may be achieved through more defined rules and enforcement on award, suspension, cancellation of mineral rights which will be addressed in the amended Mining Concession Rules.

c. *Annual sector "stock-taking"*. It is time for KPK to take stock of existing investments; this will require the collection of information from operators that is not only financial in nature but includes records of accidents, problems encountered by the operator in implementing the license/lease, mine community issues, level of miner pay, and other indicators of mine performance. Baseline data may be collected initially in key mine and quarry areas and be annually updated. Analysis of the information should be conducted by KPMMDD toward generating improved policies and support where needed.

d. *Extractive Industries Transparency Initiative* (EITI). In addition, the KPK Minerals Policy cites the Extractive Industries Transparency Initiative (EITI) which is formal mechanism in which KPK can participate. EITI is a global standard established in 2003 for monitoring revenue generated from the exploitation of natural resources. To date, the EITI has primarily been a federal government initiative but there is no restriction for KPK to apply for EITI membership. (See Appendix 1)

1.2.9 *Challenge:* Security of mine communities and conflict management related to mining.

Opportunity: Introduction of the Voluntary Principles in KPK mining. Various donors including the World Bank are promoting increased use by governments and mine operators of the "Voluntary Principles" which were established in 2000 as a multi-stakeholder initiative including governments, mine companies, and non-government organizations that guide mining, oil and gas companies on providing security for their operations in a manner that respects human rights (See Appendix 2).

2. Institutional and Regulatory Arrangements Supporting the KPK Minerals Sector

2.1 Current Institutional Arrangements

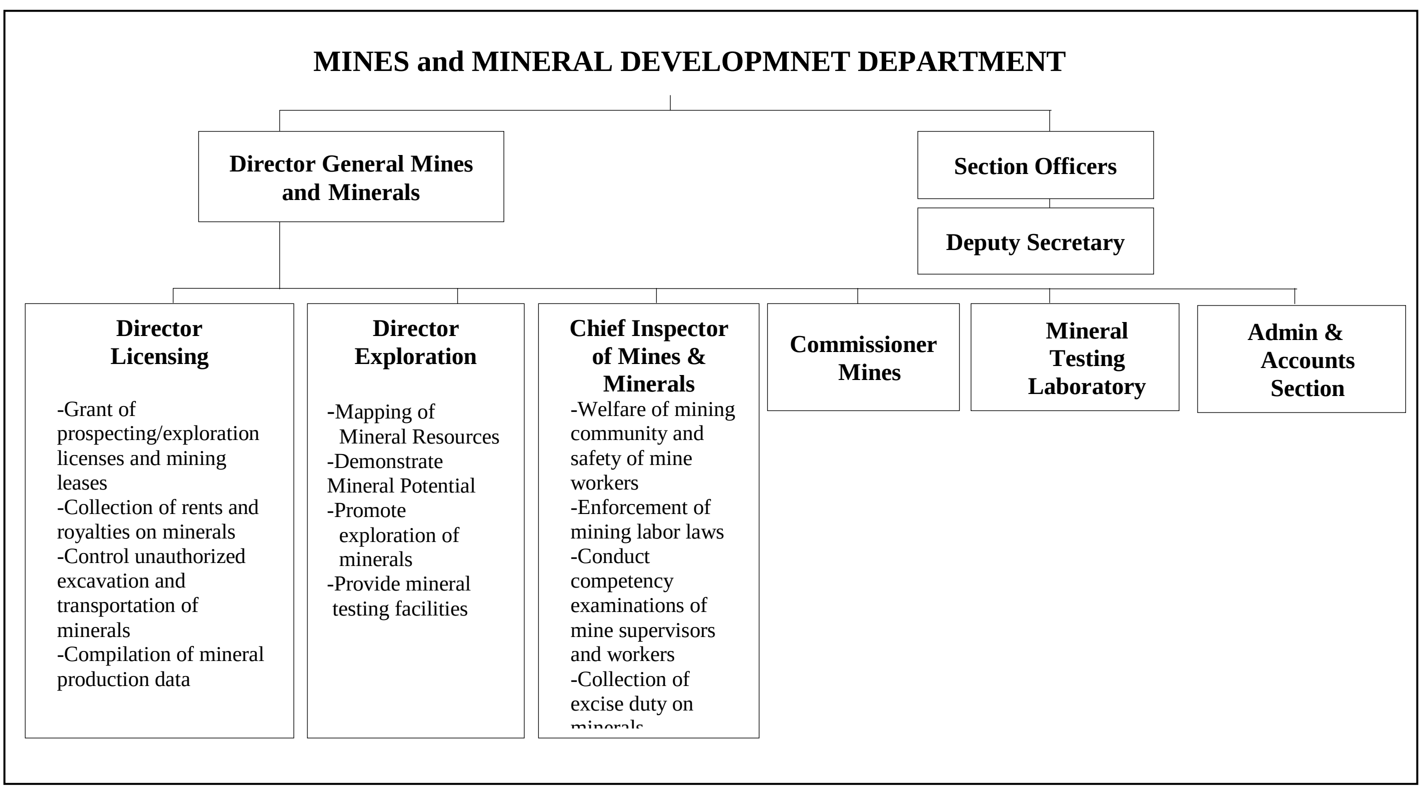
The KPK Mines and Minerals Department (KPMMDD) is the government agency responsible for policy-making and regulatory oversight of the minerals sector in the province. Under the Rules of Business the KPK MMD portfolio covers six areas:

i. Licensing;
ii. Development of Mineral Resources;
iii. Land;
iv. Regulations and Royalties;
v. Geological Survey; and
vi. Health and Safety.

KPMMDD Summary

- 200 staff in Peshawar
- 6 regional offices (20 staff each)
- 3 new offices proposed

To implement its mandate, the MMDD includes three core departments: (1) Labor Welfare; (2) Director General (licensing and exploration promotion), and (3) Inspectorate. The KPMMDD currently includes 200 Peshawar-based staff as well as 6 regional offices with about 20 staff each.



In effect, the survey and prospecting work that is conducted by the KPK Exploration and Promotion staff

2.1.1 Mines Committee.

KPK Mines Committee

- Director General, Chair
- Director of Licensing
- Deputy Secretary of MMDD
- Finance Department
- Social Welfare

In KPK, a "Mines Committee" (See Text Box) operates as the licensing authority. The committee is described to some extent in the Concession Rules but more detail in the form of operating guidelines is recommended. Typically investors will expect to follow very rudimentary licensing/leasing rules and involvement of a committee should be clearly guided with published protocols that include monitoring and public information requirements. It is recommended that review of (a) the role of the Mines Committee as well as (b) the composition of the committee (i.e., inclusion of environment officials) is needed. (**NOTE**: in the draft amended Mining Concession Rules, it is proposed that this structure will be renamed the "Mining Commission")

2.1.2 Mineral Investment Finance Authority (MIFA)

MIFA was created under earlier National Minerals Policies; in KPK the Chief Minister oversees all mining affairs. More clarity on the role of MIFA and rules for operation is needed.

2.1.3 Mine Inspectorate.

By law, throughout Pakistan the Mine Inspectorate function for mining is an independent one, however, in KPK this function operates under the KPMMDD.

2.1.4 Innovative institutions.

In the past, a "coal army" in FATA secured a coal storage yard and ensures quality control. KPK MMDD has considered establishing a "Board of Management" as a public-private operation that would manage a warehouse for marble/granite and/or other minerals to monitor mineral quality and from which sales would be made. Consideration of establishing "Economic Protection Zones" (EPZs) and development of a dedicated Mining Chamber of Commerce was also considered.

2.2 Current Khyber Pakhtunkhwa (KPK) Mineral Regulatory Framework

The primary regulatory instruments guiding minerals development in KPK are the 2005 Mining Concession Rules, Health and Safety Regulations and Licensing Regulations. The foundations of regulatory guidance are in place but may be strengthened to reflect best practices for modern mineral market operations.

2.2.1 Mineral Rights.

In today's KPK minerals market, there are two types of mineral rights[4]:

a. Prospecting License – 898 issued.

Current KPK Mineral Rights
898 Prospecting

[4] Confirmed by KPMMD Secretary, June 2014

b. Mining Lease – 431 issued.

Perhaps foremost to regulatory development of KPK minerals is the definition of rights, selection and award of investors to mine KPK resources. Presently "large-scale" mining is defined as a $3 million investment which in the global market is typically categorized as small- to medium-scale. Investor eligibility must also be well-defined so as to capture legitimate and experience investors to develop KPK minerals. Internationally comparable definitions as well as clear and predictable rights and obligations of investors, communities and the KPK Government must be in place. Current sizing is:

Illustrative definitions of Mine Size	Issue
• 200 acre for size of license/lease area	➢ This is excessive, notably for small-scale
• 5 acre size for gemstones mining area	➢ Issues of overlapping acreage should be addressed so as not to lock up mining areas
• Large-scale" mining is defined as a Rs.300,000,000 investment (approximately $US3 million).	➢ Internationally this is not considered large-scale; typically "small-"or "medium-scale".

2.2.2 Award of mineral rights and monitoring of Licenses/Leases.

KPK has recently issued an "Expression of Interest" for ten "large-scale" mines. A tender process is described but not formalized. To date, in accordance with the Mining Concession Rules, minerals rights have primarily been by application and by auction. Once a license/lease is awarded and issued, the Office of the Director General for Licensing monitors implementation. Two issues have been raised with respect to monitoring:

a. *Government is concerned* that there is no provision to "force" license/lease holders to implement their license/lease and in fact, many choose not to mine but to hold on to the rights. The amended Mining Concession Rules includes sample language on "use it or lose it" to encourage mining once a license/lease is issued.

b. *Miners are concerned* that the process to cancel their licenses/leases is discretionary and somewhat politicized particularly in the appeal process.

   i. The Assistant DG has inspection authority to cancel licenses;

   ii. Licenses can be cancelled by the KPMMDD but cancellation may be appealed to the Secretary in which case KPMMDD managers note high levels of politicization whereby licenses are reinstated. This regulatory approach results in an unpredictable setting in which a license may be cancelled and more formalized processes are needed.

2.2.3 Monitoring Licenses/Leases.

The Department of Mines and Minerals is mandated to grant mining licenses and leases, collects fees and royalties, implements inspections and maintains master plans. In KPK the Master Plan includes mapping that shows:

- the locations of all exploration licenses and leases granted,

- the renewal assignments and surrender of mineral titles, and
- any relinquishment of acreage.

2.2.4 Royalties.

The royalty system in KPK is established and may be made current. KPMMDD has a fixed royalty for 42 minerals that are occasionally reviewed. Marble is a fixed royalty of 30rupees/ton. It appears that the "fixed royalties" should be increased to reflect international standards. *In addition to royalty is an "excise duty"* called a "CESS" and is 3-5 rupees per ton. These funds are collected by the MMDD and used for social issues such as housing, disability and other social support.

2.2.5 Land use and access.

Land regulations in place do not address the specifics of mining or adequately address broader issues of resettlement and compensation. Each of the 25 KPK districts has a "Surface Rent Committee" that deals with (a) rents to be paid by mine operators to landowners and (b) address land disputes. The auctioning of "minor minerals" (construction materials) is also administered at this district level.

2.2.6 Social and Environment.

Presently there are no regulatory provisions specific to social and environmental impacts of mining in KPK.

2.3 Institutional and Regulatory Challenges in Today's Global Mineral Market

2.3.1 Establishing clear institutional roles and responsibilities.

Each country has developed specific institutional and regulatory arrangements to optimize mineral development. No matter the levels of Government, the most critical functions of government's mining institutions include:

a. A Cadastre Office (commonly referred to as the Cadastre) maintains a register of licenses/leases and activities related to licenses and leases ("cadastre"), using a cadastral map that is a comprehensive register of the metes-and-bounds of mines. The cadastre includes details of the ownership, license terms, and increasingly, the precise location (i.e., GIS coordinates) of the mines. License/lease holders are obligated to report and report to the cadastre as part of their license/contract terms and typically the cadastre is a fundamental source of data in disputes and lawsuits between landowners.

b. A Geological Survey is an institution charged with the systematic investigation of the geology of a country and/or province and for maintaining the country/province's geological map. Geological Survey maps are available for investor and public review although survey. Core mineral and rock samples are maintained, where possible, by the Geological Survey and survey work is conducted and analyzed by staff.

c. A Mine Inspectorate (commonly referred to as the "Inspectorate") is an essential institutional component in the minerals sector. It is charged with the implementation and oversight of health and safety of the mines. This includes mine safety, worker health and safety, and some poorly defined environmental and social aspects. Regulatory drafting should be an inherent part of the Inspectorate work, technical certification and enforcement power to stop mining operations that are not in compliance with operating requirements.

In the present institutional structure, these functions are basically in place in KPK although different terminology is used for some descriptions which can be confusing for investors.

Mine Institution	General Function	Status in KPK
Cadastre	*Licensing/leasing; cadastral map*	"Licensing Department"
Geological Survey	*Geological investigation & survey work*	National function (Quetta HQ) *and* KPK "Exploration Promotion" Department
Mine Inspectorate	*Health & safety, technical compliance*	Independent function operating as part of KPK MMD

2.3.2 Ensuring adequate institutional and staff capacity

KMMDD includes three core departments and six core functions. Some recommendations are provided here to "tweak" this arrangement to reflect more modern mineral market frameworks.

Current Function	Recommendation
Licensing	• Licensing is one piece of the puzzle; recommendation is to establish a stand-alone "Cadastre" responsible for licensing, mapping, reporting.
Development of Mineral Resources	• This function should be completely shifted to private sector; any "development" would be initial "survey and prospecting" work that should be included under the Geological Survey function.
Land	• This is a Cadastre function and should be included there. • Social aspects related to compensation for land use should be addressed outside of KPMMDD as part of a broader KPK government function.
Regulations and Royalties	• Separate functions so that "regulations" are drafted by Inspectorate, Cadastre, Legal Department as appropriate by topic. • Royalties should be clearly set forth in regulations; no opportunity to revise percentages, payment approaches, etc.
Geological Survey	• This function is federally implemented in Quetta and should be well-coordinated; the survey function is very important for KPK.
Health and Safety	• Recommend reference to this function not as KPMMDD generally but for the Inspectorate specifically; it is critical.

KPMMDD Department	Recommendation
Labor Welfare	• Merge this with Inspectorate
Director General for Licensing and Exploration Promotion	• Separate Licensing to be Cadastre • Separate Exploration Promotion to be Geological Survey

KPMMDD Department	Recommendation
Inspectorate	• Strengthen operations
	• Add "Investment Promotion" department • Add "Artisanal, Small-Scale and Quarries" Department • Add "Legal Department" and "Finance Department" • Add "Mines Committee Secretariat Office" • Add "Public Information/Government Liaison Department"

2.3.3 Attracting the "right" investors.

Mining is a long-term investment and investors operate throughout the world; once KPK opens its doors to outside investors, they may be expected to be working in the province for decades. It is essential that appropriately rigid regulatory criteria for investors and good due diligence on these investors as well as KPK/Pakistan investors is in place so that Government will not have an influx of bankrupted or historically fraudulent investors working in its sector.

2.3.4 Environmental protection.

For almost three decades environmental management and mining have been increasingly linked. In certain mining financing markets, absent clear environmental management plans (as discussed later in this report), banks will not finance mining operations. Improved global communications have contributed to information sharing on mine company and government performance with respect to safeguarding water, soil, air, flora and fauna. Regulatory aspects are complicated and extensive but sufficient comparative mining markets in the world offer KPK an opportunity to quickly gain "lessons learned" and adopt basic environmental regulations that are specific to mining aspects.

2.3.5 Community and citizen benefits-sharing.

There is no consistent way in which global minerals markets address how revenues and other benefits that are generated from mining activities will be shared or otherwise reverted to affected mine communities and citizens at large. There are numerous approaches to be considered; the challenge is identifying those that are appropriate for the particular mining environment but also, that the methodologies for implementing the approach are in place. Examples:

- *Mineral Wealth Fund* – typically managed by the Ministry of Finance, a percentage of revenues is housed and budgeted to allocate a certain percentage to, i.e., education, roads, health throughout the country.
- *Immediate financial entitlement* - as was established in Mongolia, where a percentage of revenues are divided amongst the entire population; this practice has now stopped as revenues have declined and alternative ways to share revenue are developed.
- *Mine Community shares* – as established in Russia, mining community governments received a percentage of revenues generated from mining to be used by the communities with a representative local oversight committee regularly meeting and publicly determining and monitoring use of funds.

- *Long-Term Mineral Growth Fund* – as is being established in Mozambique where a percentage of revenues generated from extractive industries is set aside in an interest-bearing account for a long-term growth fund, not used in the near-term.

2.3.6 Mining fiscal regime.

Increasingly, minerals markets are challenged by reduced financing available to develop minerals, notably in nascent markets where regulatory and institutional clarity and contract certainty is less developed. International banking institutions require an array of sureties to lend the large sums of financing required for significant mining investments. In addition to clear understanding of environmental requirements, performance bond, tax and other financial obligations must be clear and not subject to political or other discretionary changes for banks and investors to ensure their investment is a sound one. A common finding in today's global market is that certainty of royalties and taxes lead the financial concerns for investors followed by investor desire to obtain fiscal regime stability – that fiscal terms included in the mine contract *will not* be subject to change over the long-term.

2.4 Strengthening the KPK Mineral Regulatory Regime

2.4.1 Strengthening the KPK Minerals Policy Framework.

Key mineral policy framework recommendations for KPK have emphasized the need for a strengthened mineral regulatory regime. In order to ensure that these recommendations are adhered to, Government has initiated the formal process for the adoption of the first KPK Minerals Policy, is preparing a KPK Mining Act and amended KPK Concession Rules. These actions are significant toward establishing a clear and predictable regulatory regime for the development of minerals in KPK.

Mineral Policy Framework Recommendations	Actions to support Regulatory Strengthening
• Comprehensive approach linking "upstream" and "downstream" aspects	• Promotion of value-chain investments as part of tender criteria preference
• Geo-science data may be enhanced	• KPMMDD emphasis on strengthening in-house geo-science capacity, technology
• Sector Frameworks may be strengthened and clarified	• Inclusion of departments beyond KPMMDD, i.e., industry, environment, labor to harmonize regulatory requirements, institutional roles • Clarified fiscal terms, i.e., formula for surface rent • Enhanced environment, social, land frameworks
• Preparation of amended Mining Concession Rules	• KPMMDD preparing by August, 2014; review to be conducted by October 2014
• Modernization of mining practices	• KPMMDD initiation of "extension service" programs to expose operators to modern practices, technology, methodologies
• Greater distinction amongst mining types and mining phases	• Concession Rules will introduce clarity in phases of mining, definitions of mine/size types
• Revenue Management Program	• KPMMDD working with Finance Department to develop a

Mineral Policy Framework Recommendations	Actions to support Regulatory Strengthening
needed	revenue management/sharing program
• Improved public information and transparency	• KPMMDD establishment of public information and investment promotion office, drafting protocols for information sharing
• Integration of mining into provincial development	• Inclusion of district governments, departments beyond KPMMMD, i.e., industry, environment, labor, and increased private sector linkages; preference for investors that link mining with provincial development
• Sector capacity building	• KPMMDD introduction of training, skills development, outside expertise
• Financing Mineral Policy activities	• KPK MMDD working with private sector to identify needs; introduction of international tender process

2.4.2 Modification of Mines Committee.

Perhaps one of the most immediate regulatory improvements that may be made in KPK is the clarification of the functions and time-based actions for the Mines Committee and diversification of its composition. Presently the Committee is primarily composed of KPMMDD officials. While Finance Department and private members are also included, it will be useful to review the composition and include environmental, social and legal experts as well. The inter-agency and cross-stakeholder benefits of the Mines Committee are enormous and should be leveraged for improved regulatory guidance.

2.4.3 Strengthened Regulatory Guidance.

Perhaps the most fundamental measures that may be supported to strengthen the KPK Mineral Regulatory Regime are to improve investor eligibility requirements and to re-define the categories of mineral rights currently used to better reflect international norms. Some areas where the KPK Mineral Regulatory Regime may be strengthened are described below (*Note*: much of the regulatory strengthening suggested below may be expected to be addressed in the new KPK Mining Act as well as the amended KPK Mining Concession Rules).

Mineral Regulatory Regime

1. Investor Eligibility
2. Categories of Mineral Rights
3. Requirement to Mine
4. Predictability
5. Cadastre System
6. Mineral Rights' Registry
7. Security of Tenure
8. Clear Institutional Roles
9. Transparency
10. Transferability
11. Standardization
12. Stability
13. Mining Fiscal Regime
14. Address Illegal Mining

a. *Categories of Mineral Rights*. Investors expect an array of licensing possibilities to conduct their business but fundamentally will expect to be able to explore and to exploit resources. Typical categories of mineral rights in the global mining market are included in the current Mining Concession Rules and include:

   i. Reconnaissance

   ii. Prospecting/Exploration

   iii. Exploitation/Production

   iv. Retention

Within these categories may be specified the size and categories of mine types in order to regulate the specific nature of the market, for example, reference to "small-scale" or "large-scale" licenses. In addition, with the emergence of new mining markets, issuance of "artisanal mining" licenses has become an important aspect of mineral regulatory regimes that should be considered in KPK.

b. *Additional areas* where information important to mine categories may be strengthened through clarified regulatory guidance:

> …with the emergence of new mining markets, issuance of "artisanal mining" licenses has become an important aspect of mineral regulatory regimes that should be considered in KPK.

- *Remove reference to "major" and "minor" minerals*. This terminology is not in line with international best practices and does not necessarily reflect the minerals of KPK. "Minor minerals" refers to "construction materials".
- *Definitions*. The majority of mining in KPK is quarrying dimension stone (i.e., marble, granite) and what in industry terms may be categorized as "artisanal" and "small-scale mining". The definition of "large-scale" mining is not in line with industry terms.
- *Mineral sales*. "Middlemen" often purchase minerals and resell; there is no licensing or other standard in place to guide this segment of the business. These buyers often stockpile resources awaiting higher prices and also purchase from illegal operations. It is not clear whether "salting" (adding non-mineral elements to the actual minerals) is an issue. *MMDD notes that the Board of Investment would be the regulatory body for this activity*.

c. *Requirement to Mine*. A common problem in KPK and other mining markets occurs when the mine operator delays commercial production. This delay results in delayed revenue generation and job creation that will benefit mine communities and KPK. As part of either the new KPK Mining Act or supporting regulations, some conditionality should be placed on licenses/leases that require commercial production in a certain timeframe or that KPMMDD may cancel the license.

- "Commercial Production" is typically deemed to have commenced on the date upon which Minerals mined from the mine property are first delivered to a purchaser on a commercial basis, or on the date upon which concentrates or other products derived from the minerals are first delivered to a purchaser on a commercial basis, whichever date is earlier.

d. *Predictability*. A critical next step in improving the regulatory regime in KPK is minimizing the use of discretion in all processes. The more clear and predictable the regulatory regime, the more likely to attract credible investment. Investors want to understand at the beginning of their investment what are their rights and their obligations. Examples of important regulatory guidance:

- *Obligations*. Under the current concession rules there is a mix of information concerning obligations to maintain the mineral title (process) and obligations to conduct operations (functional implementation). These obligations must be clarified [and will be in the amended Mining Concession Rules]. Any obligations with respect to environmental safeguards must be not only published, but understood by investors and should include clear monitoring and enforcement processes.

- *Fees and penalties* including surface rent, land access and other payments must be published and consistently applied.
- *Handling of social impacts* including resettlement, compensation, etc. should be known to the investor up-front and in consultation with mine communities.

e. *Cadastre system*. Investors want to know that their mineral rights are clearly recorded following a published map-based process (i.e., using cadastral blocks), and that this information is secure (cannot be changed), transparent and available for public review. KPK is in the process of installing additional GIS equipment; strengthened GIS capacity is needed.

    - *Mineral Rights' Registry*. Establishing a user-friendly "Register" that clearly records *each and every* submission for a mineral right and change to a license or lease will improve transparency and accuracy for future awards. Most countries post the registration information online.

f. *Security of Tenure*. The international trend has been to regulate "exclusivity" of mineral rights; this assurance is essential to an investor's ability to finance its operations using "third party" financing (i.e., bank loans). This also means that license/lease terms should be sufficiently long to allow investors to obtain return on their investment and that land rights and access are secure. Finally, cancellation of a license/lease should be a difficult process that follows a clearly published set of criteria and processes.

    - *Award of Mineral Rights*. There is considerable discretion in the award of mineral rights in KPK; MMDD indicates that 95% of licenses are at the review of the DG while 5% are actually evaluated by the licensing department. While the appropriate institutional arrangement is in place, the allocation of actual authority internally in the MMDD should be assessed.
    - *Information.* Geological, financial, and overall sector information may be improved for Government, investors, workers and citizens. Greater emphasis on geo-science data (i.e., by hiring more geo-scientists and relevant equipment) as well as a formalized system for information exchange will assist Government to understand critical issues and manage citizens expectations.
    - *Environment*. KPK mining includes marble, granite and precious gems that are not necessarily being produced using best methodologies. As a result, product quality is diminished and environmental degradation comes along with poor mining practices. Institutional oversight of environmental issues is required to preserve water, soil and other natural resources, optimize minerals' value, and to safeguard communities.

g. *Land Rights, Compensation*. It is important that "decentralization" of surface rights and land issues has already taken hold in KPK; what will next be of regulatory benefit is harmonizing and clarifying land rights for impacted communities (landowners and land users) and providing a formula for surface rent and compensation that is consistent throughout the province. "Standard Operating Procedures" for the district surface rights' committees that include information on community participation and information exchange may be prepared.

h. *Clear Institutional Roles*. An important part of the KPK regulatory regime is ensuring the clarity of roles for provincial, district and federal government in mining investments; <u>lessons are to be learned</u> from almost two decades of experience in

Balochistan (iron ore, copper) that differences between provincial and federal government concerning mining investments can ultimately stall and even deter investment. Investors need to clearly understand the role of the State in the mining sector and authority of national, provincial and district authorities. For KPK this specifically means:

- Will the KPK Government have an investment role in mining such as being a shareholder in a government-owned mine company? Or other company?
- What will be the issues that federal government will have a role, i.e., taxes, etc.?

i. *KPK Commitment to Transparency*. Any appearance of discretion whether by political or other players will diminish the credibility of the sector. Investors are prepared for Government requirements that include reporting, monitoring, audit and other measures to which they must comply during the life of their license/lease. As part of the "Minerals Value Chain", three critical areas are considered toward promoting sector transparency:

- **Accountability** - the extent to which citizens can hold governments, political leadership and private companies responsible for performance and conduct; *transparency* and *participation*;
- **Capability** - the *ability of governments and public organizations* to take decisions and get things done through effective policies and programs. *Mobilizing and managing* human and financial resources, deploying information and management systems; and
- **Inclusiveness** - ensuring that all stakeholders are consulted to *ensure that rules apply equally* to everyone in society and how the *use of finite revenue* from the sector is governed.

As noted, use of the Extractive Industries Transparency Initiative (EITI) has proven to be an effective start toward engaging various stakeholders for improved mineral sector transparency (See Appendix 1).

j. *Transferability*. Particularly for large-scale mining, investors expect that they are able to easily transfer their license/lease rights. This is possible in the current KPK context but may be further clarified with respect to (1) eligibility and qualification of the transferee, and; (2) tax and other implications – transferring license/lease rights can result in tax avoidance if regulations do not address the issue ("transfer tax").

k. *Standardization*. The National Minerals Policy speaks of mine contracts/mineral agreements which for KPK may be useful for large investments however on the whole use of standard terms and conditions included in the KPK Mining Act and Concession Rules ensures that Government is streamlining how it approaches mining. The risk with contracts is that absent expert preparation, terms and conditions may considerably vary contract to contract making (1) investors leery about how transparent the sector is; and (2) make it complicated for the MMDD to adequately monitor and enforce all contracts.

l. *Stability*. Investors typically seek (and Governments typically are hesitant to provide) standardized terms and conditions *by law* notably on fiscal matters such as tax percentages. As part of its 2009 tax laws, Afghanistan adopted an impressive "Qualified Extractive Industry Taxpayer" (QEIT) stability provision that is worth review. (See Appendix 3) Importantly any stability benefits for investors should require that the investors must commit to an "investment program" of a certain amount and that if they fail to meet that program, penalties shall be applied.

m. *Mining Fiscal Regime*. A closer look at regulatory strengthening to support a consistent and realistic fiscal regime for KPK minerals is needed.

"*Fiscal Discipline*" refers to the system through which the overall financial framework supporting minerals is structured and operating. CESS" and is 3-5 rupees per ton. These funds are collected by the MMDD and used for social issues such as housing, disability and other social support.

Factors to model into a Minerals Project

- Price that may be obtained per ounce/ton for the mineral
- Debt incurred to run the project
- Depreciation of project assets

- "*Fiscal Incentives*" refers to those benefits that the KPK Government is prepared to offer mineral investors to entice them to invest in KPK now and for the long-term. Under the National Minerals Policy and KPK Policy reference to incentives is given (i.e., tax) but in practice, the royalty, customs and tax rates included by law should be reviewed if to be competitive in the global mining market. This is a complicated task that requires modeling of investment projects (*See Text Box*) to understand best options for designing the fiscal incentives investment package.

- *Addressing illegal mining* through ensuring realistic regulatory provisions and public information may be achieved. An example of unrealistic regulatory guidance is found under Mining Concession Rule 173 which requires payment by any illegal mine operation of the "mine-pit value" of resources produced. KPMMDD managers agree that this penalty is so unrealistically high that it is impossible to enforce. This rule also says that any unauthorized mining or obstruction would result in 3 months to 3 years in prison ***and*** 1-10lak fine issued by the Court of competent jurisdiction; in fact, this provision is never enforced. In comparable mineral markets, gradual engagement between Government and illegal mine operators to determine mutual benefits from formalizing illegal operations through simple regulatory requirements has proven successful.

2.4.4 Strengthening Institutional Arrangements.

As KPK continues to emphasize the benefits of mineral development for the province, it is increasingly essential that broad-based government institution understanding and support of sector development takes place. KPMMDD as the lead government agency for mining must regularly convene the various government agencies that directly and indirectly impact how mineral investments will be regulated. (See Chart below)

a. *KPMMDD.*

- Modify Department Names and Functions. The names of the functions described above should be modified to reflect modern mining regulatory structures, i.e., use of the term "Cadastre" and development of modern regulatory drafting capacity.

- Introduction of Dedicated Departments. As noted above, in order to reflect the reality of the KPK mineral sector, the introduction of a dedicated artisanal, small-scale and quarries department, investment promotions, legal and finance departments are recommended. Through these departments extension services (training, support) may be specifically targeted to government officials and mine operators.

- Legal Capacity. The introduction of a strong legal department is needed to consolidate contracts, coordinate legal requirements and possibly contribute to regulatory drafting.
- Project Finance Modelling. Capacity to conduct basic mine project modelling so that KPMMDD can understand the "pros" and "cons" of how various mine investments are structured.

b. *Clear distinction of government agency roles*. Both in Peshawar and at the district level, various government agencies will interact with mining investments. Some interactions may be directly related to the mining while others may be indirectly related to support of mining activities. Either way, coordination of institutional roles and harmonization of procedures, fees and overall implementation of mining in KPK is critical for investor confidence and to mitigate opportunity for confusion – and corruption.

Illustrative Investment Issue	**Responsible Agency**	**Direct or Indirect to Mining**
Award and implementation of license/lease	• KPMMDD • Mine Operator	Direct
Environmental Protection	• KPK Environment Department • KPMMDD	Direct and Indirect
Miner Welfare	• Inspectorate (health & safety) • KPK Labor Department (salaries)	Direct
Safeguarding Community	• KPMMDD • District Government • Civil Society Organizations • Mine/Quarry Operator	Direct and Indirect
Land Access, Compensation	• KPK Agriculture and Land Department	Direct and Indirect
Electricity Infrastructure	• PESCO • District Officials • Mine Operators	Indirect
Transportation Infrastructure	• KPK Transportation Department • District Officials • Mine Operator	Indirect
Fiscal Regime	• KPMMDD • KPK Finance Department • Federal – Ministry of Finance • District Government (e.g., if revenue	Direct and Indirect

Illustrative Investment Issue	Responsible Agency	Direct or Indirect to Mining
	sharing developed)	
Export	• KPMMDD (e.g., export promotion, certification of mineral quality) • KPK Government • Federal Government	Indirect

c. *Clear distinction of government-mining company.* In today's market, if government opts to conduct any type of mining business through a government-owned company, in order to avoid any appearance of conflict of interest, that company should be a stand-alone, corporatized entity (i.e., under the Companies Ordinance, 1984) and should operate as a viable business concern, responsible for all costs, subject to independent audit and not entitled to government subsidy.

- KPK Mining Company. Some discussion has been given to the establishment of a KPK Mining Company. In most countries the establishment of a government-owned mining company has been problematic primarily because of financing. Government typically has to subsidize operations and is not able to leverage lending to run a modern mining operation.
- KPK Survey Company. Another company proposed would be specifically dedicated to field services and survey work. In this instance, countries have had some success but again, capital investment in equipment and technical capacity building is expensive. It is standard practice for government to use its geological survey function to conduct initial survey work, drilling and mapping but not to fully explore and never to exploit mineral resources.

d. *Address institutional gaps*. Comprehensively developed and administered regulations in the KPK minerals market will appeal to investors, government and citizens for consistency and predictability. In today's KPK market, KPMMDD leads virtually all aspects of sector regulation, some broadening of regulatory scope amongst additional provincial (and even federal) agencies is recommended.

Issue	Institutional Gaps	Need for Strengthening
Inspection of Mines	Investor, Government and public understanding of inspectorate may be improved	Inspectorate at MMDD, regularization of inspections, strengthened enforcement power
Land rights	Some clear policies on land use and land access for mining may be developed	Forestry, Land, and Environment Departments capacity building to better understand mining nexus
Resettlement/ compensation	Existing law and institutions may not be sufficient to address modern mining needs	Land Department to develop rules on resettlement, compensation, grievance mechanisms
Environment	Virtually not addressed; URGENT issue!	Environment Protection Dept to prepare specific regulations
Dispute/Conflict	Formal guidelines, institutions for	KPMMDD can play some role

Issue	Institutional Gaps	Need for Strengthening
Resolution	various disputes not clear	District governments and Mine communities also have a role
Foreign Investment	How federal-provincial agencies are to interact with investor	Financial and foreign investment institutions must develop clear policies and protocols
Public Information	Formal, regularized communication program not in place; media training on mining will be useful	KPMMDD can play a role but perhaps outsource this work and build on community networks
Stakeholder participation	Nascent civil society must be supported to build citizen participation	KPK government may more actively and regularly include citizens in mining issues
Worker protection	Inactive union/worker associations	KPMMDD and Labor Department can focus more attention here
Skills training, education	No structured or strategic training in place for provincial residents – institutes, schools, university curriculum needed	KPMMDD can start with regulatory drafting work and survey work
Financing sector reform	KPK “Minerals Sector Reform” initiative may be supported to bring together key stakeholders	KPMMDD can work with provincial government, donors to develop modeling skills
Downstream mining aspects	Downstream issues are not formalized or consistently addressed	KPMMDD has a role but Industry Department and private sector collaboration/capacity also needed

3. Assessment of KPK Prospecting and Inspection Functions

3.1 Current Prospecting Functions and Opportunities for Improvement

3.1.1 Definitions.

Under the current regime, “prospecting” and “exploration” are terms that are used interchangeably; more clarity on how these terms are used is recommended.

a. Prospecting is
   - the “first stage” of geological analysis of minerals territories; and also
   - the term used to describe artisanal and small-scale mineral exploration which is conducted by a license holder to find economically viable/commercial deposits.

b. Exploration is the “second stage” of geological analysis of minerals territories which is typically conducted by a license holder to find economically viable/commercial deposits.

In very open markets, “prospecting” is often an opportunity for individuals and/or companies to enter an area of land and simply seek a “mining claim” by erecting posts and filing a “claim” with the appropriate mining authority.

3.1.2 Current prospecting functions and protocols

In KPK, two aspects relevant to prospecting include how the KPMMDD conducts prospecting and the other is the private sector role in prospecting.

a. KPMMDD. The designation of mining as a provincial subject in Pakistan presents a somewhat unique regulatory aspect to prospecting in KPK. Geological survey work, typically conducted by the State’s “Geological Survey” includes “survey and prospecting” in order to identify potentially viable mineral deposits for commercial development. In Pakistan, the Geological Survey does conduct this work and is based out of Quetta, Balochistan. There are concerns that the Quetta-based Survey does not adequately share information or conduct sufficiently thorough surveys with all provinces; streamlining protocols and roles of Quetta and Peshawar survey functions for investor understanding will be useful.

b. Private Sector. The Mining Concession Rules provide for a “prospecting license”. However, stakeholders note that in today’s KPK context, there is virtually no division between prospecting and exploration and exploitation. In most instances license/lease holders delve directly into exploitation. This approach results in little analysis of geological samples, analysis of deposits or adequate mine and quarry design to optimize resources.

3.1.3 Opportunities for improving prospecting

a. *Cadastral Mapping.* KPK divides its minerals into five categories:

- Dimension Stone
- Gemstones
- Industrial Rocks (i.e., rock salt, limestone, phosphates, gypsum, soapstone)
- Fuel Minerals
- Metallic Minerals (southern province, i.e., coal, base metals, lead) and construction materials.

KPK Mineral Categories

1. Dimension Stone
2. Gemstones
3. Industrial Rocks
4. Fuel Minerals
5. Metallic Minerals

Detailed cadastral mapping of these minerals is an important aspect of KPK mining sector development. There are geological trends that will be increasingly apparent as the maps are updated first from prospecting findings, then by exploration and exploitation. The “Tethyan Belt” of copper and iron ore deposits stretching from Iran into Afghanistan into Pakistan (Balochistan) is a large-scale example of how mineral resources may be tracked. As KPK licenses and leases are issued, updating this map and conducting expert analysis of mineral discoveries is essential.

b. *Industry Structure.* The KPK Government offices supporting mining are themselves important job creators; some consideration has been given by Government to downsize Government mining operations; it is recommended that a close functional analysis be conducted and that the staffing numbers may be adequate but that staff assignments may be reoriented to cover different and additional topics.

The Geological Survey Function includes the surveying and prospecting of mineral resources in consultation and collaboration with existing mining operations, the retrieval and maintenance of geo- science data, and the maintenance of a Geo-Science Data Center. The Survey function should cooperate with exploration and mining companies, license/lease holders and provincial mining authorities.

In effect, the survey and prospecting work that is conducted by the KPK Exploration and Promotion staff may duplicate the work that the Geological Survey should be conducting. Some very clear division of the “Director of Exploration” function and the Geological Survey function is needed related to the restructuring of KPMMDD earlier recommended.

c. *Distinguishing prospecting from exploration/mining*. KPMMDD engagement in prospecting is helpful in (1) building know-how amongst KPMMDD staff; (2) identifying and mapping KPK minerals resources; (3) identifying mineral development opportunities that may be tendered for private sector operation. But, as noted elsewhere in this report, it is not recommended that KPMMDD engaged in exploration – as many mining destinations have discovered, exploration is an expensive activity and private capital is best used to leverage results rather than government funds.

d. *Regularized monitoring of and reporting on prospecting operations*. The Inspectorate is typically charged with the task of ensuring that license and lease holders do not go beyond their license/lease rights. Mine operators should be required to submit regular reports to the Cadastre on the status of their license/lease. In the case of prospecting, once an operator extends work to full-scale exploration or even exploitation, this must be marked and transfer of license/lease is required.

e. *KPMMDD equipment*. In order for KPMMDD to conduct survey and prospecting work, modern equipment, knowledge of modern prospecting methodologies and health and safety equipment is needed. KPMMDD may analyze the types of equipment needed and procure same. Either establishing testing facilities in KPK or having access to affordable testing facilities in or near Pakistan (i.e., Dubai) will enable KPMMDD to assess quality of its minerals.

It is ***NOT*** suggested that KPK set up its own Exploration Mine Company as has been the case especially in some African mining countries. In these scenarios, government is beholden to invest in expensive mining operations and/or investors must share equity with government. When these companies develop, government must face several challenges, none of which typically bode well for governments unwilling to invest significant funds:

- Government must contribute to the equity percentage it acquires over a certain number of years; this typically results in governments taking loans that must be repaid.
- Government takes on a role as investor and as regulator and as policy-maker; the lines amongst these roles is not always well drawn and results in conflicts of interest, collusive behavior and corruption.
- Government is busy; when it takes on role as mining investor it often neglect other government duties to the detriment of the community.

f. *Introduction of "Artisanal License*" will provide KPMMDD and operators the opportunity to conduct prospecting activities using private sector funds. Well-monitored artisanal operations can provide important jobs for KPK residents but also guide KPMMDD toward optimal resource development. For example, where initial private sector prospecting results in the discovery of certain precious gems, it may be that larger mineral deposits exist and KPMMDD may further survey those areas.

3.2 Current Inspectorate Functions and Possible Areas of Reform

Inspection services are addressed in detail through regulation in place in KPK and throughout Pakistan. These regulations have been periodically updated but do not sufficiently reflect modern mining practices. Further, where regulations are in place, they are not necessarily enforced or enforcement mechanisms (i.e., penalties) are insufficient to have effect on operators.

3.2.1 Current Inspectorate Function and Protocols.

KPMMDD inspectorate officers have listed the following functions as part of the Inspectorate:

- Welfare of mining community and safety of mine workers
- Enforcement of mining labor laws
- Conduct competency examinations of mine supervisors and workers
- Collection of excise duty on minerals
- Training of mine inspectors

These functions are typical and protocols in place to support them exist. It is however, important that the Inspectorate not carry the entire burden of mining community welfare. As recommended here, and in earlier deliverables, broader outreach to impacted mine communities, relevant non-government organizations and district authorities to ensure that mine community welfare aspects are more broadly addressed is also recommended.

For the Inspectorate, what is absent is significant:

i. Protocols that support modern mine methodologies, requirements;
ii. Enforcement mechanisms that are meaningful in terms of level of penalty, ability to suspend or close mine operations; and
iii. Linkage of inspection with environmental aspects including water and soil testing, worker health attributed to environmental aspects.

3.2.2 Possible Areas of Reform

a. *Clarifying the KPK Inspectorate Function*. In mining, the Inspectorate function is to develop and monitor the adequacy of mine safety and worker conditions, mine health and safety equipment, services, supplies and procedures. It is critical that this function is independent of licensing and other government mining functions so that inspectorate operations are transparent and do not promote insider deal-making or collusive behavior. Clearly stated objectives, timelines for performance and penalties for non-performance by mine operators, miners and even KPMMDD are essential. Some immediate recommendations for streamlining KPK Inspectorate priorities:

Illustrative near-term KPK Inspectorate Actions

- Ensure regularization of mining operations
- Assess, monitor, audit operations
- Inventory existing mine operations
- Prepare strategy to license all operations
- Assess technical, safety, environment and other risks
- Address non-compliance
- Provide confidential approach for miners to report violations
- Conduct audits and inspections

- The Inspectorate is charged with the regularization of exploration and mining activities
- The Inspectorate must record and assess all existing mining operations, inspect and monitor and audit these operations on a regular basis.
- The Inspectorate must compile an inventory of mines, prepare a strategy working with the Cadastre to license all operations and assist operators to become licensed.
- The Inspectorate must assess project technical, safety, environmental and other risks; check compliance and determine appropriate action, making information available for public review.

- The Inspectorate must work with other KPMMDD departments to address non-compliance that may include suspension and/or closure of mine operations with appropriate opportunity to cure and notice.
- The Inspectorate must improve its tracking of occupational health and safety accidents (incidents), operator requirement for reporting.
- The Inspectorate must provide a confidential approach for miners to report health and safety violations.
- The Inspectorate must conduct audit and inspections that include technical, economic and regulatory (including mine contract compliance), health and safety (including risk analysis), project review and evaluation, and review of mine company reports.

b. *Technical modernization.* Especially for quarry operators and the KPK province at-large, more clear requirements for technology will help to safeguard mineral resources and optimize their exploitation. The KPMMDD Inspectorate and Licensing Departments must require actual mine designs and that they include mine closing and an environmental remediation and rehabilitation program. The Inspectorate may immediately:

   - Prepare a modern explosives policy that includes rules for monitoring, enforcement measures[5] and imposition of penalties; and
   - Preparation of a list of modern technologies and costs for marble and granite.

c. Update inspection protocols.

   1. *Quarries*. In light of stakeholder concerns expressed on quarrying, it may be timely to update inspection protocols specific to quarrying. This would include allowable quarry methodologies, requirements for use of explosives (or non-use), requirements for quarry design and the development of meaningful penalties.
   2. *Reporting Accidents (Incidents*). Current procedures to report accidents, injuries and even deaths are insufficient. A systemized and well-monitored approach to tracking mine/quarry worker safety is needed. (NOTE: International standard for “death” includes death arising from mine accidents or injuries)
   3. *Review and improve enforcement mechanisms.* In addition to current penalties being insufficiently low, the overall approach to enforcing inspections will benefit from review and upgrading, i.e.,
      - Ability for inspectors to safely enter a mine/quarry premise
      - Ability for KPMMDD to suspend mine operations and even to close them must be conducted in a systemized, transparent manor that allows operators an opportunity to cure any wrong-doing.

d. *Linking inspection with environment.* One of the most common observations taken from stakeholders is the use of explosives in quarrying and mining throughout KPK and the damage that this practice does to quality of mineral

[5] Under Deliverable 5 as part of this Subcontract sample Explosives Regulatory language was provided.

products as well as to the environment. Mention of worker safety should also be given. An immediate measure that may be taken by KPMMDD is to develop and implement an explosives protocol (sample included in Appendix 4) and to carefully enforce same. KPMMDD working with the Environment Department to ensure that this and other inspection aspects are addressed will promote department collaboration and consistency in implementation.

e. *Institutional arrangements.* The Inspectorate is itself a stand-alone institution operating under its own set of legal/regulatory standards. Investors need clarity and certainty on what these arrangements are and how KPMMDD may or may not manage the inspectorate component of mining in KPK.

f. *Equipment and protective gear*. Just as miners should be required to wear protective gear when located at mine/quarry sites, so too should inspectors. And, just as miners and mine operators are or should be penalized for not appropriately wearing protective gear, so too should inspectors. For the Inspectorate, it is imperative that KPMMDD/Inspectorate provide the appropriate protective gear to the inspectors or funding for them to procure same.

g. *Inspector protocols*. Global markets have learned that the further mines are from the headquarter oversight and regulatory bodies, the less oversight they tend to have. Inspections can become quite familiar and engender corrupt practices, for example, to “look the other way” when mines are operating in violation of health and safety requirements. Some remedies that are consistently employed in these markets:

  - *Rotation of inspectors*. Inspectors are typically at the furthest locations from headquarters and working on their own. It has proven useful that inspectors are rotated so that “friendly relationships” with mine operators do not emerge and supersede inspection protocols.
  - *Two or more inspectors*. It is useful to have two or more inspectors per site.
  - *Training opportunity as part of each inspection*. It is also useful to have a senior inspector with a junior inspector for training purposes.
  - *Technically qualified and well-paid inspectors*. International experience has demonstrated that inspectors must be as qualified or better qualified than mine/quarry operators and that part of their job is to offer advice, recommendations to operators toward improved operations. Inspectors must be well-paid to ensure expertise and to alleviate possibility for corrupt practices.

4. Key Regulatory Constraints to KPK Mining and Quarrying

4.1 Differences between Mine vs. Quarry

The difference between a "mine" and a "quarry" may generally be described as follows.

- A ***mine*** is a location that may be (1) on the surface – "open pit" or "surface" or "underground"; and (2) under the surface or "deep" where the extraction of *valuable* minerals or other geological materials is conducted.
- A ***quarry*** is the same thing as an "open-pit" or "surface" mine; the difference is that typically the materials extracted from a quarry are construction/building materials and dimension stone.

For purposes of KPK, quarrying typically includes granite, marble and construction materials. These may both be used within the province and especially granite and marble, for export. In the current context, most minerals will capture optimum value when exported outside of KPK.

4.2 Regulatory Constraints to KPK Mining and Quarrying

Regulatory Constraints

- Political economy influences
- Standard mine regulatory terminology and standards
- Antiquated enforcement
- Unclear role of State
- Uncoordinated institutional inputs and regulation
- Discretion and transparency
- Comprehensive "value chain" regulation needed
- Incomplete Mining Fiscal Regime

Perhaps the fundamental regulatory constraint in KPK mining is the absence of modern mining regulatory guidance. The absence or regulatory gaps results in an uncertain investment environment in which rules may be unevenly applied to different investors.

Regulatory constraints that have been identified by KPK sector players have included political-economy issues such as discretion and politicking surrounding mining in KPK. In the competitive global minerals market, as KPMMDD seeks to attract large-scale investments, regulatory constraints must be identified and addressed.

4.2.1 Political economy influences.

Gaps in current regulation result in creating opportunity for discretion and political economy impacts. A primary area for improvement will be in reducing the discretion, included in the Mining Concession Rules, of the "Licensing Authority". Clear regulatory guidance that is publicly available may be achieved through rigorous drafting of time-bound regulatory requirements, practical penalty amounts and enforcement mechanisms. ***Note:*** It has earlier been recommended that in place of the term "Licensing Authority", use of "Cadastre" be inserted based on standard terminology in the industry.

4.2.2 Investor eligibility requirements.

It is essential that appropriately rigid regulatory criteria for investors and good due diligence on these investors as well as KPK/Pakistan investors is in place so that Government will not have an influx of bankrupted or historically fraudulent investors working in its sector. Clear and enforceable eligibility requirements should further contribute to reduced political and other influences. Whether investors have prior quarry or mine expertise, their financial status, and technical qualifications of their mine staff are essential factors in determining whether they should be eligible for a license or lease.

Example of Investor Eligibility

- ✓ any natural person who has attained the age of eighteen (18) years and is a citizen of Pakistan;
- ✓ any foreign natural person who has attained the age of eighteen (18) years;
- ✓ any legal person established under Pakistan law and in good standing;
- ✓ any foreign legal person organized or cooperating under foreign law, that is legally entitled to reside, invest, or do business in Pakistan and is in good standing;
- ✓ only natural persons and who are citizens of Pakistan are eligible to hold an Artisanal Mining License; and
- ✓ Natural persons may not apply for a Reconnaissance License, an Exploration License, or a Mining Lease.

4.2.3 Requirement to Mine.

A common regulatory constraint for government in KPK and other mining markets occurs when the mine operator delays commercial production. This delay results in delayed revenue generation and job creation that will benefit mine communities and KPK. As part of either the new KPK Mining Act or supporting regulations, some conditionality should be placed on licenses/leases that require commercial production in a certain timeframe or that KPMMDD may cancel the license.

- "*Commercial Production*" is typically deemed to have commenced on the date upon which minerals mined from the mine property are first delivered to a purchaser on a commercial basis, or on the date upon which concentrates or other products derived from the minerals are first delivered to a purchaser on a commercial basis, whichever date is earlier.

4.2.4 Cadastral mapping.

Quarry operators indicated that insufficient information is available or up to date with respect to quarrying operations in KPK. In some mining destinations, in order to immediately streamline information about quarry and small-scale mining, a "paper cadastre" process is used to expedite information submission and cadastral mapping. Regulatory details and guidance on cadastral reporting, mapping and information sharing will improve the current information gap.

4.2.5 Public information and awareness.

There is not sufficient regulatory requirement for public information or public access to information relevant to KPK mining. The more stakeholder participation and awareness, the less opportunity for collusive behaviour. KPMMDD may prepare time-based regulatory requirements for mine operators as well as KPMMDD and affected mine communities that will require and ensure public forums, community hearings, publication of contracts and other awareness building measures will contribute to improved transparency and reduced political economy impacts.

4.2.6 Preparation of (predictable) regulatory guidance.

Investors want to understand at the beginning of their investment what are their rights and their obligations. A critical regulatory constraint for KPK investors is, plainly, the lack of regulatory predictability. This extends to fees and payments required beyond KPMMDD such as the Forestry Department and local landowners (discussed below). It includes issues of transport and storage. With the adoption of the KPK Minerals Policy, the time is right to prepare a more clear and predictable the regulatory regime. Examples of important regulatory guidance:

a. *Award of Mineral Rights*. There is considerable discretion in the award of mineral rights in KPK; KPMMDD indicates that 95% of licenses are at the review of the DG while 5% are actually evaluated by the licensing department. While the appropriate institutional arrangement is in place, the allocation of actual authority internally in the KPMMDD may be more clearly detailed in regulations.

b. *Investor obligations*. Under the current concession rules there is a mix of information concerning obligations to maintain the mineral title (process) and obligations to conduct operations (functional implementation). These obligations must be clarified. Any obligations must be not only published, but understood by investors and should include clear monitoring and enforcement processes.

c. *Fees and penalties* including surface rent, land access and other payments must be published and consistently applied.

d. *Handling of social impacts* including resettlement, compensation, etc. should be known to the investor up-front to avoid “deal making” and made in consultation with mine communities.

4.2.7 Maintaining clear license records

Investors want to know that their mineral rights are clearly recorded following a published map-based process (i.e., using cadastral blocks), and that this information is secure (cannot be changed), transparent and available for public review. Recording and reporting regulations may be strengthened to ensure this level of record-keeping.

a. *Cadastre.* Consideration of a “Flexi-Cadastre” and other GIS equipment as well as strengthened GIS capacity at KPMMDD may be supported to remove potential conflicts due to lack of regulatory guidance.

b. *Mineral Rights’ Registry*. Establishing a set of user-friendly “Registers” that clearly record *each and every* submission for a mineral right and change to a license or lease will improve transparency and accuracy for future awards. Most countries post the registration information online.

c. *Information.* Geological, financial, and overall sector information may be improved for Government, investors, workers and citizens. Lack of accurate maps is a regulatory constraint for investors – they will not be able to gauge the actual boundaries of their license area. “Layered” mapping that not only includes mine boundaries, but locations of infrastructure, villages, forests, etc. removes any uncertainty about mine sites.

4.2.8 Standard mine regulatory terminology and standards.

Current regulatory terminology somewhat constrains understanding and intent of KPK sector operations – at a minimum in its perception. If to become a competitive investment site for international funds, regulatory terminology may be modified to reflect modern mining markets. This topic has been addressed in earlier analysis and is worth repeating. Some examples:

a. *Exploration Promotion* – in a mineral market economy, investors expect that they will conduct exploration, not government. Government actors are typically expected to conduct basic "survey" work and "investment promotion".

b. *License and lease types* – notably modifying the definition of "large-scale" mining (now described as $3million+ investment which is comparatively low) as well as the introduction of "artisanal license" would place the KPK regulatory regime along the same course as similar mining markets.

c. *Discontinue use of "minor" and "major" minerals* – use of modern terminology includes "construction materials" in place of "minor minerals" and "minerals" in place of "major minerals".

4.2.9 "Out of date" enforcement.

KPMMDD and other government agencies are constrained by current regulatory guidance that only supports minimal penalties and fees based on regulations developed decades ago; they have insufficient meaning for operators. Close and updated review of enforcement mechanisms and antiquated penalties to be brought current will provide predictability and meaningful enforcement to the sector.

(1) *Penalties.* Penalties currently rely on the 1923 Mining Act, its various amendments and the Mining Concession Rules that are financially very weak. These need to be made current to empower KPMMDD as well as to better guide investor actions – their behaviors should be modified knowing that meaningful penalties may be imposed.

(2) *Dispute resolution.* A regulatory constraint is the absence of modern mechanisms to address mineral-related conflicts. In KPK there is significant reliance on use of the provincial court system to resolve the most minimal of cases; this results in project delays and negative perception of mining in the province. Some opportunities to establish alternative dispute resolution approaches:

- *Minerals Dispute Resolution Panel.* Establishment of an independent expert panel consisting of an odd-number of members that may come from academia, private sector , and government to provide a first point of dispute resolution. Typically the members on this panel will not be permanent but will rotate for each dispute to reduce possibility of deal-making and insider-benefits.
- *Community Dispute Resolution Panel.* Especially relevant where large-scale mining is taking place, but other mining as well, a panel consisting of community members, government, private sector that will hear disputes particular to community, land and social aspects.
- *Establish a formal mine worker grievance system*. KPK mine workers do not have adequate information to protect themselves; the trade union structure is very weak. As a result, mine workers are paid a minimum of 7500rs/month as

is required under the labor law with no consideration of the dangerous aspects or limited timeline for mine work. There is a “produce or perish” approach to pay and workers are not contractual which means they do not have benefits attached to their jobs. Mine workers are not always “registered workers” under the law; KPMMDD may work with the KPK Labor Department to address this issue. Improved rights for mine workers including health and safety equipment and protective gear are needed as well as a system of redressal (grievance) for workers. Penalties that may be levied on mine operators rely on 1923 and 1948 legal acts and are far too low (i.e., 10-25 rs per violation) to have impact.

4.2.10 Unclear role of State.

Investors need to clearly understand the role of the State in the mining sector and authority of national, provincial and district authorities. The KPK Minerals Policy introduces institutional responsibility and regulatory guidance specific to each institutions procedures, obligations, time-based activities may follow.

(1) *Multiple roles of State*. The State as regulator, investor and even as a mine operator creates room for conflict of interest. The current regulatory and institutional framework allows the State to hold mineral rights which is KPK; closer review of whether this type of investment will be supported and how is needed.

(2) *Clear federal and provincial institutional roles.* By Constitution, mining in Pakistan is a “provincial subject”; however, for international investors, there will be considerable national interaction. Clarification and delineation of roles of national, provincial and district institutions is required. Any foreign investment will require a combination of national, provincial and district institutional participation that for an outsider is not yet sufficiently clear. Especially relevant for large-scale mining – some federal institutional functions will emerge, i.e.:

- Ministry of Petroleum and Natural Resources– oil and natural gas
- Board of Investment (BOI) – notably relevant with large and foreign investments
- Ministry of Finance (Federal Board of Revenue, Tax and Custom Authorities)
- Planning Commission of Pakistan – especially when integration of infrastructure, water and mining results
- Ministry of Labor and Manpower
- Ministry of Law
- Water and Power Development Authority (WAPDA)

Note: An issue of Article 173.3 of the Constitution in light of the 18th Amendment says that oil and natural gas is a concurrent item – to be jointly managed by federal and provincial government –investors will similarly need to understand this relationship.

4.2.11 Uncoordinated regulation

KPK mine and quarry investors complain that different provincial and district departments and authorities impose different requirements and penalties and fees relevant to mine and quarry operations. They also note that private actors such as land holders and others often require payments for access and transport rights. The absence of clearly, consistently enforced and close monitoring of these aspects is a regulatory constraint for operators.

- An example of conflicting directions or various fees being levied for quarries and small operators was reported for forestry, environment and land access issues. In some emerging markets, quarry and small operators are regulated using simple forms rather than complicated and extensive environmental reports. These abbreviated submissions are often referred to as “screening reports”; KPMMDD may review these and determine the additional level of information that is needed for smaller operators to proceed. Forestry, Environment and other relevant departments should received the same information and convene alongside KPMMDD for a streamlined approach to the operators. .

4.2.12 Incomplete Mining Fiscal Regime

A closer look at regulatory constraints to support a consistent and realistic fiscal regime for KPK minerals is needed.

a. Royalties are generally applied; more testing of KPK minerals to better distinguish the types of royalties to be applied and value of minerals is recommended.

b. In KPK, the use of a “CESS” is 3-5 rupees per ton. These funds are collected by the KPMMDD and used for social issues such as housing, disability and other social support. This is not necessarily an international norm; some review of how the CESS funds are calculated and collected and used may be designed.

c. The Forest Department levies its own fees; these must be predictable and consistently applied. There are reports given that local landowners also charge fees to mining/quarry operations that are “under the table” – improved understanding and transparency of these fees will reduce perceptions of discretion and deal-making.

d. Reconciliation of federal and provincial fiscal policies is needed including more developed regulation on royalties and other fiscal benefits of mining. Investors (notably foreign investors) will be reluctant to enter over-taxed markets. For example, there are 6 cement plants in KPK that pay 30rs per ton to the KPMMDD but the federal government obtains close to 100 rs per bag in taxes. KPMMDD would like to explore approaches to improved regulation of revenue generation.

e. Fiscal reporting is minimal; especially as large-scale investments increase, KPMMDD requirements for financial reports must be more detailed and regularized. Earlier discussion has been given to KPK following the Extractive Industries Transparency Initiative (EITI) (Appendix 1) which would provide an initial baseline for what financial information should be collected and publicized for stakeholder review.

4.3 Recommendations for Improved Regulation of KPK Mining and Quarrying

Regulatory regimes supporting Minerals Sectors are typically complex – this does not mean that complex regimes are essential. Tracking regulatory improvements against the Minerals Value Chain may help to immediately identify critical gaps to be addressed.

4.3.1 Continued legal and regulatory reform

KPK has commenced a pro-active review of the overall *legal and regulatory context* in which mining is being conducted in KPK including adoption of a new KPK Minerals Policy, drafting a KPK Mineral Act and amending the NWFP Mining Concession Rules.

a. Modern legal and regulatory guidance should be supported with continued re-drafting and new drafting of relevant rules and regulations to ensure modern legal guidance. Time-based requirements for project performance and reporting requirements (i.e., monthly, quarterly, annual) may be detailed as part of the regulatory reform process.

b. The manner in which the continued development of the legal and regulatory framework occurs should not be limited to Government participation but should also include investors, civil society. The establishment of the Minerals Working Group on the federal level may be established at the KPK level to bring together key provincial government agencies, private sector and stakeholders.

4.3.2 Support of technical modernization activities

a. *Geo-data and mapping enhancements.* Introduction of a modern cadastre system (i.e., using cadastral blocks) and requirement of geology-based mine design (‘control mapping”). KPK conducts prospecting and even exploration activities but more work to collect geo-data and to systematically provide support services to mine operators will be useful.

b. *Strengthened Mine Inspectorate.* KPK maintains Inspectorate offices as part of the MMDD. It relies on the 1923 Mines Act and inspection regulations; attention to certification and preparation of inspectorate capacity for all types of mining and quarrying is needed. A dedicated training program for mine inspectors should be institutionalized; this is a critical aspect of mine operations. In addition, enhanced familiarity with modern mining techniques, geological preservation (i.e., use of explosives) and health and safety practices will be useful.

4.3.3 Establishment of a clear and modern Mining Fiscal Regime

a. *Collection and management of mining revenues may be improved*. A combination of complex fiscal arrangements blurs the actual reality of payments being made related to mining activities. “Royalty” is a term used to describe every type of payment from a traditional royalty (tax on minerals) to bribes and other local payments that are so entrenched, they have become institutionalized practices. Aside from how revenues are generated and paid, the manner in which they are collected and utilized must also be reviewed; there is no formalized program for management of revenues generated from mining in either province. The provincial mines departments rely on pre-calculated mine royalty receipts and government budget funding that result in cross-subsidization of mineral sector operations not always to the benefit of the local population.

b. *Current mine investments may be reviewed*. Some deeper review would be useful to assess existing investments in the minerals sector and whether these types of investments – and investors – are the types that will help the province further develop the sector. IT IS NOT RECOMMENDED THAT EXISTING LICENSES/LEASES BE RENEGOTIATED.

- Renegotiating of existing licenses/leases sends a message to investors (in Pakistan and outside of Pakistan) that the regulatory environment is very unpredictable and investments are not secure.
- Instead, Government should be assess not only the immediate financial benefits of the investments, but whether the investor is bringing shared values of community development, citizen consultation, environmental protection and other aspects to the province. Government consultation with local non-government and citizen groups will also be useful to gauge the sentiment of community members toward mineral investments. In some districts, citizen sentiment was expressed as “100% against mining”. This and other citizen perspectives must be understood and addressed if a sustainable minerals sector is to develop.
- Once Government has an understanding of current mineral investments, through KPMMDD, it may work with mine operators toward building these investments to better interact with KPK development goals such as more job creation, local skills development and training and infrastructure development.

4.3.4 Design and implementation of a Minerals Revenue Management Program

Minerals Revenue Management Plan

- Definition of “Minerals Revenue” (i.e., royalties, community funds, taxes)
- How these revenues will be collected and banked by Government.
- How will revenues be monitored and allocated by Government.

There is presently no formalized program for the management of revenues generated from mining in KPK; it does not appear that current mining investments in either province are optimal. More attention is needed in costing out the mining investments -market-based analysis and mine cost assessments are essential at every stage of a mine development – <u>the investors will be assessing costs and so should Government</u>. Government may also more closely review the “fiscal incentives” and “benefits” of mining investments to ensure that mining companies want to invest but also that they will responsibly invest for the long-term benefit of the provinces. Some immediate actions may include:

a. *Development of a provincial “Minerals Revenue Management Plan*” that will address:

   i. Definition of “Minerals Revenue” (i.e., royalties, community funds, taxes)

   ii. How these revenues will be collected and banked.

   iii. How these revenues will be monitored and allocated.

b. *Assessment of “mine investment lessons learned*” from other mining markets in the world.

4.3.5 Improved transparency.

KPMMDD can take immediate steps to improve transparency of operations, examples below.

a. *Establishment of clear rules for licensing/leasing and use of license/lease registries including public access* as well as publication of key contract/lease terms is useful. Related to the lack of timely and accurate information is the level of transparency at which mineral rights are auctioned, awarded, implemented and monitored. Award of licenses/leases, i.e., that mining under licenses/leases must commence within a certain time from award so investors cannot “buy licenses and hold on to them.” Defined royalty system, ideally published as part of law or rules.

b. *Publication of license and investment information*. Standard mine contract and publication of terms in provincial gazette. Formalized procedures for public access to cadastre and mine contract information

c. *Reduced discretion and conflict of interest.*

- Participation of community elders in sector decision making may continue but this role should be clearly defined for all to understand.
- Government officials may not hold licenses or invest in mining until at least one year after leaving office
- Reduced discretion of licensing authority through more defined rules on award, suspension, cancellation of mineral rights.

4.3.6 Public information campaign on mining

Whether geo-science, investment-related or policy development, timely and accurate information exchange is not presently an inherent part of KPK mineral sector operations. There is an extreme lack of public awareness on mining and general lack of understanding of the risks and benefits of mining. Additional measures to improve information exchange and transparency of sector operations may be made, i.e.

- Preparation of basic “what is mining” information including provincial mineral information, why mining is good for the province, etc.
- Use of existing district and village forums to disseminate information ***and*** collect feedback from affected communities.
- Training and engagement of local media as a regular part of sector developments to accurately tell the story of mining.

4.3.7 Capacity building

The array of business processes required to successfully effect a viable minerals sector requires a similar array of capacity building. Beyond directly engaged mining actors, the Pakistan banking sector, environmental authorities, land and social protection agencies are not yet equipped to address the range of issues that stem from mining activities. The KPMMDD may “champion” a “Minerals Capacity Building” program that will include key topic areas described in earlier submitted consultant documents:

- *KPMMDD managers and staff*
- *Modern mining methodologies*
- *Mining fiscal regime*
- *Social and environmental protection*
- *Mine workers*

- *Curriculum development* that may be shared amongst all levels of the education and vocational sector
- *Inter-provincial relations and information sharing*
- *Private sector*

5. Mine Environment and Safety Regime

5.1 International Environmental Best Practice in Minerals Development

In order to address gaps in current environmental aspects in KPK, some general steps may be taken in addition to specific ones.

a. *Strengthened KPMMDD.* The focus on the KPMMDD and its departments should be rudimentary on license procedures and regulatory oversight and all KPMMDD staff should be versed in environmental aspects. General training and understanding amongst KPMMDD staff on these important topics will have a “trickle down” effect on operators, other stakeholders.

b. *Introduction of Mining Environment tools to all mineral investments in KPK.* Even for quarries, gemstone/artisanal mining, some level of environmental management must be introduced. This may include simpler environmental screening assessments as opposed to larger scoping studies and monitoring essential for larger scale mining (as described below) – this level of monitoring should immediately be commenced.

c. *Immediate quarry assessment.* It is no secret that quarrying operations in KPK and throughout Pakistan are not adequately technically regulated. Quarrying techniques are proving to not only damage the geological quality through use of dynamite and other explosives, they are not being conducted in a technical way to optimize valuable, non-renewable resources and are dangerous to miners. KPMMDD can immediate inventory, map and analyze these investments toward preparing recommendations for improved operations, issuing penalties and gaining insight on how best to monitor new quarry investments.

d. *Introduction of mining and environment aspects to the KPK Environment Department and federally, Ministry of Environment.* Considerable strides and awareness in environmental monitoring have taken hold in Pakistan in recent years. KPMMDD may work closely with the KPK Environment Department and ultimately the Ministry of Environment to promote environmental awareness, develop practical monitoring and enforcement mechanisms and ensure legal ability to suspend and even close operations in violation of environmental requirements.

5.1.1 Key environmental and social tools

Throughout global minerals markets, core environmental tools are being used to manage and track environmental and related social impacts of mining activities. These documents are useful toward identifying possible damage that will be caused by mining activities, mitigation measures to reduce impacts and notably, financial and technical support throughout the license/lease term including closure and post-closure of the mine.

Key Environmental/Social Requirements
• Environmental and Social Impact Assessment (ESIA) • Environmental and Social Management Plan (ESMP)

a. <u>Environmental and Social Impact Assessment (ESIA)</u>

identifies relevant impacts, risks and benefits and, in an integrated manner, assesses their potential nature and scale. The level of detail of the ESIA is determined by the potential nature and scale of the impacts, risks and benefits of a proposed mining activity. An ESIA should be conducted in accordance with good international practice the process of identifying and evaluating potential environmental and social impacts, risks and benefits (particularly local community development) of a proposed mining or related activity; the process may range between a comprehensive assessment where impacts, risks and benefits are numerous, diverse, and complex to a limited and focused assessment where impacts, risks and benefits are straight forward. Timelines for performance of actions as well as financial sureties to ensure that environmental and social mitigation aspects are sufficiently funded should be included.

b. Environmental and Social Management Plan (or Program) (ESMP): An environmental and social management plan (ESMP) (i) identifies specific actions necessary for a project to manage identified impacts and risks and (ii) specifies measures enabling project benefits to be maximized for environmental and social receptors. The ESMP should be conducted in accordance with good international practice a set of actions (including responsibility and budget) to address impacts, risks and benefits identified and evaluated in the ESIA together with defined outcomes; the program may range from a comprehensive set of action plans (including but not limited to a Resettlement Action Plan, Biodiversity Action Plan, Water Management Plan, Pollution Control Plan, Community Health, Safety and Security Plan, Community Development Plan) to the straight forward application of siting, design or mitigation/compensation measures routinely used in the sector. The ESMP should also address mine closure aspects.

c. Resettlement Action Plan (RAP). For the purpose of resettlement and compensation to the displaced populations, the mining companies must resort to resettlement if it is absolutely necessary, carry out a detailed social impact assessment that assesses prior living conditions of the project affected persons, their income levels and likely impacts of the project on the communities, compensation and mitigation strategies. Resettlement Action Plans (RAP) should be developed in consultation with the communities and that should include community development programs. They must consider land management laws and ensure the protection of cultural and historically important heritage sites. The RAP should provide for adequate financing to cover all costs of resettlement, and compensation for resettled individuals. It should also provide information on capacity-building and job training programs for project affected persons. The companies also should ensure engagement with women and marginalized sections within the communities.

5.2 Review of Mine Environmental Regime and Recommendations for Improvement

5.2.1 Streamlining monitoring and oversight.

Institutional oversight of environmental issues related to mining is required to preserve water, soil and other natural resources, optimize minerals' value, and to safeguard communities. The cross-cutting nature of environmental protection efforts is of course well-known, and the institutions challenged to implement are often weak or not capable. Because the issues to be addressed extend beyond mining, it is important that the roles of and types of documents required by KPMMDD, the KPK Environment and Forestry Departments and other relevant agencies are made clear, for example:

1. *KPMMDD* will be the government agency responsible to assess pre-feasibility and feasibility studies on mining issues.
2. *Environment Department* will be the government agency responsible to assess water use, land use and other environmental quality aspects.
3. *Forestry Department* will be the government agency responsible for land management, flora and fauna issues.

5.2.2 Legitimizing.

Environmental permitting must become an inherent part of sector operations – it should not be a simple “pass through” as part of a license or lease. Monitoring not only of investments but social impacts of these investments is the only way to ensure long-term benefits from non-renewable mining resources. While mining remains a provincial topic, federal authority over environment and foreign investment issues must be reconciled with KPMMDD as the primary institutional intermediary. More clarity on how local families/tribes will interface with investment will also be useful.

5.2.3 Include Socio-economic issues as part of Environmental issues.

Over the past decade, it has become common international practice to include social-economic aspects of mine development as integral to environmental assessments. This approach is comprehensive and allows for a more complete approach to assessing what impacts of mine and related developments may be and how best to mitigate and remediate them.

Some key socio-economic issues in mining include the availability of fresh water, impact on poverty, ensuring health care is available, levels of education to participate in mine development activities, life expectancy as a result of mine activities and the development of infrastructure to support not only mine development but mine communities. As noted in earlier deliverables under this consultancy, use of “Community Development Agreements” (CDAs) primarily with medium and large-scale mining allows mine operators and communities to identify critical social, economic and other issues and to design approaches to ensuring benefits for all stakeholders over the course of the license/lease.

Key Socio-Economic Issues and Mining

- Availability of Fresh Water
- Poverty
- Health Care
- Education
- Life Expectancy
- Relevant infrastructure

Importantly, social impacts of mining and related activities can be either harmful or beneficial. Employment and educational opportunities must be balanced against noise pollution, increased dust and changed population (new market entrants will mean foreign influences). There is a definite possibility of displacing KPK citizens if large scale mining operations are implemented which can generate social unrest. But, the affected community may also gain access to basic services such as electricity, sanitation, and water as a result of large-scale mining operations. The KPMMDD and KPK Government must continuously monitor the approach it supports to developing KPK minerals and the social impacts that will emerge from this development.

At a minimum, the mining companies working in KPK should be required to adopt following socially responsible mining practices:

- Enhance social and economic development in mine sites after engaging in community consultation;
- Contribute to mitigate negative social impacts of the project on local communities;
- Prevent or compensate any loss of assets and livelihood;
- Protect human health and rights of mine workers and provide social protection; and
- Contribute in community development by providing direct employment, creating business opportunities

Minimum Social Requirements of Mine Operators

- Enhance social and economic development in mine sites after engaging in community consultation;
- Contribute to mitigate negative social impacts on local communities;
- Prevent or compensate any loss of assets and livelihood;
- Protect human health and rights of mine workers and provide social protection;
- Contribute in community development by providing direct employment, creating business opportunities.

In addition to including social-economic issues in ESIAs, KPK may include social requirements in relevant natural-resource legislation such as legislation that addresses water, land management, labor and community entitlements.

5.2.4 Environmental and Social Impact Assessment Regulations

While it is possible that environmental and social requirements may be specified in a mine contract, it is preferable that a clear set of standards be in place to guide investors, government and citizens. Preparation of specific ESIA regulations will aid investors by providing clear timelines for performance, consistent use of terminology (ideally in line with international standards), and provide meaningful enforcement approaches and penalties.

NOTE

Artisanal and Small-Scale mining activities must be regulated with some attention that differs from large-scale mining. Even these smaller operations have the potential to negatively impact workers, their families and communities. In many cases, these operations are informal, not presently regulated. Issues that may immediately be addressed to this class of mining include:

- poor mining extraction methods
- use of explosives
- types of equipment used
- use of child labor
- financial reporting

It can be hoped that were predictable and publicly understood regulations in place, criminal and other affiliations that tend to infiltrate small mining operations will gradually be deterred.

5.2.5 Environmental and Social Impact Assessment (ESIA)

Environmental Audits have been used in various countries to monitor and regulate mining impacts. More formal and strategic tools such as Environmental and Social Impact Assessments (ESIAs) are now the primary tool used in the current attempts to control environmental impacts that may be associated with extractive industry operations. For KPK use of the ESIA should be reviewed and designed to be of practical use and enforceable. This may, in the short term mean:

a. Different levels of ESIA for different stages of projects (prospecting, exploration, mining)

b. Lesser requirements for artisanal and quarry and small-scale mines than large-scale mines.

c. Specific emphasis on certain aspects such as clean water, soil pollution, air pollution.

In implementing ESIAs, it is important that,

- mine feasibility studies include environmental and social impact assessment findings;
- ESIA's must be officially approved before any mining may commence;
- benchmark actions and timelines for mitigation actions are clear,
- institutional review and other roles of KPMMDD, the Environment Department and District Government, etc. are clear;
- enforcement provisions are available;
- assessments are available for public review and consultation.

ESIAs <u>must,</u>

1. be included in mine feasibility studies;
2. be officially approved before any mining may commence;
3. include benchmark actions and timelines for clear mitigation actions;
4. have clear institutional review and approval processes;
5. include penalty and enforcement provisions; and
6. be available for public review and consultation.

5.2.6 Environmental and Social Management Plans.

Environmental and Social Management Plans (ESMPs) arise from the ESIAs and provide a strategy to mitigate adverse impacts of mine developments. Risks and benefits should be included and require (i) identification, (ii) assessment and (iii) management. The identification, assessment and management process (i) informs project design, implementation and closure and (ii) recommends measures to address the potential impacts, risks and benefits to environmental and social receptors.

ESMPs are important for the life of the license/lease and require continued monitoring and evaluation by KPMMDD, the Environment and Forestry Departments and any other relevant governmental agencies. ESMPs will include post-development and closing aspects as well. Environmental standards to be developed by KPK may be commenced through the formation of an inter-departmental working group that as a first step may review fundamental environmental guidelines for extractive industries available in the public realm, these include:

- Operational Procedures of the World Bank, in relation to various aspects of the extractives industry procedures;
- World Bank/IFC Environmental, Health and Safety (EHS) Guidelines (General and Mining Sector Guidelines);
- ISO 14000 series on Environmental Management;
- International Finance Corporation (IFC) Performance Guidelines; and
- European Union “Best Available Technique Reference” documents of the Integrated Pollution Protection and Control Bureau.

A fundamental requirement of the EMP is the definition of the environmental management objectives to be realized during the life of a project (i.e. pre-construction, construction, operation and/or decommissioning phases) in order to enhance benefits and minimize adverse environmental impacts. The mine operator and KPMMDD shall review and include:

- Description of the detailed actions needed to achieve these objectives, including how they will be achieved, by whom, by when, with what resources, with what monitoring/verification, and to what target or performance level.
- Mechanisms to address changes in the project implementation, emergencies or unexpected events, and the associated approval processes.
- Clarification of institutional structures, roles, communication and reporting processes required as part of the implementation of the EMP.
- Description of the link between the EMP and associated legislated requirements.
- Description of requirements for record keeping, reporting, review, auditing and updating of the EMP.

5.2.7 Rehabilitation, Remediation, Abandonment

International experiences are large reflecting the devastation of mines that have been improperly remediated or abandoned. Governments have learned that addressing these issues as early as is possible in the mine development phases is essential – even upon award of license/lease – how will this investor address these issues?

NOTE: *When these issues are not addressed, the State inherits tremendous liabilities to clean up mine sites.*

The ESMPs should be as comprehensive as possible; review by the Inspectorate, Environmental and Social monitors and KPMMDD offices must be included as part of the process. It is important that either the law or the regulations are very clear about the extent of liabilities for mine operators. KPMMDD and the Environment Department may develop approaches to identify liabilities so that all stakeholders have clarity on roles and responsibilities for environmental or social degradation.

Financial Guarantees. The uncertainties surrounding the solvency of mine companies makes it all the more important that KPK instill financial guarantees from the onset of license/lease aware to ensure that environmental or social issues will be addressed. ESMPs arising from the ESIA process should include information on the guarantees and an escrow fund may be required of license/lease holders as surety for performance.

Illustrative ESIA Issues

- Labor and working conditions
- Resource efficiency and pollution prevention
- Community health, safety and security
- Land acquisition and involuntary resettlement
- Biodiversity conservation and sustainable management of living natural resources

5.3 Review of KPK Mine Safety Regime and Possible Areas of Reform

5.3.1 KPK Mine Safety Regime

Mining safety in KPK is guided by the Inspectorate. Protocols are in place but may be modified to reflect a more rigorous, modern mining market. Utmost will be the updating of enforcement mechanisms to ensure compliance. As earlier noted, penalties are financially low and incentives for operators to improve operations are minimal.

5.3.2 Possible Areas of Reform.

a. *Establish a formal mine worker relations system*. Mine workers do not have adequate information to protect themselves; the trade union structure is very weak. Aside from low pay, neither operator nor worker gives sufficient consideration to the dangerous aspects or limited timeline for mine work. The “produce or perish” approach to pay and workers are not contractual which means they do not have benefits attached to their jobs.

   - Introduction of “Mine Workers Contract” that goes beyond the labor law requirements to adequately reflect the danger and health issues of mining. This type of contract typically lasts 1-2 years at which time negotiations with management and the workers union, called “collective bargaining” allows for streamlined negotiations and solid contract terms not subject to change during their effective dates.

   Improved rights for mine workers including health and safety equipment and protective gear is needed as well as a system of redressal (grievance) for workers. Penalties that may be levied on mine operators rely on 1923 and 1948 legal acts and are far too low (i.e., 10-25 rs per violation) to have impact.

b. *Introduction of safety responsibilities and penalties.* In today’s KPK mining market, safety requirements are lightly observed and enforcement appears to be more discretionary than regulatory. The introduction of clear stakeholder responsibilities and penalties is recommended, examples:

Illustrative Stakeholder	**Illustrative Violation**	**Illustrative Penalty**
Mine Owner	*Continued operation of unsafe mining*	○ *Financial penalty per day until cure unsafe practice* ○ *Suspended license/lease* ○ *Close down mine* ○ *Criminal suit under law*
Mine Operator/Managers	*Failure to correctly report accidents*	○ *Financial penalty- i.e., per day until cure*
Mine Workers	*Failure after 2 warnings to wear protective gear*	○ *Financial penalty* ○ *Suspension from work*
KPMMDD/ Government agency	*Failure to act under the Rules*	○ *Civilly or criminally liable*
Mine Community	*Intentional inhibiting legal mining*	○ *Criminally liable*

c. *Fortify the social and environmental framework for mining*. Insufficient attention is given to the social and environmental impacts of mineral development in KPK. Dramatically more attention and formalization of how Government will address these issues, expectation of mine operators, and how social and environmental impacts of mining will be monitored is *urgently* needed.

d. *Facilitate stakeholder consultation*. As mining increasingly becomes part of the provincial economy, Government, investors and civil society dialogue must be structured to ensure that developments are sustainable and of equitable benefit to all citizens. Civil society organizations, non-government organizations, district and village councils and other structures are already in place through which consultations may be conducted. A first use of consultation may be in disseminating Government's Minerals Policy for discussion with all stakeholders.

e. *Strengthened Inspectorate.* As noted above, the role of inspectors in KPK mining is critical and impacts the technical, safety, social and economic well-being of how the sector is developed. As modern mining techniques develop, inspectors must be aware of protocols, best practices and methodologies and what technologies are most appropriate for which types of mining. Training may be conducted at international venues but there is also a trend in Pakistan throughout various provinces to enhance inspectorate functions – inter-provincial training and linkages should be encouraged.

- Establishing a "mine simulator" may be supported with donor funds on which inspectors may be trained.
- Videos of "to do" and "not to do" mining approaches are available in the market and should be included as part of inspector training.

f. *Awareness building for mine operators and miners.* Building operator and miner awareness of the risks and benefits of mine safety may need to commence with a somewhat "heavy hand" – penalty based awareness building. International experience has demonstrated that operators should be penalized for worker violations, not only workers. However, absent adequate awareness of what the "rules of the safety game" are it should not be expected that key stakeholders can comply. The Inspectorate should be conducting regular awareness building for operators and miners that may be marked with "certification" of different levels. Where funding permits, support of travel to other mining destinations (i.e., South Africa, Australia) will provide invaluable first-hand viewing of best safety practices in mining.

Note. There are approximately 32,500 workers in the KPK mining sector; an average of 24 workers die each year from mine-related accident/injury; 60% deaths occur from underground mining. When a worker dies in this manner, the family receives 5lak[6] from Government and 2lak from the mine company. Just as attention is given to penalties, attention to worker benefits and review of child labor aspects will be useful.

g. *Reporting accidents, injuries and illnesses.* Incidents of accident, injury, or illness are to be reported, whether the workers involved are employees of the mine operator or employees of a contractor. For incidents or accidents which pose a reasonable risk of death, mine operators must report them within 15 minutes. Otherwise, the form (that should be provided by KPMMDD) must be completed and submitted to KPMMDD within 10 working days after an accident or occupational injury occurs, or an occupational illness is diagnosed.

- The principal officer in charge of health and safety at the mine or the supervisor of the mine area where the incident occurred is responsible for completing the KPMMDD form.
- A separate form is required on each accident, whether a person was injured or not.
- A form is required for each individual who became injured or ill, even when several individuals were injured or made ill in a single occurrence.

Illustrative Recommended Reporting Requirements (included in amended Rules)
Mine Operators
Must call immediately, but not later than ***15 minutes*** from the time they know or should know that an accident has occurred to KPMMDD. "Immediately Reportable Accidents and Injuries" include: • A death of an individual at a mine • An injury to an individual at a mine which has a reasonable potential to cause death • An entrapment of an individual for more than thirty minutes or which has a reasonable potential to cause death • An unplanned inundation of a mine by a liquid or gas • An unplanned ignition or explosion of gas or dust • In underground mines, an unplanned fire not extinguished within 10 minutes of discovery; in surface mines and surface areas of underground mines, an unplanned fire not extinguished within 30 minutes of discovery • An unplanned ignition or explosion of a blasting agent or an explosive • An unplanned roof fall at or above the anchorage zone in active workings where roof bolts are in use; or, an unplanned roof or rib fall in active workings that impairs ventilation or impedes passage

[6] Lak = Rs100,000

Illustrative Recommended Reporting Requirements (included in amended Rules)
• A coal or rock outburst that causes withdrawal of miners or which disrupts regular mining activity for more than one hour • An unstable condition at an impoundment, refuse pile, or culm[7] bank which requires emergency action in order to prevent failure, or which causes individuals to evacuate an area; or, failure of an impoundment, refuse pile, or culm bank • Damage to hoisting equipment in a shaft or slope which endangers an individual or which interferes with use of the equipment for more than thirty minutes • An event at a mine which causes death or bodily injury to an individual not at the mine at the time the event occurs
Subcontractors to Mine Operators
Required to report in accordance with Mine operators requirements above.
Independent Contractors
Required to: • Report accidents, injuries, and illnesses to KPMMDD. If an accident, injury or illness occurs at or in conjunction with activity at a mine, independent contractors are required to report immediately. • Report immediately reportable accidents and injuries to KPMMDD. An independent contractor must call immediately, but not later than 15 minutes from the time they know or should have known that an accident has occurred.

5.4 Use of Explosives

An immediate action that may be taken by KPMMDD is to halt any operations that are engaging dynamite. Alternative approaches to granite and marble quarrying may be suggested by the KPMMDD Inspectors. Under Deliverable 5 as part of this Consultancy, a sample "Explosives Regulation" was provided.

5.4.1 Non-explosive demolition agents[8]

Non-explosive demolition agents are commercial products that are an alternative to explosives in demolition, mining, and quarrying. To use non-explosive demolition agents in demolition or quarrying, holes are drilled in the base rock like they would be drilled for use with conventional explosives. A slurry mixture of the non-explosive demolition agent and water is poured into the drill holes. Over the next few hours the slurry expands, cracking the rock in a pattern somewhat like the cracking that would occur from conventional explosives.

Non-explosive demolition agents offer many advantages including they are not prohibited to be brought into Pakistan and obtained by small and artisanal miners, that they are silent and do not produce vibration the way a conventional explosive would. In some applications conventional explosives are more economical than non-explosive demolition agents. In many countries these are available without restriction unlike explosives which are highly regulated.

These agents are much safer than explosives, but it is important to follow directions closely in order to avoid steam explosions during the first few hours after these materials are placed.

[7] Culm is strata of mainly shale and limestone with some coal thin coal seams; likely present in KPK
[8] Vaughan Smith, mine technical specialist

a. *Environmentally sound*. All manufacturers tout their products as being non toxic and benign to the environment. Most are made of oxides or silicates mixed with an organic compound, which combines to create a quickly expansive product. Aside from its non-toxicity, these very controlled non explosive mining techniques allows controlled demolition which results in virtually no dust or uncontrolled scattering of debris and resulting in a much safer work environment.

b. *Cost effective*. Although all manufacturers claim their products to be cost efficient, there is very little data that show cost comparisons between conventional explosive mining and non explosive mining using these products. *It is presumed that this product itself is more costly that explosives. However the cost savings presumably come from the safety aspect*, resulting in fewer work casualties and deaths, and savings as to the controlled nature of the expansive event which directs the debris to a confined area, making quicker clean up.

c. *Requirement and financial support for protective gear.* Certain technologies and protective gear are not known or at least not available in KPK mining operations. Fundamental requirements should include use of steel-toed boots and helmets but financing support to smaller operators must be similarly considered. For large-scale mining operations a standard list of safety equipment must be included in mine contracts and closely monitored by the Inspectorate.

d. *Cost of mining.* As part of the mine plan, operators must be required to include health and safety projected costs and planned investments. KPMMDD must conduct careful analysis of these figures – it may be that the costs of ensuring safe mining are higher than the projected commercial benefit in which case a license/lease should not be granted.

6. Strategies for the Efficient Management, Regulation, and Promotion of the KPK Minerals Sector

KPMMDD and KPK Government have committed to strengthening the minerals regime for effectiveness in the province. The recently adopted KPK Minerals Policy sets forth government commitments on how the sector shall be developed. Following these important policy commitments, strategies for implementation shall follow.

6.1 Strategies for Efficient Management

Perhaps the most fundamental strategy aspect toward efficient management of KPK minerals at this point in time is institutional and staff capacity building. How KPK minerals are managed will completely rely on whether institutional roles and responsibilities are clear for investors, government and citizens as well as staff capacity to implement those roles and meet those responsibilities.

6.1.1 Strengthened Mine Operator Reporting Requirements.

KPMMDD may begin to enhance the type and frequency of information required of mine and quarry operators. Penalties should be available for operators that are not in reporting compliance. KPMMDD staff should use this information as a basis from which improved management may be developed – i.e.,

- Where it is clear that too many workers are being injured on the job, what management tools may mitigate injury?
- Where operations are clearly ongoing but tax and royalty payments to not reflect same, what enforcement mechanisms may be used to better ensure accurate collection?
- Where local communities are unhappy with mineral developments, what management mechanisms will include them and improve sharing of benefits?

6.1.2 Establish a viable Cadastre.

Mapping, reporting, tracking license/lease development is an essential part of minerals management that may be strengthened in KPK. Some technical installation of a user-friendly Cadastre system (could even be paper-based) as well as field visits to update survey information is timely.

6.1.3 Capacity building programs

Capacity building programs may be developed under KPMMDD as the “champion” of minerals development in KPK and should underlie the strategy to ensure efficient management of KPK minerals. Worldwide a number of formal and web-based programs are available to build capacity of critical stakeholders engaged in how resource development is managed, including:

- KPMMDD Cadastre
- KPMMDD Inspectorate
- KPMMDD Financial Modeling
- KPMMDD Regulatory Drafting
- Mining Commission
- Environment Department
- Civil Society

6.1.4 Education and curriculum development. KPK

Education and curriculum development. KPK and other Pakistan academic and vocational institutions should be shored up to train students in technical, legal, financial, and commercial aspects of minerals development. KPMMDD managers working alongside academic and technical experts can prepare practical curriculum that in the near and long-term will generate local expertise not presently available in the market.

6.1.5 Formal Government Relations and Public Outreach Program

Perceptions about mining in KPK range from positive to suspicious. KPMMDD and Government can be pro-active in providing regular information that helps citizens of KPK understand what mining and quarrying is, the risks and benefits of same, and the roles and responsibilities of key stakeholders.

- *General Assembly and Government Department awareness* is essential to effectively managing minerals development in KPK but often information at these levels of policy-making is incorrect or incomplete. A basic informational program and even brochures explaining minerals value chain aspects is a good first step toward building understanding about the issues important to minerals management.
- *Globally, public outreach programs* have been developed using existing civil society organizations, religious forums, schools and offices.

6.2 Strategies for Efficient Regulation

In addition to capacity building referenced above, effective regulation may be triggered by some "nuts and bolts" preparation of clear guidance and institutional strengthening.

6.2.1 Regulatory drafting skills

KPMMDD and Government may immediately enlist academic institutes to provide regulatory drafting courses that distinguish policy, strategy, law and regulatory drafting. Some international advisory and experience may be of use.

6.2.2 Prioritization of regulatory preparation

Mine markets throughout the world are forever preparing new regulations. KPK can emphasize certain regulatory drafting at this stage of development that may include:

- Explosives regulations
- Mapping, reporting and cadastre rules
- Illegal mining – extractive, transport and sale

- Fiscal regime for investments including KPMMDD, Forestry, Labor, Finance, Environment fees, penalties, royalties, incentives, revenue sharing – how will this all be regulated?

6.2.3 Technical support.

Weigh stations are required on site but not always operable or correctly reporting – this impacts levels of royalty. KPMMDD may assess the technical aspects of regulating mining including quality of product, weighing and other aspects to more effectively gauge mineral production and benefits that should be received from same. (NOTE: health and safety of workers typically impacts levels of mine efficiency and should also be assessed)

6.2.4 Preparation of operating guidelines.

As institutional roles are modified and new institutional roles emerge, guidelines for performance and time-bound actions are important. Guidelines may readily be prepared for:

- Mining Commission – about membership, meeting times, appeals
- Grievance Processes for mine workers
- Grievance Processes for mine communities
- Negotiation rules for tenders
- Environmental and social impact assessment content, review process

6.3 Strategies for Efficient Promotion

6.3.1 Establish KPMMDD Investment Promotion Office.

As earlier recommended, KPMMDD may establish an “Investment Promotion” office as part of its Peshawar headquarters. This office should be developed as a “one stop” shop for investor information that will be cross cutting – including not only mineral aspects but information about environmental, social, financial and other investment requirements in KPK. It should link mine communities and district governments to investors and provide “bridge” services to reduce the stress of investor understanding.

6.3.2 “Road Shows”

The world does not fully appreciate the mineral wealth or attraction to invest in KPK minerals – KPMMDD and its counterpart Government agencies need to promote this reality. Possibly as part of existing KPK road shows or as part of broader Pakistan road shows, this topic should be developed and presented outside the borders of Pakistan throughout the world. Preparation activities that may be taken, perhaps in coordination with the KPK economic promotion officers:

- Brochures that include basic information about minerals in KPK as well as useful maps of the region and its resources
- Information about investing in KPK and in Pakistan
- General placards and “booth” or “stand” information that may be displayed at conferences and trade shows
- A short video about KPK mining, showing the region, miners

6.3.3 Strengthen provincial-federal linkages.

While mining is a provincial topic, some federal connections notably for foreign investors, will be essential. KPK linking with the Board of Investment and other federal agencies to promote KPK minerals will help to clarify roles and responsibilities and to demonstrate to investors that the investment environment is harmonious and federal-provincial conflict will not impede their investments.

6.3.4 Strengthen provincial-provincial linkages

Similarly, investors tend to assess investments from a country-wide or large-regional perspective. An investor in Sindh or Balochistan may seek investment opportunities in KPK. KPMMDD and Government of KPK may strengthen its communications with other provinces in Pakistan to:

- Identify good investors
- Caution about “black-listed” or dubious investors
- Promote value chain investments that may traverse different provinces
- Streamline and harmonize fiscal regime including incentives, penalties, fees
- Share “lessons learned” about how to tender resources, pace development, include communities, etc.

7. International Tender Process

7.1 The Global Market Context

Increasingly throughout emerging mineral markets, use of tender has been employed to award mineral rights. This opposed to plain issuing “first come, first served” as well as “auctioning” typically requires more time but also allows government more time and analysis toward ensuring most optimal investment.

A key lesson learned in the global market is that tender design is critical. A strong tender is designed to attract superior developers, who in turn have access to capital markets having the “carrying capacity” to finance, i.e., up to 80% of the project debt**.** After eight years of global market disruption, there is still limited depth of capital for mining investments around the world. The available capital is further limited depending on country portfolio limitations. Some of the world's most favorable mine projects (i.e. iron ore in Simandou in Guinea and Pilbara) are being held back by:

- *Initial capital requirements* that exceed capital available in the financial market, for which governments have not unbundled mega-mine development into staged, incremental investments over time;
- *Poorly specified Requests for Proposals* (RFPs) having policy gaps regarding roles and responsibilities; and
- *Insufficient legal and regulatory clarity* on which large investments must rely.

7.1.1 Pre-Tender Consultations

> Financiers are showing a strong preference for investment opportunities that will achieve contractual close quickly

Increasingly, inadequate local consultation and clear mechanisms for sharing benefits generated from mining projects are negatively impacting project profitability. Addressing these issues *before* contract award can prevent such negative financial results. Financiers are showing a strong preference for investment opportunities that will achieve contractual close quickly – this quick close is directly correlated to the time and attention given to up-front project preparation of the bid package, closing the policy, legal and regulatory gaps, and demonstrating adequate attention to consultation and community support.

7.1.2 Building Investor Confidence

The present legal and regulatory framework in KPK and in Pakistan does not provide necessary clarity for investors or Government to appropriately implement and manage a large-scale mining project for the benefit of Pakistan. This does not mean that KPK cannot seek investors but it does mean that more “up front” work is to be done. Where the legal and regulatory framework is not sufficiently in place, investors will expect to enter into a clear contract in which all rights and responsibilities are clearly agreed. Including the draft contract terms as part of the RFP typically provides investors an opportunity to review the terms and conditions and to ask questions.

7.2 KPMMDD Tender Actions

7.2.1 Policy Review.

Before a final legal and regulatory regime may be prepared on which a Mineral Development Agreement would be based, there are certain policy considerations that must be made by Government. These policy decisions require consultation amongst different Government agencies as well as with stakeholders that include the general public. Some of the policy considerations required before this or any mineral tender include:

a. Government role in the project (i.e., holder of equity, regulator, infrastructure partner).

b. Objective of this mine development (i.e., revenue generation, job creation, expanded exploration, enhanced steel production, export).

c. Requirement for sale of mine production to the domestic market (as earlier proposed).

d. Participation of Pakistan citizens (i.e., as workers, as community beneficiaries, as recipients of revenues generated via increased budgetary spending).

e. Revenue management of the funds generated from mining and related activities.

f. Storage and removal of waste; resale possibilities.

g. Water and electricity use, diversion.

h. Environmental protection and mine closure requirements.

Policy Considerations for Mineral Tender

- Government role in the project (i.e., holder of equity, regulator, infrastructure partner).
- Objective of this mine development (i.e., revenue generation, job creation, expanded exploration, steel production, export).
- Requirement for sale of mine production to the domestic market (as earlier proposed).
- Participation of Pakistan citizens (i.e., as workers, as community beneficiaries, as recipients of revenues generated via increased budgetary spending).
- Revenue management of the funds generated from mining and related activities.
- Storage and removal of waste; resale possibilities.
- Water and electricity use, diversion.
- Environmental protection/mine closure requirements.

7.2.2 Review of Legal and Regulatory Regime

The legal basis for investment in large-scale mining in KPK is relatively clear, however, legal and regulatory guidance for implementation and monitoring of exploration and mining activities is insufficient. This insufficiency will not only impact investors but is likely to greatly diminish the potential return for Government. KPMMDD is working with the FIRMS Project to prepare new Mining Concession Rules but investors will also consider other legislation officially on the books at both the provincial and federal level. Harmonization of this legislation is important.

It is ***very important*** that KPK government, notably the Law Department and citizens understand that the tendering of mineral rights should not be a topic under the *public procurement law.*

7.2.3 Application of Appropriate Law in Tendering Mineral Rights.

It is very important that KPK government, notably the Law Department and citizens understand that the tendering of mineral rights should not be a topic under the public procurement law. This is a common initial approach in many countries new to large-scale mining but one that cannot be used if to optimize development of mineral resources and safeguard the people and environment of KPK. The tender should be guided by the Mining Concession Rules and tender procedures that are included in the Request for Proposal.

7.3 Proposed Tender Methodology

7.3.1 Open international tender.

Investors are looking for world-class and significant reserves that deserve the attention of the global market. Government should consider ensuring adequate time for potential bidders to visit the actual site, attend road shows in key cities around the world (i.e., Dubai, London, Toronto), and to publicize in well-known mining journals.

7.3.2 Two Stages.

In light of the potential wealth and extent of development offered by certain KPK deposits, consideration of a two-stage tender process in which a (i) pre-qualification of interested bidders is followed by a (ii) full-scale proposal round with pre-qualified bidders, is recommended. This approach has become the international standard and provides Government will necessary time and resources to conduct due diligence on bidders as well as for potential investors to understand the mining issues and to develop better plans for implementation.

7.3.3 Requirements of Each Stage

While the pre-qualification stage requires less information than the final qualification phase, it is important not to take the pre-qualification stage lightly. This is an opportunity for investors and Government to understand the investment potential of the deposit and to provide both technical and financial information that is useful. It is also a chance for Government to learn more about the social and environmental performance of the bidders.

7.4 Sample Mine Contract

KPK has requested a sample draft template for a Mine Contract which is increasingly referred to in the global market as a Minerals Development Agreement particularly for a “large-scale” investment in KPK. As noted, in KPK “large-scale” mining is defined as a $3 million or more investment which globally is more reflective of a small-medium mine investment.

In 2009 the World Bank commenced the “Extractive Industry Technical Facility” (EI-TAF) that included a legal consultancy conducted by the International Bar Association to prepare a template for an internationally standard Minerals Development Agreement. A copy of this template was provided as part of Deliverable 1 of this Subcontract[9]; it is approximately 200 pages.

Typically included in tender documents is a sample mine contract. A sample mine contract has been provided under Deliverable 3 of this Subcontract[10]. In an effort to promote clear and useful

[9] Available on request
[10] Available on request

contracting, special attention is being given to large-scale mine contracts. Some important background notes:

a. “Large-scale” mine definition in KPK is $3 million investment which in most mining regions is considered small or medium-scale mining; the template provided is in support of a $5-10 million investment; the Minerals Development Agreement referenced above in Section 5.1 may also be used but will require considerably expert legal and financial review.

b. KPMMDD seeks practical legal tools to guide investments; this template has been prepared with that in mind. In order to keep the Contract short, draft Procedures have been developed and are attached to the Contract as appendices.

c. For this size investment, it is important that financially viable companies ***not*** individuals are signing these contracts.

Rationale *to not* have individuals sign exploitation contracts: (1) individuals are less likely to be structured to pay the legally required employee taxes; (2) less likely that an individual will be able to leverage increased financing (at least traditional financing through banking institutions) for improved mine operations which may become an issue where unexpected costs arise (e.g., environmental or health & safety violation penalties and remediation costs).

7.5 Project Structure

It is often useful for the tender documents to include a preference for how the project will be structured but to leave options should investors have additional approaches that they believe are viable. Considerations for Government to include in a project structure include:

7.5.1 Exploration License and Mining Lease

Award of the contract will not only include award of the Exploration License but, presuming that the company conducts all of its requirements under the Contract, upon commercial finding, award of the Mining Lease as well. This exclusive right is essential for an investor who can be expected to spend millions of dollars during the investment phase of its work. KPK MMDD reports that proposed tenders will incorporate these exclusive rights.

- An issue to be discussed is the extent to which associated minerals, tailings are included in these licenses.
- If Government expects that processing of mineral would be part of the mine contract, some discussion of this must be made in the tender documents.

7.5.2 Composition of Project Ownership.

No requirement of project ownership is recommended; this is an internal company decision and investors are better equipped to design project ownership.

- *Unless,* Government seeks to hold a share of the mining investment in which case this offer should be clearly stated. *Note* that some companies are less likely to invest when they are forced to partner with Government companies.

7.5.3 Upstream and Downstream Expectations

Now is the time for Government to consider whether it will agree with the export of minerals produced or would prefer, as a matter of policy, for some use in country or a mix. Government may indicate its preference and respond to investor feedback. Some discussion about tailings is useful.

7.5.4 Financial Structure.

While Government may propose certain preferences for how a project is financed and structured, allowing investors to respond with their expert approaches will provide Government with options for how to best develop this deposit.

- Fiscal incentives were useful in Thar Coal to attract investors but considerable time and effort went into building provincial and federal institutional collaboration in the form of the Thar-Coal and Energy Board to ensure that these incentives were real and possible.
- There are a variety of fiscal models that can generate revenue for Government; some financial modeling on behalf of the Government is recommended to ensure an option that will provide optimal benefit.

7.5.5 Ancillary Arrangements.

A clear understanding of not only the mine opportunity but ancillary activities that may include construction of roads, rail, port facilities, development of community programs, education and health improvements, energy development/sharing must be set out as part of the expected project structure.

Examples of ancillary agreements:

- *Energy* - it can be expected that the investor at a large deposit will either use coal-fired power or diesel power (the latter is very costly). Whatever energy source, will excess power be made available to KPK at cost?
- *Secondary Roads* – necessary for transport of ore and workers, the investor is likely to contribute to the development of roads (i.e. widening roads); will community and third parties have free access to them?

7.6 Community Development Agreements (CDAs).

In today's emerging markets it is also becoming more common to require "Community Development Agreements (CDA)" as part of large-scale – and even medium and small-scale mining contracts. The CDA is between the mine company and the community and discusses the responsibilities of both parties for the life of the project. Mining markets notably in Africa are taking CDAs very seriously and several countries including South Sudan and Sierra Leone have developed or are developing CDA regulations that may be assessed for application in KPK.

8. Mining Concession Rules

Submitted as part of Deliverable 5 under this Subcontract was amended draft Mining Concession Rules; these were the 2005 Northwest Frontier Province Rules now amended as the 2014 Khyber Pakhtunkhwa Rules. Amending the rules will require continued review, one approach may be to divide the rules into different categories and prepare stand-alone rules (i.e., stand-alone rules on Environment, Community Development Agreements, Applications, etc.)

NOTE: In light of the compressed time for the preparation of these amendments, a process to which some mining markets dedicate 1-2 years, some critical points to keep in mind when reviewing the amended draft:

(1) The piece has not been "harmonized" meaning that any reference to Rules must be reviewed and updated; in some places "X" has been used as a placeholder.

(2) Green highlights are retained in some places for attention with respect to significant suggestions on amendments but considerable changes have been introduced that are not highlighted in green in this version (they are in the draft submitted as part of Deliverable 5 under this Subcontract).

(3) Recognizing that the Legal Department and other government agencies will be responsible for reviewing and adopting amendments, Consultant has attempted not to drastically rework the ordering of the Rules but the order should be addressed. As a result, some substantially new information recommended for inclusion in the Rules is presented at the end of the amended Rules for consideration.

(4) Penalties in the 2005 Rules must be updated and increased; some are highlighted in green to demonstrate.

(5) The draft is not fully formatted; alternative language and ordering has been proposed; careful review and consideration is required before final formatting may be completed.

8.1 General Observations and Amendments

a. *Institutional roles* may be clarified – for example whether the MIFA remains in place.

b. *Terminology* as discussed throughout this report may be modified to reflect modern mining market terminology.

   - KPMMDD in place of Licensing Authority (for clarity)
   - Holder in place of Holder
   - Mining Commission in place of Mines Committee
   - Retention License in place of Mineral Deposit Retention License
   - Construction materials in place of Minor Minerals
   - Term “renewal” is used when sometimes it is more clear to say “extension”
   - The term “Mineral Agreement” is used based on the original 2005 Rules; “Minerals Agreement” and/or “Mine Contract” may also be used.

c. *Award of Rights.* Some amendments are recommended, i.e.

   - Mining Lease may not be awarded by application.
   - Only legal persons (not individuals/natural persons) may apply for Reconnaissance License; this may be the case for Mining Lease as well, review needed.
   - Mining Commission resolves disputes on certain issues (earlier version said MIFA).

d. *The ordering of content in the Rules* is a core issue and may be revised to (1) remove separation of “major” and “minor” minerals; (2) address not only issuance of licenses/leases but more information on post-award guidance.

e. *Addition of an additional mineral right in the “Artisanal Mining License*” is recommended.

f. *Monitoring.* In addition to addressing purely “concession” award aspects, additional regulatory guidance on monitoring and requirements for environment, land, social aspects is suggested.

g. *Gender neutral terms*. Use of the term “he” and “him” should be replaced with Holder or other term in order to keep Rules gender-neutral.

h. Strengthen penalties and enforcement. Recommended that penalties need to be reviewed and increased to have meaningful impact.

i. *NEW items* have been inserted:

   - Institutional Arrangements
   - Mining Commission (established)
   - Discovery of Minerals (more details)
   - License Registers
   - Easement

  - Environmental Requirements
  - Community Development Agreements
  - Termination provisions
  - Artisanal Mining License

j. *Additional KPMMDD/KPK Government review and discussion needed, for example*:

  - Size/definition of Large-Scale and Small-Scale Mining
  - Introduction of Artisanal Mining License
  - Penalties and enforcement
  - How to address illegal mining
  - Introduction of Environmental and Social Requirements
  - Requirement to Mine (Old) Section 50 – Exploration License says commence operations within three (3) months of issuance of license – for large-scale mining Exploration can take years – conducting feasibility, environment/social impacts, etc. – need to review. Similarly, Exploitation Lease (Mining Lease) would require more than six (6) months.

9. Appendices

Appendix -1 Extractive Industries Transparency Initiative (EITI)

The Extractive Industry Transparency Initiative (EITI) was established in 2003 as an international commitment to improved mining and generation of revenue for the benefit of host-country citizens as well as to safeguard resources and environment for the long-term.

Implementation of EITI must be consistent with the criteria below: (eiti.org)

1. Regular publication of all material oil, gas and mining payments by companies to governments ("payments") and all material revenues received by governments from oil, gas and mining companies ("revenues") to a wide audience in a publicly accessible, comprehensive and comprehensible manner.
2. Where such audits do not already exist, payments and revenues are the subject of a credible, independent audit, applying international auditing standards.
3. Payments and revenues are reconciled by a credible, independent administrator, applying international auditing standards and with publication of the administrator's opinion regarding that reconciliation including discrepancies, should any be identified.
4. This approach is extended to all companies including state-owned enterprises.
5. Civil society is actively engaged as a participant in the design, monitoring and evaluation of this process and contributes towards public debate.
6. A public, financially sustainable work plan for all the above is developed by the host government, with assistance from the international financial institutions where required, including measurable targets, a timetable for implementation, and an assessment of potential capacity constraints.

The EITI Principles

The EITI Principles, agreed at the Lancaster House Conference in June 2003, provide the cornerstone of the initiative. They are:

1. We share a belief that the prudent use of natural resource wealth should be an important engine for sustainable economic growth that contributes to sustainable development and poverty reduction, but if not managed properly, can create negative economic and social impacts.
2. We affirm that management of natural resource wealth for the benefit of a country's citizens is in the domain of sovereign governments to be exercised in the interests of their national development.
3. We recognize that the benefits of resource extraction occur as revenue streams over many years and can be highly price dependent.
4. We recognize that a public understanding of government revenues and expenditure over time could help public debate and inform choice of appropriate and realistic options for sustainable development.
5. We underline the importance of transparency by governments and companies in the extractive industries and the need to enhance public financial management and accountability.

6. We recognize that achievement of greater transparency must be set in the context of respect for contracts and laws.
7. We recognize the enhanced environment for domestic and foreign direct investment that financial transparency may bring.
8. We believe in the principle and practice of accountability by government to all citizens for the stewardship of revenue streams and public expenditure.
9. We are committed to encouraging high standards of transparency and accountability in public life, government operations and in business,
10. We believe that a broadly consistent and workable approach to the disclosure of payments and revenues is required, which is simple to undertake and to use.
11. We believe that payments' disclosure in a given country should involve all extractive industry companies operating in that country.

In seeking solutions, we believe that all stakeholders have important and relevant contributions to make – including governments and their agencies, extractive industry companies, service companies, multilateral organisations, financial organisations, investors, and non-governmental organisations.

Appendix-2 Voluntary Principles

Established in 2000, the Voluntary Principles on Security and Human Rights (Voluntary Principles) is a multi-stakeholder initiative(MSI) involving governments, companies, and nongovernmental organizations that promotes implementation of a set of principles that guide oil, gas, and mining companies on providing security for their operations in a manner that respects human rights. Specifically, the Voluntary Principles guide companies in conducting a comprehensive human rights risk assessment in their engagement with public and private security providers to ensure human rights are respected in the protection of company facilities and premises.

Overview of the Voluntary Principles:

- MSI composed of multinational oil, gas, and mining companies, governments, and key international non-governmental organizations
- Practical guidelines to help extractives companies manage risk effectively at the international, national, project level
- Platform for mutual learning, joint problem solving, and building best practices on security and human rights challenges with companies, governments, and NGOs
- Framework to build capacity of key players to address these issues in complex environments.

Why Implement the Voluntary Principles?

While the duty to protect human rights rests with governments, businesses have a responsibility to respect human rights as outlined in the UN Guiding Principles on Business and Human Rights,[1] by acting with due diligence to avoid harming people and addressing adverse impacts with which they are involved. Extractives companies often operate in complex environments with little guidance on the ground on how to observe their human rights responsibilities. The Voluntary Principles helps companies identify human rights risks and take meaningful steps to address those risks in a manner that helps ensure respect for human rights in their operations.

The Voluntary Principles provide a framework for companies to manage risk effectively by:

- Conducting a comprehensive assessment of human rights risks associated with security
- Engaging appropriately with public and private security service providers and surrounding communities in complex environments
- Instituting human rights screenings of and trainings for public and private security forces
- Developing systems for reporting and investigating allegations of human rights abuses Join this important initiative to contribute to the advancement of security and human rights.

www.voluntaryprinciples.org and **http://www.state.gov/j/drl/**.

Appendix-3 Qualified Extractive Industry Taxpayer (QEIT) Provision

Income Tax Law 2009
Islamic Republic of Afghanistan

CHAPTER 12

TAXATION RULES FOR QUALIFYING EXTRACTIVE INDUSTRY TAXPAYERS

Article 77 Definitions

(1) In this Chapter:

1. a “hydrocarbons Contract” means an Exploration Contract or Service Contract described in any applicable law affecting hydrocarbons in . Hydrocarbons are petroleum, gas, and other derivatives therefrom;
2. a “Mining Authorization” is a permission letter that is issued by Ministry of Mines in accordance with the Mines Law, for exploration of quarries, constant utilization of quarries, utilization of previously explored idle materials, professional utilization, business, process, transfer, and processing of minerals;
3. a “Mining License” is a document issued in accordance with the Mines Law for exploration or utilization of mines;
4. "QEIT" means a Qualifying Extractive Industries Taxpayer and refers to a person that holds a mining License or mining Authorization or is party to a hydrocarbons Contract;
5. a "QEIT asset" is an asset that –

    - has an effective life of more than 12 months; and
    - is constructed or acquired to be used directly in the business stated in the mining License, mining Authorization or hydrocarbons Contract.

(2) A well that is drilled by a QEIT for the purpose of exploring for, developing, or producing hydrocarbons shall be deemed to be a QEIT asset and all costs incurred in the course of drilling the well, contracting with another person to drill the well for the QEIT, or closing a well shall be treated as the cost of acquiring the well. Where the drilling or contracting costs for drilling are incurred over more than one tax year, the QEIT shall be treated as acquiring separate QEIT assets in each year with a cost for each asset equal to the drilling or contracting costs for drilling incurred in that year.

Article 78 Precedence of Chapter 12 The Articles in the Chapters of this Law apart from this Chapter apply to a QEIT in the same manner they apply to a taxpayer that is not a QEIT unless they are changed by an Article in this Chapter.

Article 79 Tax obligations of QEIT (1) A QEIT shall be treated as a separate taxpayer in respect of each mining Authorization, mining License, or Contract for hydrocarbons.

(2) If a QEIT is party to more than one hydrocarbon Contract or holds more than one mining License, or mining Authorization, or any combination of these, the person shall be treated as if it were a separate person2 in respect of the business operations related to each hydrocarbon Contract, mining License, or mining Authorization.

(3) If a hydrocarbon Contract, mining License, or mining Authorization is renewed, the renewal shall be treated as part of the original hydrocarbon Contract, mining License, or mining Authorization for the purpose of this Article.

(4) If a QEIT is party to more than one hydrocarbon Contract or holds more than one mining License, or mining Authorization, or any combination of these and incurs expenditure in relation to more than one hydrocarbon Contract, mining License, or mining Authorization, the expenditure shall be apportioned between the different parts of the business on the basis of the application of the expenditure.

Article 80 Business receipts tax The business receipts tax imposed under Chapter 10 of this Law shall not apply to:

1. receipts of a QEIT from the sale of mineral substances (as defined in the Minerals Law, 2005) that are subject to a mining License or mining Authorization;

2. receipts of a QEIT from the sale of hydrocarbons that are subject to a hydrocarbons Contract; or

3. receipts of a QEIT from the sale or transfer of a mining License or mining Authorization or a hydrocarbons Contract.

Article 81 Depreciation deductions (1) Contrary to sub-paragraph 7 of paragraph (1) of Article 18 of this Law, a person that is a QEIT and that incurs an expense to acquire a QEIT asset other than a building or rights to occupy a building may deduct the cost of acquiring the asset for a year on a straight-line basis over the lesser of:

1. the effective life of the asset; and
2. five years commencing with a deduction in the year in which the asset is acquired.

(2) Contrary to sub-paragraph 7 of paragraph (1) of Article 18 of this Law, a person that is a QEIT and that incurs an expense other than annual rent to construct or acquire a QEIT asset that is a building or to acquire rights to occupy a building may deduct the expense on a straight-line basis over 15 years, commencing with a deduction in the year in which the expense is incurred.

(3) A person that is a QEIT that incurs an expense to acquire a mining Authorization or mining License or hydrocarbons Contract may deduct the cost of acquiring the Authorization, License or Contract on a straight-line basis over the period to which the Authorization, License or Contract applies.

(4) The depreciated value of a QEIT asset at any time shall be the original cost less any deductions for the cost of constructing or acquiring the asset that were allowed under this Article. Where a person that is a QEIT disposes of a QEIT asset for more than its depreciated value, the excess of sale proceeds over depreciated value shall be included in the person's income for tax purposes. Where a person that is a QEIT disposes of a QEIT asset for less than its depreciated value, the excess of depreciated value over sale proceeds shall be deductible in the year of sale.

Article 82 Cost of constructing roads (1) This Article applies to a person that is a QEIT and that incurs an expense to construct a road that will be used to carry on a business that is subject to a mining License or mining Authorization or a hydrocarbons Contract.

(2) A person described in paragraph (1) of this Article may deduct the cost of constructing the road described in paragraph (1) of this Article over a period of fifteen years commencing with a deduction in the year in which the road is completed.

(3) This paragraph applies where a person that is a QEIT sells its rights under a mining License or mining Authorization or hydrocarbons Contract to another person and as a result of that transfer the person making the sale will no longer use a road described in paragraph (1) of this Article and the person acquiring the mining License, mining Authorization or hydrocarbons Contract will use the road. In this situation, the person acquiring the mining License, mining Authorization or hydrocarbons Contract asset shall be entitled to deduct the undeducted cost of constructing the road over the remaining deduction years. For this purpose, the remaining deduction years for the road shall be calculated as 15 minus the number of years during which the previous owner or owners were entitled to deductions under this Article.

(4) Where paragraph (3) of this Article applies to a road described in paragraph (1) of this Article, the person who sells its rights under a mining License, mining Authorization or hydrocarbons Contract shall not be entitled to any deductions under this Article for the cost of constructing the road the year in which the rights under the mining License, mining Authorization or hydrocarbons Contract are sold or in any later year.

Article 83 Pre-production costs (1) Notwithstanding Article 18 of this Law, a person that is a QEIT may only deduct an expenditure that is a pre-production cost on a straight-line basis over the pre-production cost recovery period where –

1. a "pre-production cost" is any expenditure that is incurred by a QEIT prior to commencing commercial production of minerals in the course of business related to a mining License or mining Authorization or a hydrocarbons Contract. However, a pre-production cost does not include the cost of acquiring a QEIT asset or the cost of constructing a road;

2. the "pre-production cost recovery period" for a mining business carried on by a QEIT in an area defined in a mining License or mining Authorization shall be the lesser of –

- 15 years; and
- the number of years remaining in the License or Authorization.

3. the "pre-production cost recovery period" for a hydrocarbon business is the number of years remaining in the Contract.

(2) A QEIT shall be treated as commencing commercial production of minerals or hydrocarbons in the earlier of:

1. the year in which the Ministry of Finance and the Minister of Mines and Industries issue to the QEIT a written notification that the Ministries jointly accept a written submission by a QEIT that it has commenced commercial production, and

2. in the case of a QEIT that holds a mining Authorization, the year in which the proceeds from the sale of minerals exceeds 6 percent of the pre-production costs incurred by the QEIT prior to that year,

3. in the case of a QEIT that holds a hydrocarbons Contract, the year in which the proceeds from the sale of hydrocarbons exceeds the threshold percentage of the pre-production costs incurred by the QEIT prior to that year where the number in the threshold percentage is determined by dividing 100 by the number of years of the hydrocarbons Contract.

(3) Where a person that is a QEIT sells its rights in a mining License or mining Authorization or hydrocarbon Contract to another QEIT, the first QEIT may add to the cost of acquiring its rights in the License, Authorization or Contract any pre-production expenses it incurred that have not been previously deducted under paragraph (1).

Article 84 Deduction for contributions to a fund for environmental and social obligations

A person that is a QEIT may deduct any amount that is required to be paid in respect of environmental and social obligations under Article 82 of the Minerals Law, 2005 or pursuant to a plan required by any applicable law affecting hydrocarbons provided –

1. the amount is paid to an entity that has no direct or indirect connection to the person claiming a deduction under this Article;

2. the person provides, through a financial institution approved for this purpose by the Da Bank, a bank guarantee for payment to the Ministry of Finance of the deductible amount in the event the entity holding the amount deposited does not apply the funds as specified in the governing Minerals Regulations or pursuant to a plan required by any applicable law affecting hydrocarbons.

Article 85 Loss carry-forward and stability agreements (1) Article 42 of this Law, which imposes a limit on the recognition of net operating losses, shall not apply to a QEIT. Where a QEIT incurs a net operating loss as defined in Article 47, the loss may be treated as a deductible expense in the following year.

(2) Subject to paragraph (3) of this Article, the Ministry of Finance shall apply to a QEIT the provisions of this Law as they stood at the time the QEIT became party to a mining Authorization, mining License, or hydrocarbons Contract for a period of:

1. 5 years, in the case of a QEIT holding a mining Authorization, commencing with the year in which the QEIT begins to hold the Authorization;

2. 8 years, in the case of a QEIT holding a mining License, commencing with the year in which the QEIT begins to hold the License; or

3. the period of the hydrocarbons Contract, in the case of a QEIT that is party to a hydrocarbons Contract.

(3) The Ministry of Finance shall only apply the provisions of this Law to a QEIT as set out in paragraph (2) where the QEIT has agreed in writing that taxable income of the QEIT shall be subject to an income tax rate of 30 per cent for the years in which the provisions of this Law are applied by the Ministry of Finance on the basis of this Article without regard to subsequent changes.

End of Relevant Section

Appendix-4 Draft Amended Mining Concession Rules

See Attached as a Stand Alone Document

USAID Firms Project
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