STRATEGIC INSTITUTIONAL CONSIDERATIONS FOR MINERAL SECTOR DEVELOPMENT IN PAKISTAN

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SECTION ONE
INTRODUCTION

1. This draft report addresses how the government of Pakistan can position itself to attract, create and sustain mining development. However, before addressing the specifics it is proposed to look at mining in a broader context, and at the trends and changes, which have had an impact on the development of the industry.

2. In the macro-economic area, acceleration in reforms and liberalization has provided access to countries and resources which were previously off-limits. With respect to the role of government and the private sector, fundamental changes have been seen in the activities of governments from owner/operator of mining assets to a role of regulator/administrator, while the private sector has moved from a position as a by-stander that of being to the driving force in mining investment and development.

3. As a result of these trends and changes, especially in the macro-economic area and the role of government and private sector, there has been a considerable shift in the geographic distribution of investment for exploration and mining development.

4. A look at the historical breakdown of worldwide exploration dollars, results in an interesting picture. A number of Latin American countries have surged ahead in the 1990s, and at no time in the history of Latin America has the mining sector enjoyed a mining and exploration boom as strong as the one experienced in the nineties. Since 1994, Latin America has overtaken such well established mining countries as Australia, the United States and Canada as the leading destination for exploration investment.

5. The Latin American example shows some of the steps Governments can undertake to revive the mining sector. Their approach included the following elements: formulation of a well-defined minerals development policy, establishment of a sound macro-economic and trade environment, and the formulation and execution of a clear sector strategy. In short, the mining boom in Latin America was made possible by a comprehensive approach to mining sector reform, including updating the legal and fiscal framework, strengthening mining institutions, providing basic geologic information, and ensuring sound environmental management. The execution of such a program does not always guarantee success – there are other factors outside the control of governments, such as geology – but it will enable the country to position itself as an attractive alternative for investment in today’s competitive environment where the private sector’s choices where to invest have increased dramatically compared to 10 years ago.

6. This submission is designed to address priority issues and recommend actions to improve the policy, legal, regulatory, fiscal and institutional framework of mining sector management and promotion in Pakistan.
1.0. **ASSESSMENT OF COMPARATIVE ATTRACTIVENESS OF THE MINING INVESTMENT FRAMEWORK OF PAKISTAN**

1. As with all other elements of this analysis, the basic information and internal research directed at this topic, and supplied to the World Bank study team, is hereby acknowledged. It forms the core of the following assessment.

2. To frame this discussion, it must be reiterated that the current mining investment framework is not sufficiently attractive to either local or foreign private sector investors. Although Pakistan has many superior macro-economic advantages over its potential international competitors, it also has a number of serious mineral sector specific disadvantages. Some main internationally desired favourable features as well as usual unfavourable features are summarized below.

### 1.1. DESIRABLE FAVOURABLE FEATURES

- relatively untested, known mineral bearing geological terrains;
- comprehensive, accessible geological and mineral database;
- availability of affluent local private and state joint venture partners;
- good urban infrastructure of ports, airports, roads, utilities and communications;
- good health and education facilities;
- good national banking system;
- stable political regime;
- private sector oriented economic development policy in place;
- improved profit tax / royalty / incentives / fiscal regimes for mining;

### 1.2. USUAL UNFAVOURABLE FEATURES

**General factors**

- unclear Government privatisation intentions;
- lengthy approval process for mineral title applications;
- conflicting regulation and mineral exploration interests of mining authorities;
- shortage of skilled national mining work-force, technicians, professionals;
- tax exemption for local investors;
- prohibition of foreign shareholders in domestic stock exchange;
- perception that foreign firms do not receive equal treatment in all areas of law;
- restrictive visa procedures for prospective investors.
Mineral Sector Specific

- state’s right to percentage share of net profits;
- state partnerships in privately managed mining operations;
- unclear domestic joint-venture equity policy;
- confusions regarding restrictive precious metals policy;
- perceived preferential joint venture status for domestic mining enterprises;
- inadequate transportation and utility linkages to key mining areas.

2.0. STRATEGIC MINERAL POLICY OVERVIEW

3. Mining in Pakistan pre-dates recorded history. Some of the current metallic and non-metallic producers and development targets are at or near the sites of ancient workings. The country contains geological features with the same characteristics as other formations, which are host rocks for significant precious and base metal mineralization in other parts of the world. These formations contain significant metallic and non-metallic mineral deposits.

4. Over the past decade, there has been an increasing effort on the part of the Government to diversify its revenue producing capability through more effective utilization of its metallic and non-metallic mining opportunities. A review of the existing policy, legal and institutional framework of the mining sector has confirmed that the current investment environment has not been effective in maximizing revenue from the country’s known mineral endowment, and is not sufficiently attractive to either local or foreign private sector investors. The Government’s stated plan to correct this is to induce new mineral exploration, mine development and production through attracting increased local and foreign private sector investment. In this respect, a number of important actions have been taken:

- a new National Mining Policy has been prepared and made operational, in order to induce mining sector development;
- the existing centralized institutional setup based on the General Direction of Mines and the Geological Survey of Pakistan has undergone reorganization, in order to be responsive to the Provincial structure of the country, through an organization which now includes the Federal General Direction of Mines, the Provincial Mining Administrations, and the Geological Survey of Pakistan;
- a growing emphasis is evolving for privatising the operating activities of the Pakistan Mineral Development Corporation, in line with a new role for the state as referee rather than player on economic activities in general, and mining in particular;

5. These and other positive moves away from Government control and direct participation in mineral resource development, towards neutral Government regulation of independent private sector investment and operational activities, are not yet comprehensive and not without problems. These result mainly from the desirability to achieve coherence and consistency in the mineral
policy, regulation and administration of all provinces, which in turn would enable a coherent perception of Pakistan, by investors, as a country with clear, competitive and attractive frameworks for mineral investments.

3.0. **Recommendations for Priority Strategic Analysis**

6. Many substantial improvements in Pakistan’s mining investment framework are currently under consideration. The formal endorsement for the legal, financial and institutional reforms will substantially improve the country’s international status with respect to mining investment attractiveness. Additional significant legislative revisions are essential to elevate Pakistan’s mining investment framework to international status. The highest priority needed reforms include:

- The Legal Framework
- The Mining Fiscal Regime
- The Institutional Framework

7. The major challenge, however, will be in clarifying and revising certain unattractive and contradictory **Mineral Policy** positions that could seriously negate the otherwise superior mining investment framework now under consideration. The substance of the key mineral policy elements would be incorporated into recommended legislative revisions. It is critical, however, to link them with the highest level of Government policy endorsements and directives. Some of the key issues requiring such senior policy reinforcement are:

- the new lead agency (or agencies) must be demonstrably separated from all operational enterprises and transparent in dealing with all clients on an equal basis;
- state-owned mining companies must operate on equal, competitive basis with private sector counterparts;
- the informal or formal state-mandated monopolies for mineral commodity development should not be allowed;
- joint venture partnerships must be entered on a voluntary basis;
- there must be formally prescribed time-frames and equity distribution targets for privatization of state-owned shares;
- a unique ‘made-in-Pakistan’ organizational structure must be established with formally established, streamlined inter-governmental management matrix to facilitate public awareness and federal government and/or provincial administration approval processes for mineral projects;
- the federal government and provincial administration must ensure the transparent connection of approved policy objectives with the uniform application of rules and procedures for local and foreign investors;
- the private sector of Pakistan must be involved in relevant aspects of Policy formulation;
- the National Mining Policy should be actively promoted both at the national and international levels.
8. The establishment of Pakistan as a dynamic world-class mineral sector player and superior mineral investment venue is clearly attainable goal. It lies in the adoption of a new vision of the sector’s economic importance and the path required to take full advantage of its near-term investment and long-term revenue generating potential. This path must be transparently open to the entrepreneurial initiatives of new local and foreign private sector investors.

9. If the senior decision-makers of Pakistan integrate the favourable features of the proposed investment framework with the elimination of certain unfavourable features, to meet well recognized international best practices, they will form the basis for a mineral policy framework that could receive universal praise and attention. The steps between the current analysis of priority issues and the final synthesis of senior policy decisions into a visionary policy document and focused execution plan has to be understood and formally approved at the highest levels of the country.

10. With respect to the purpose of this Background Paper and its role in the upcoming Workshop event, an important premise to be emphasized is that the recommendations offered are intended to present international best practice elements for focused evaluation by the selected participants of the Workshop.
SECTION TWO  
LEGAL AND REGULATORY FRAMEWORK

11. From an institutional perspective, this section analyzes the legal and regulatory framework for mining in Pakistan. It presents options from best practice, and offers recommendations as to the solutions. The issues examined fall within the following sub-sections:

- Independence of licensing office
- Same rules for state and private enterprises;
- Transparent and adequate licensing and administrative procedures;
- Modern mining cadastre;
- Security of tenure
  - Strength of property rights
  - Comprehensive exclusivity
  - Virtually automatic right to go on from exploration to exploitation
  - Maintenance rights obligations and cancellation criteria/procedures
  - Transferability of rights
  - Operating obligations
  - Penalties

2.0. BASIC REGULATORY FRAMEWORK

2.1. INDEPENDENCE OF LICENSING OFFICE

12. The key administrative institution upon which a private sector-based mining industry depends is the mineral license registry office. All actors in the sector must have confidence that the licensing office will function reliably, effectively and professionally in accordance with objective standards and procedures. To provide such assurance, modern mining laws tend to provide for an independent license registry unit.

13. An independent licensing office is one that has no interest in the substantive outcome of its licensing actions other than the correct and professional administration of objective licensing and registration procedures. It has no authority to carry out exploration or mining activities itself. It is also organized in a manner that is designed to insulate it from the influence of any administrative body that does have operational authority or responsibilities, as well as from political interference in the administration of its responsibilities.

14. In addressing the important mineral titles issues, the following three options are often considered for the formulation of the Minerals Concessions Department:
(a) Creation of an autonomous licensing office outside of the Ministry and/or provincial mineral administration agency, protected by civil service law, whose only functions are related to issuing, renewing, modifying, canceling and maintaining accurate public records of licenses for all phases of mining activity.

(b) Establishment of a semi-autonomous licensing office within the Ministry or provincial administration (i.e., with its own budget) that is insulated from other departments and protected by civil service law, whose only functions are related to licensing and registration of all aspects of mining activity.

(c) Organizing a distinct department within the Ministry or provincial administration responsible only for licensing and registration of all phases of mining activity, with a reporting structure that is separate from that of any state agency or department directly or indirectly involved in exploration or mining.

15. The recommended administrative form of the independent licensing agency depends on whether the Ministry and/or provincial administration retains the authority to engage in exploration or mining activities. If it does, then the licensing agency should be an autonomous agency outside of the Ministry (Option a) to ensure its independence.

16. The trend in modern mining legislation that is designed to attract private investment into the mining sector is to provide that the Ministry and/or provincial mineral authorities would not engage in either mineral exploration or exploitation activity. The stated policy of the Government of Pakistan to promote the development of a private sector mining industry should be reflected particularly in the exclusion within the GSP for conducting geological exploration work, or mining at Pakistan Mineral Development Corporation. For mineral sector development, this includes basic geological studies, thematic mapping, and essential exploration work and studies. The essential amount of exploration is considered to involve up to occasional and incidental borehole drilling to confirm specific geological trends or intersection of mineralization. However, under the current setup, drilling and pre-feasibility studies could evolve into larger and costlier campaigns, which is a matter of concern that should be addressed in revised mineral law and regulations.

2.2. **SAME RULES FOR STATE-OWNED AND PRIVATE ENTERPRISES**

17. If the policy of the Government of Pakistan is in favor of private companies obtaining exploration and mining licenses on their own, and not just through joint ventures with enterprises such as the Pakistan Mineral Development Corporation, then reassurance should be provided that the private companies will not be subject to unfair competition from state-owned enterprises. In addressing this issue, the following three options might be considered:

(a) Provide in the Mining Investment Code that all state-owned enterprises and agencies are subject to the mining law on the same basis as private entities.
(b) Provide in a separate law that all state-owned enterprises and agencies are subject to the mining law on the same basis as private entities.

(c) Eliminate or privatize state-owned enterprises and agencies; or limit them to activities not in competition with the private sector.

18. The recommended option, as between a) and b), is a), because it establishes a universally applicable principle on which the regulation of the mining sector is to be based. That principle should be stated clearly in the mining law.

2.3. **Transparent Licensing Process Administered by Accountable Officials**

19. A competitive private mining industry relies not only on the independence of the licensing agency, but also on the transparency of the processes by which it issues, renews, and modifies licenses or rejects requests for the same. In addition to a clear identification of the licensing agency, transparency requires that such agency should:

- apply criteria and procedures which are made explicit in the Mining Code and Regulations;
- act within reasonable timeframes in accordance with specific mandates;
- provide notice and opportunity for a hearing and/or remedy before canceling any party's rights based on an administrative decision; and
- issue decisions in writing, setting forth the grounds on which they are based.

This is a proven practice in the most successful mining countries in the world, namely, USA, Canada, Australia, and most recently, Chile and Peru.

20. The mineral code should contain a clear statement of the criteria and procedures for cancellation of rights, including notice, a hearing, and a written decision, which is subject to a review process.

21. The mining code should also contain a clear statement providing that the Ministry and/or the Provincial Mineral Authorities shall establish registers of applications and licenses, which will be open to the public for examination in order to determine the availability of particular areas for licensing. This will be indicative of transparency in the licensing process.

22. Finally, it is also recommended that provisions be added to the mining code to provide the opportunity for at least one administrative review of any agency decision adversely affecting an applicant or a license holder, followed by a possible appeal to a judicial authority or a neutral arbitrage forum.
2.4. MODERN MINING CADASTRE

23. One of the key functions of an accurate and reliable mining cadastre is to be a system of recording and publicizing different types of rights over clearly identified areas which can be readily located in accordance with a standardized mapping system that minimizes boundary conflicts and facilitates administration. A mining law that is based on an accurate and reliable mining cadastre provides potential investors not only with important information as to which geographical areas are available for licensing, but also with assurance that existing licenses are openly acknowledged and protected. The mining cadastre is the foundation for many modern mining codes.

24. The following elements of an accurate and reliable mining cadastre should be established in the mining law:

- a uniform basis for mapping the entire country, preferably translatable into GPS readings for ease of boundary location in the field, with reasonable accuracy;
- standardized license area configuration requirements to avoid boundary conflicts and facilitate administration (e.g., contiguous polygons with sides in multiples of a standard length, oriented north-south and east-west);
- standardized license area boundary identification criteria for the same reasons (e.g., coordinates of all corners according to the standardized mapping system); and
- recording of all existing licenses and all applications for licenses in registers and on maps readily available for consultation.

25. If the policy of the Government of Pakistan is to rely primarily on private investment to explore for, discover and evaluate the extent of the country's mineral resources, then it is strongly recommended that consideration be given to establishing in the new mining code the basis for a modern mining cadastre. The boundary identification criteria for license areas should be incorporated, or reasonable parameters for them, into the Code itself. In addition, it is highly recommended that the registers of existing mining titles be made open to public consultation, and supplemented with maps showing existing areas under license.

2.5. SECURITY OF TENURE

26. Strength of Property Rights. In countries with important mining sectors, such as Chile, for example, mining concessions are clearly defined as real property rights that are specifically protected by the Constitution from unlawful expropriation. In the best known mining jurisdictions of Latin America (e.g., Chile, Peru, Bolivia and Mexico), exploration and mining rights are property rights entitled to the general protections afforded to such rights. The following options might be considered for this purpose:

(a) Strengthen the rights in the Mining Code by making them real property rights protected by the Basic Governing Law.
(b) Strengthen the rights in the Mining Code by giving exploration rights the status of personal property and exploitation rights the status of real property, both protected by the Basic Governing Law.

(c) Strengthen the rights in the Mining Code by making them personal property rights protected by the Basic Governing Law.

27. Further analysis and discussion would be required to examine the benefits and disadvantages of each of these options under the law of Pakistan. The important thing is to define the legal status of the rights in a way that protects them from being taken without compensation, and that facilitates their use as collateral for commercial finance.

28. **Comprehensive Exclusivity.** The exploration and mining rights available under the Mining Code are of only limited exclusivity. Rights to other minerals may be granted to other parties within the same geographical area.

29. This restriction limits the value of the mineral rights available in Pakistan because license holders are not automatically entitled to enjoy the benefit of discovering an ore body containing mineralization, other than that which is the subject of their license. It also complicates the risks that exploration license holders face. They are subject to the risk that the holder of an exploration license for another mineral may make a discovery and obtain an exploitation license in the area they are still exploring, thereby complicating their ability to benefit from their own possible discovery. At a minimum, the possibility of overlapping mineral-specific licenses creates enormous potential for conflict among the different license holders and also hampers efficient management of the mining cadastre.

30. The rights available under the Mining Code compare unfavorably with the mineral rights available in many other jurisdictions that are exclusive as to all minerals (sometimes excluding construction materials). In some jurisdictions, the license holder may maximize the value of his mineral rights by granting rights to explore for certain minerals to another party as a subcontractor, while remaining primarily liable for performance of the obligations pertaining to the license.

31. In addressing the issue above mentioned, the following options might be considered:

   (a) Make exploration and exploitation licenses exclusive as to all minerals, allowing only one license at a time over any area.

   (b) Make exploration and mining licenses exclusive as to all minerals other than building materials, and allow only (i) one exploration or exploitation license for metallic and non-metallic industrial minerals, and (ii) one exploration or exploitation license for building materials over the same area at the same time, subject to safeguards to protect the rights of the first mineral rights holder installed on the property.
(c) Make exploration and exploitation licenses exclusive as to all minerals within one of three defined classes (such as building materials, non-metallic industrial minerals and metallic minerals, thereby permitting one license for each class to overlap.

32. Of these three options, either a) or b) is recommended. Overlapping licenses for different minerals of the same class should be eliminated as a practice. It tends to create conflicts between different license holders in the same area rather than maximizing exploration for all mineral resources. A private owner of all mineral rights with the right to subcontract or farm out part of his rights to explore for specific groups of mineral resources will be the best motivated and best situated to maximize exploration in the area while minimizing conflicts through contractual relationships. Option b) is also recommended, because it may be good policy to maintain ease of access to building materials for local construction.

33. **Virtually Automatic Right to Proceed from Exploration to Mining**. In countries with important mining industries the Mining Code usually provides the holder of an exploration license with the "exclusive right ... to obtain an exploitation license within the area included in the exploration license" if two conditions are met. First, the holder must have performed all of his obligations. Second, he must prove the discovery of an exploitable mineral. Traditional requirements that he must prove, to the Ministry responsible for Mines, that he is technically and financially competent to effectively discharge his obligations have been progressively replaced by market oriented approaches based on the consideration of exploration and exploitation rights as property rights.

34. The requirement that the holder of the exploration license must have performed all of his obligations seems on its face to be a matter of simple common sense, but it is so general that it tends to undercut security of title. If prospective investors in exploration sense that they would be subject to a rigorous examination of compliance with all of their exploration license conditions and possible denial of an exploitation license on the ground that they have not performed a minor obligation, they will not invest. They should be assured of obtaining an exploitation license as long as they are in good standing and have not failed to fulfill a condition for the maintenance of their licenses.

35. Proving the discovery of an exploitable mineral, as well as the license holder's technical and financial capability to discharge his obligations, is not generally considered an onerous requirement by international mining companies as long as the standard is an objective one not involving any second-guessing by the licensing authority. A mining company may have to perform a number of increasingly comprehensive “feasibility” studies leading up to a final “bankable” mine feasibility study on a project in order to convince its senior management and its lenders to finance final completion of the mine anyway. Therefore, in order to reconcile the investors' concern with security of tenure and the Government's concern with good stewardship of its resources, consideration should be given to ensure an adequate formulation of the proof requirement.
36. It is recommended that the Mining Code guarantee the grant of an exploitation license to the exploration license holder in good standing who submits a professionally prepared and technically credible feasibility study. The Code should define such a study as being one that has been preliminarily accepted by a creditworthy source (the mining company, its parent or affiliate, and/or its lenders) willing to finance development of a proposed mine. The definition should be flexible enough to accommodate large, medium and small mines and quarry operations. In this regard, basic form and content can be specified in regulations.

37. Filing the feasibility study would accomplish the proof requirements as to the ore body and the licensee's technical and financial capabilities all in one document that the exploration license holder would have to prepare in any event. The conclusions of the study and the decision of the management and lenders to finance the project should not be open to question or discussion by the Ministry and/or the Provincial Administrations. Its role should be limited to verifying that the licensee has done what a developer would normally have to accomplish in order to justify developing a mine.

38. The respective regulations should specify what documentation is necessary in order establish that the feasibility study is acceptable. The Mining Code and Regulations should also provide very carefully for protection of the confidentiality of the study and the non-disclosure of proprietary information included therein. In order to ensure the acceptability of the feasibility study, a detailed description of the requirements and outline of a feasibility study should be included in the mining regulations.

39. Many jurisdictions, particularly in Latin America, do not require proof of either the discovery of an ore body or the technical and financial capability of the company as a condition for the grant of a mining license. Their approach eliminates discretion and avoids corruption in the license issuing process and facilitates administration. Those jurisdictions are considered to be very attractive to investors because they allow free market forces to determine whether and how a particular ore deposit will be developed and by whom. However, it is suggested that the same result can be achieved in an arguably more responsible manner by guaranteeing that an exploration licensee who submits a professionally credible feasibility study will receive an exploitation license, as recommended herein.

40. **Clear/objective maintenance obligations, and cancellation criteria/procedures.** The Mining Code of countries with important mineral industries usually distinguish between those obligations that must be fulfilled in order to maintain a license in effect and those that must be fulfilled as a matter of good practice. These usually differentiate in regards of obligations where failure of compliance involves cancellation of licenses, or other less drastic penalties such as fines and suspensions of operations. This is particularly important in light of the current state of rapid and significant change in regulation of the mining industry with respect to environmental protection.
41. The trend in modern mining laws is to differentiate between those obligations that must be fulfilled in order to maintain one's rights in effect and other obligations that are a condition for permission to engage in operations pursuant to those rights. Maintenance rights are generally financial in nature and therefore objective: payment of rentals, required minimum annual expenditures and perhaps royalties. Failure to meet these obligations results in cancellation of the license. Since the obligations are objective in nature, a license holder and his financial backers can make provision for them and minimize or practically eliminate any risk to the licensee's security of tenure.

42. Other obligations - for example in the areas of best practices and compliance with all other applicable laws - may be subject to evolving interpretations as to which there is considerable uncertainty. It is impossible for a prospective investor to evaluate his risk of license cancellation due to noncompliance with one of these obligations, and that in turn undercuts his security of tenure. Therefore, the modern trend is to sanction noncompliance with those obligations by penalties and forced suspensions of operations pending remediation.

43. For these reasons, it is strongly recommended that consideration be given limit legally the cancellation of licenses only to:

- default in the timely fulfillment of financial obligations, including minimum expenditure requirements,
- perpetration of fraud against the Government.

44. Accordingly, other failures should be punishable by fines and suspensions of operations.

45. **Transferability of rights.** The transferability of exploration and exploitation rights is important to investors in providing them with some source of liquidity and facilitating financing. From the private investor's perspective, a mining law should provide freedom to assign rights, or to subdivide rights, and to mortgage (if real property) or pledge them (if personal property) as necessary to secure financing. Junior exploration companies, many of which have been very successful at delineating mineral deposits, rely on transferability of their rights at some point in the exploration sequence, since they are often not capable of financially or technically developing a mine to production.

46. The flexibility of transfer rights must be usually balanced with the usual provisions in the Mining Code’s, which stipulate that mining rights will be held only by eligible and qualified persons, which accept the related obligations summarized in the code.

47. The trend in modern mining laws is to accommodate the financial community's need for liquidity by permitting greater freedom to transfer exploration and mining rights. It includes usually the requirement that the transferee must assume all of the obligations of the license being transferred, and a broader freedom of transferability to include the ability to subdivide a license and transfer a part of it, subject to conformity of both the transferred and the retained parts to the
standard boundary configuration requirements. The acceptance of transfers should be defined as a verification and registration process based on criteria prescribed in regulations.

48. In contrast, it is worth noting that many countries with favorable geological potential, but with yet to be developed mining sectors, usually appear to discourage transfers in general and mortgages in particular. They often require prior written approval of the Minister of Mines for a mortgage of rights under the Mining Code, and do not restrict him from unreasonably refusing a request.

49. Accordingly, in line with modern trends, it is recommended that Mining Codes state clearly which rights are morteageable, and clarify that mortgages of such rights are also transfers, subject simply to prior verification by the Ministry, and/or provincial authorities as they case may be, that the mortgagee is eligible, is providing the major part of the financing for a project, and is capable of assembling the technical expertise to carry on the project in the event of default by the licensee and foreclosure of the mortgage. The Code should also require the registration of mortgages of mineral rights in a register maintained for that purpose by the licensing agency.

50. **Operating Obligations.** The operating obligations of licensees should be clear, economically sensitive and practical. As addressed above, it is recommended that a distinction be made between operating obligations (which are conditions for engaging in operations on or under the ground) and maintenance obligations (which are obligations for maintaining mineral rights in effect). Usually, it is found that the obligations of the various license holders are underdeveloped, and there is a lack of differentiation as to the requirements applicable to the different types of license.

51. For example, it is entirely unrealistic and impractical to expect a reconnaissance license holder or applicant to complete a "comprehensive environmental study". If a comprehensive environmental study is a prerequisite for reconnaissance and initial exploration, that situation will discourage even the best financed companies from investing in minerals exploration. Such kind of well-intentioned and vague provisions are not realistic from either an investor's or an administrative perspective. The submission of a "comprehensive environmental study" should be required prior to commencement of a clearly defined "advanced exploration" program involving the initiation of significant ground disturbance activities. This situation is sometimes being improved through revisions of mineral regulations, which can stipulate different requirements for the various phases of the exploration and mine cycle.

52. It should be noted that often policies on employment and mining need to be reconciled. In particular, by introducing mechanisms for facilitating visas and work permits for foreign workers needed during project development and start-up, in conjunction with monitoring of the licensee's programs for localization.

53. The reporting requirements for holders of reconnaissance and exploration licenses should be reasonable. They are often excessive in countries with favorable geological potential, but with
a mineral industry yet to be developed. The usual requirements that technical records, samples and drill core be delivered to the Ministry of Mines should be sensitive to the needs of licensees to market their projects to potential financing sources. The Mining Codes should clearly permit licensees to retain duplicate technical records and slices of drill core, which match those on file for their own analytical and marketing needs. Furthermore, the Mining Codes should provide for fundamental protection of the confidentiality of the geological information submitted by licensees during their tenure.

54. **Operating rights.** Often mining codes need to be improved in respect of: a) necessary easement rights ancillary to exploration and mining rights; b) clarity as to surface rights; and c) issues of access of mineral right licensees to water supplies, as to which some linkages are usually necessary.

55. Finally, often there is also a need to improve Mining Codes with statements on marketing freedom, and clarifications to include pricing freedom and whether domestic sales are subject to any restrictions.

56. **Penalties.** As previously noted, it is generally recommended that a distinction be made in the Mining Codes between non-forfeiture penalties (fines and suspensions) for failure to comply with operating obligations, on the one hand, and specific financial, maintenance obligations which must be met in order to maintain a license in good standing. All violations, except false information and failure to pay amounts due the state, should be addressed with differentiation of the severity of penalties according to the gravity of the violation, and with procedural provisions for the application of penalties.

57. **Conclusions and Recommendations.** Based on the preceding analysis, it is important that the mining code compare favorably with modern mining codes in the countries that have been most successful in attracting foreign private investment into their mining sectors. It is therefore recommended that consideration be given to introducing the additional improvements discussed in this section and summarized below:

- Provide in the Code for the establishment of an independent licensing office;
- Provide in the Code a clear statement of the criteria and procedures for licensing, including administrative and judicial review;
- Codify the necessary elements for a modern mining cadastre;
- Adopt the "first come, first served" principle of processing applications;
- Define the controlled competitive bidding process and narrow its use to open, strategically selected mine development properties;
- Clarify the financial incentives for voluntary relinquishment of territory;
- Improve security of tenure by: (i) clarifying that the various rights under the Code correspond to specific types of property rights; (ii) eliminating overlapping licenses for
different minerals; (iii) making the grant of an exploitation license automatic for an exploration license holder who submits a credible feasibility study; and (iv) limiting the grounds for license cancellation to defaults in the performance of objective, financial, maintenance obligations;

- Clarify the verification and registration process for transferability of rights to enhance liquidity and facilitate financing;
- Differentiate operating obligations from maintenance obligations and adapt the former with a view to their practical application;
- Modernize in the Code the provisions for a Mines Inspectorate Office, with monitoring and inspection duties and responsibilities prescribed in regulations;
- Clarify access to water rights, as well as the operating and marketing freedoms of operators;
- Differentiate non-forfeiture penalties according to the severity of the offense and establish procedures for the imposition of such penalties.

58. It is respectfully submitted that the recommended changes would significantly enhance the attractiveness and administration of the legal regime for mining of Pakistan, without departing from a Government's conservative approach to good stewardship of the non-renewable mineral resources of the country.
SECTION THREE
INSTITUTIONAL FRAMEWORK

1.0. OVERVIEW OF EXISTING INSTITUTIONS

59. Effective mining institutions are indispensable for the promotion and regulation of a reformed mineral sector. The main functions of the public mining institutions are: (i) the establishment of sectoral policy, goals and strategy; (ii) the definition and enforcement of norms and regulations; (iii) the administration of mining rights; and (iv) the establishment of a bank of reliable technical information. The most common problems observed in mineral sector institutions are overlapping mandates and responsibilities, conflicts of interest, and political interference in administrative and technical work. A careful assignation of functions based on a clear definition of objectives and scopes of activity contributes to a climate of confidence and transparency in the administration of sectoral policy, and optimizes the use of resources.

60. Since Independence, the public mining institutions of Pakistan were designed to meet the needs of a public sector driven industry. Typically, in other countries, the state-owned mining enterprises reserved to themselves the best prospects for future exploration, although their exploration budgets were the first to be cut in any austerity program. This has resulted in that exploration by the private sector has been minimal due to the unattractive competition and related legal framework.

61. In Pakistan, despite of their commitment and acute sense of professionalism, the public mining institutions operate under a number of constraints. Many regulations cannot be implemented without adequate equipment, financial resources, and skills, limiting their capability to enforce the law. In order to enable the federal and provincial institutions to expand their capacity with qualified and trained staff, additional resources will be required. This will have to come through the recognition of the importance of the sector and a consequent increase in resources. One possible approach would be to establish cost-recovery principles in the operation of the provincial mining administration, associated with the granting of mining licenses and the management of the registry system, allowing them to receive a part of the surface rental fees. This system is widely used in several Latin America countries and contributes to the sustainability of public mining institutions.

62. Mining Directorate. In the successful mining countries, the Ministry and its units are responsible for policy; design, definition and enforcement of regulations; coordination with other ministries; supervision of the other mining sector agencies; compilation and publication of statistical data; and the promotion of mining activities and investment opportunities.

63. Sound policy making, regulation and administration of the mining sector requires considerable coordination with other government departments, notably Finance, Justice, Transport, Power, Labor and Environment. Special emphasis needs to be given concerning relationships and procedures with the national environmental agency. An open dialogue with the
private mining sector is also important to establish consensus regarding the definition and enforcement of viable regulations.

64. The main public mining institutions are the Federal General Direction of Mines, the Provincial Mining Administrations and the GSP. However before discussing the specific roles and activities of these institutions it appears justified to review the legal and overall framework under which they are operating. As mentioned before there is a substantial gap in the institutional content of the current legislation to provide the legal underpinning for the NMP to ensure the proper administration and management of the sector.

65. **Central Mining Administration.** In Pakistan the Ministry of Petroleum and Natural Resources is responsible for the administration and control of the mining sector through the Federal General Direction of Mines, which is organized into two divisions. The main functions and responsibilities of these Divisions can be summarized as follows:

- Control and statistics of exportation and importation of minerals.
- Statistics of minerals production.
- Supervision of the Geological Survey of Pakistan.
- Monitoring of the Mineral Corporations and the mining companies owned by the State (Federal or Provincial).

66. For the execution of these activities, the Federal General Direction of Mines is staffed with a total of 10 people. It is important to point-out that the current structure/staffing does not allow the Federal General Direction of Mines to accomplish the institutional functions listed above.

67. A similar situation exists with respect to the cadastral information. Each province has a registry and updated information about the situation of the licenses (applied, granted or cancelled) inside its own provincial jurisdiction, but there is no complete and comprehensive database about the licensing situation in the totality of Pakistan. As the mining cadastre information can be considered the “barometer” of the mining industry, providing the government with information:

- To monitor the performance of the mining policy.
- To design required action plans, in response to the real demands of the mining sector, and to improve the practical application of the mining policy.
- To guarantee the correct interpretation and application of the legal framework, providing applicants and investors security of tenure.
- To promote the minerals potential of Pakistan.

68. It is important that these functions are coordinated to ensure the correct management and promotion of the Pakistan mining sector, and do not present competition between the Federal Government and the Provinces. In fact, the activities listed above are complementary to the licensing responsibilities held by the provinces. Good coordination will be mutual beneficial to both, provincial and federal, mining administration levels. The need for this coordination was
already identified some years ago by the federal Government, when (from the Management Services Division of the Cabinet Secretariat) it was suggested in 1995 to create a “Mineral Wing” in the Ministry of Petroleum & Mineral Resources to take on this coordinating role. This recommendation has however not been implemented.

69. **Provincial Mining Administration.** Although the organization of the Provincial mining administrations is based on the NMP, the practical results of the interpretation in each province is somewhat different from the principles established at Federal level. Point 3.3. of the NMP states that the provinces organize a Development of Minerals Department, with two administrative units: the Licensing Division and the Exploration Promotion Division. Nevertheless, the provinces interpreted this in their own way. In fact, the organization in each province is slightly different compared to the others (Table A) and consist of three divisions, with different administrative and functional contents.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Staff (aprox.)</th>
<th>Divisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>DG Minerals, Balochistan Province</td>
<td>300</td>
<td>- Exploration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Mines and Minerals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Licensing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Mining Inspection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Mines in Minerals</td>
</tr>
<tr>
<td>DG Minerals, NWFP Province</td>
<td>240</td>
<td>- Exploration and Minerals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Licensing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inspectorate</td>
</tr>
<tr>
<td>DG Minerals, Sindh Province (*) Plus an independent authority for coal matters</td>
<td>150</td>
<td>- Exploration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Administration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inspection</td>
</tr>
<tr>
<td>DG Minerals, Central Administration</td>
<td>10</td>
<td>- Geology and Mining</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Economy and Laws</td>
</tr>
</tbody>
</table>

70. It is important to note that the organization as presented in Table A does not reflect the reality as most of the provinces lack the resources to implement the organization mandated by the NMP. However based on the number of staff/personnel assigned to each DG Minerals, it should be possible to implement the complete structure adequately through a more balanced distribution of the available human resources.

71. **Institutional Evolution in other Mining Countries.** In countries that have transitioned from colonial regimes, the development and management of mineral resources has often been handled by a lead agency or Ministry, with specific responsibilities, and assistance from external
bilateral organizations as partners. Offices reporting to the lead agency have often included: Mining Investment; Survey and Exploration; Finance and Administration; a Legal, Planning and Public Relations Department; and the Geological bilateral missions.

72. The activities of the lead agency have included: Geologic Survey and Mapping, Services to the Community, Mineral Exploration, Mining Development, and Mining Investment. Its principal activity, however, has been in conducting advanced exploration and mining development projects. Its main objective has been to focus attention on promising prospects by conducting detailed mineral deposit evaluations up to the completion of pre-feasibility studies. The lead agencies have then aimed to offer such targets to the public or private sector for further feasibility analysis and where deemed profitable, for mine production.

73. Available literature documents the contributions of the bilateral geological missions in assisting lead agencies to improve the geo-scientific understanding of respective countries until recently. These have included large and small-scale geological and geophysical mapping, mineral target and occurrence compilations and metallogenic syntheses. The results of several decades of geo-scientific surveys and exploration projects have often been made available in open file reports and map series, and are now at various stages of being compiled into modern information systems. The more important examples of this work are:

- Geologic and geographic maps at 1:500,000 scale;
- Geologic and geographic maps at a scale of 1:250,000;
- Geologic quadrangle maps, at 1:100,000 scale, of many areas of the respective countries;
- Aeromagnetic maps of the country and cover rocks at 1:100,000 scale, 1:500,000 scale and 1:250,000 scale;
- Industrial mineral resource maps of major urban areas at a scale of 1:100,000;
- Hydrogeology maps of a limited number of quadrangle areas at 1:250,000 scale;
- A number of 1:1,000,000 scale maps, including mineral occurrence maps, lithofacies map, and felsic plutonic map;
- Mineral Locality maps, and maps of ancient mining sites.

74. The bilateral geological missions have also played an important role in the establishment of, and related training in, Geographic Information Systems (GIS), and in information technology and data-management systems. They have also contributed to environmental hydrogeology and geohazard documentation. Again, however, these missions have assisted the country’s lead mineral agencies in specific mineral deposit identification, investigation, and pre-feasibility assessments.

75. A prime objective of these lead agencies has been to train a broad range of local personnel, to can manage and integrate its administrative and technical activities and make decisions concerning mineral sector policy. As a result it is not uncommon to find a high proportion of technical staff, which have completed advanced degrees in the geological sciences.
76. **State owned mining enterprises**. Such companies have been often established, with shares held by the State, to carry out mineral exploration and development across the respective countries. A usual stated objective has been to rationalize mining projects in which the country participates. In this regard, such enterprises have taken interest and/or control of mines, development projects, and numerous exploration and development targets. Often, they have engaged in the conduction of investigations, including drilling, on large exploration areas and have applied for additional exploration licenses and mining leases under the respective existing Mining Codes.

77. Such companies have had missions and objectives stated within their respective charter. Certain selected articles relevant to this analysis are reproduced here:

- “engage in the various aspects of mining activities relating to all stages of the industry...;
- “acquire any of the mining concession deeds in accordance with the [existing] Mining Regulations”;
- “attract domestic and international investments to participate in the national mining industry”;
- “conduct its activities on commercial basis and for the purpose of profit as practised by private commercial companies”;
- “during an specific year of the incorporation of the Company, the State shall consider offering all or part of the Company’s shares for public subscription”;

78. In public presentations and documents prepared by such their management it has been stated that such companies:

- will operate in accordance with the country’s traditional liberal, open-market private enterprise policies;
- welcome cooperation with qualified local and international companies voluntarily seeking a substantially capitalized local joint venture partner;
- recognize the high risk involved in the search for new mines, and are prepared to share both the risks and rewards with qualified local and foreign partners;
- wish to contribute, through education and training, to the strengthening of career opportunities for national staff in the mineral sector;
- do not endorse monopoly rights or special status, and welcomes competition within an open, commercial business climate.

79. The inclusion of such state owned mining enterprises in the Institutional section is based on the observation that such companies are often viewed by Governments as an essential agent in the comprehensive development or revitalization of their mineral sector. It is also clear that, in spite of their legal mandate, stated commercial intentions and future privatization, such companies are perceived, by many local and foreign observers, to in fact already have informal “special status” arising from the following advantages:
• an exclusive right to all new gold development projects; and
• an exclusive mandate to be the major joint venture partner for all mineral projects
2.0. Institutional Reform Issues

80. The role of the Government in a private-sector-led mining industry is to define and enact clear (i.e. non-discretionary) and consistent policies for the sector, to promote private initiatives and investments, to administer mineral rights, to gather and provide basic geological information and to ensure that mining development is environmentally sustainable. Other activities, such as exploration, development, exploitation, beneficiation, smelting and refining, as well as mining and support services are left to the private sector.

81. As countries liberalize their economies along free market principles, the role of Government is reviewed, creating profound changes in all government institutions. In relation to institutional factors, perhaps the most important feature should be the simplicity and clear mandates of the institutions involved in regulating and administering the mineral sector. The institutions, other than state mining enterprises, should have a sector regulatory/administrative role only and be responsive to both public and private sector participants. Good geological data which is well organized and readily accessible at reasonable cost is another requirement of the enabling environment to attract private investors. The establishment of a modern mineral resource database and up-to-date regional geology, geophysics, geochemistry and thematic maps integrated into a geographic information system is another important function for the Government.

82. If enterprises and private investors/operators are to work successfully side by side and in the necessary competitive atmosphere, the regulatory environment for domestic, both private and state owned and international mining companies needs to be both transparent and the same.

83. In successful mining countries with important mineral industries, all parties have generally agreed on the need to restructure and reorganize their institutional setup to more effectively and efficiently administer a new private sector oriented Mining Investment Code and its inter-ministerial and inter-agency imperatives. In line with such consensus, the mineral authorities have initiated and implemented the establishment of new organizational frameworks, to be responsive to private sector led new developments in the mineral sector.

84. A basic premise of the current mineral sector promotional initiative of many mining countries, with important mineral industries, is that “for any prospective investor . . . there is only one agency (the) to deal with”. Reinforcement of this “one stop shop” concept is recommended strongly for restructuring the current organizational framework of Pakistan to attract local and foreign investors. The international merit of this structure remains based on the fact that it represents the current institutional framework for the successful mining jurisdictions of Chile and Peru. It also represents the historic institutional framework for the most successful mining States in Australia and Provinces in Canada over the first 70 years of this century, a period when mining development in these two countries made them the pre-eminent mining jurisdictions in the world.
3.0. **Proposal for Restructured Mineral Institutional Setup**

85. Four main functions/activities outline the role of public mining institutions in a modern, private sector oriented mineral sector jurisdiction. These are:

- **mineral policy**, objectives and strategy
- **mining code**, regulations and administration
- **information management**, research, compilation and dissemination
- **inter-ministry coordination**, cooperation and facilitation

**Table B**, below, presents the diverse functions necessary to address these areas of activities within an integrated organizational framework.

**Table B. Reformed Mineral Sector Lead Agency Organization Chart**

![Organization Chart](chart.png)
86. Based on the following best international practices, the proposed restructuring would result in fundamental changes in the mandates of mineral institutions compared to its existing functions and activities:

- the necessity of a clearly defined separation of Government regulation of a country’s mineral sector from the private-sector operational responsibility for financing and conducting applied mineral exploration and mine feasibility and production activities.
- A well defined role of the Government to conduct fundamental geo-scientific research and promotional engineering, processing, marketing and investment studies compared to the role of the private sector (and state-owned mining companies) to conduct practical exploration and development work aimed directly toward mine feasibility analysis and mine production decisions.
- A clear definition of non-monopolistic, non-special status for all the state-owned mining companies, and their unequivocal objective to conduct their business in a commercially competitive manner within the country’s new private sector led mining investment framework.

87. The fundamental change from mixed mineral sector regulator-operator to a regulator of private sector operations would require that the new institutional setup receive a clear mandate from the Government, and strong leadership of a team identified with the reform objectives. The new mission of the mineral institutions and agencies would be to administer the Mining Investment Code, and all responsibilities emanating from its authorized activities through:

- fair and open application of mineral titles, legal procedures and operational standards and enforcement;
- development and maintenance of comprehensive geo-science and mineral inventory research, reports and databases, and
- analysis and policy development of mineral sector issues conducive to promoting and stimulating new investment opportunities.

88. The following sub-sections provide a brief overview of each of the units outlined above in Table B.

89. The Geological Survey Department. The basic functions of this department are presented in Table B. The objective is to develop and maintain a reliable national earth science database. This database is essential for documenting the geological formations and structures favourable to the occurrence of metallic and non-metallic mineral deposits. As such, it represents the key contribution to the promotion of the country’s mineral resources. An equally important function is the identification of geo-ecological processes, hazards and water resources that impact on the social and economic well-being of the nation. The position of Head Geologist must continue to be filled by a senior, highly respected scientist with the ability to motivate a diversified
team of geoscientists. The research emanating from this department must be made available to the public in a timely and open manner.

90. **The Mining Investment Policy and Planning Department.** The strategic objective of this Department is to stimulate and encourage investment in mineral resources by the private sector. In this regard, it must act as the coordinator of the focused activities of the other units within the country’s lead mining institution and/or agency, and consolidate the information and statistics into policy position papers and promotional presentations for both senior Government and local and foreign investment leaders. A team of professional researchers are needed to maintain updated national and international perspectives on legal, technology, processing, marketing and commodity developments as they relate directly to the country’s mineral sector imperatives. This unit/department must play the central role in internal and inter-ministry coordination and private sector liaison, in order to effectively establish the country’s lead mining institution and/or agency with a one stop shop credibility within industry and the public. In this context it would also be responsible for the packaging and adjudication of competitive bids.

91. **The Mineral License Application and Registry Office.** This autonomous unit must be completely independent from any Government entity authorized to hold licenses issued under the Mining Investment Code. Its focused responsibility is to be the official Registry of all licenses and license transactions and notifications directly or indirectly related to the provisions of the Mining Investment Code. It must therefore contain expertise in the development and maintenance of a standardized cadastral system, accurate cartographic map control, and clerical efficiency in acceptance, processing and notifications related to the holding, renewal, rejection, cancellation and amendment of all mineral licenses. Proficiency in basic computer processing is also required. The subsequent maps, databases and registries of such documentation must be open to the public. Additional data and submissions, which may be specified as confidential by law, must also be securely controlled by this office. The Chief Registrar must therefore be a trustworthy professional with comprehensive education and experience in surveying, cartography and/or technical engineering. This office represents the first door into the institutional setup, headed by the country’s lead mining institution and/or agency, for many prospective local and foreign licensees.

92. **Inspection Office for Exploration and Mining.** This unit is responsible for the inspection of all advanced exploration and mining activities, in order to ensure the proper conduction of all work authorized under the Mining Investment Code and Regulations. Although specialized in nature, these exploration and mining activities must also conform to national standards of worker health and safety, and environmental protection and management. This unit should work in close coordination with the main Labour and Environmental Institutions and Agencies of the country, and should be formally designated to act as an agent for their inspection responsibilities.

93. This responsibility requires education and experience in applied exploration and mining programs, in addition to the necessary knowledge of related environmental, labour and health and safety legislation and regulations. Regular communication with all authorities where exploration
and mining activities may have an impact is essential. The Chief Inspector must be a senior mining
engineer, with impeccable credibility as a fair arbiter of proper mining conduct. All staff must
develop this type of reputation in order to successfully fulfil the duties of this difficult, essential
public service.

94. **Inter-sectoral Coordination.** Of the four general categories outlined above in paragraph
85, the most critical and most difficult is to address inter-ministerial and inter-agency coordination
and cooperation. With respect to international best practices, traditionally successful mining
jurisdictions, with apparently best practice models in the areas of mining policy, mining code and
information management, have sometimes deteriorated and become currently unable to effectively
manage their mineral sectors. This lack of coordination is often the result of a redistribution of
responsibilities from one integrated mines department into separated policy, regulatory and
investment assignments within ministries of Labor, Environment and Finance.

95. This transition has led to a number of negative developments:

- poor understanding and appreciation of the unique technical, environmental and
  financial elements of mineral development;
- overlapping and conflicting mandates and responsibilities; and
- bureaucratic and political conflicts of interest.

**Note:** At the beginning of the 1990s, the regional distribution of world-wide non-ferrous,
non-fuel mineral exploration expenditures was approximately USA - 20%, CANADA -20%,
AUSTRALIA - 20%, LATIN AMERICA - 15%, Rest of World (mainly SE Asia and Africa) -
25%. By the early 2000s, the distribution was roughly USA - 7%, CANADA - 17%,
AUSTRALIA - 19%, LATIN AMERICA - 29%, Rest of World – 28%.

Many factors are involved in these trends, but, for the purpose of this analysis, two patterns
are emphasized for consideration:

- the three traditional mining countries have all suffered reduced percentages of this
  global exploration pie, with USA and Canada suffering 50% reductions. These countries
  continue to experience increasing interference in mineral policy and administration by other
  ministries and external interest groups.

- Latin America (especially Chile, Peru and Mexico) has doubled its percentage of the
  pie. Many countries in Latin America have implemented private sector focused mining
  reforms during this period, including restructuring/strengthening of their mining institutions.

96. It is clear that it will be essential to build mutually satisfactory linkages between the diverse
disciplinary government (Federal and Provincial), non-government and public agencies that
impact the conduct of modern mining related activities.

97. A preliminary list of some key Ministry and Agencies interfaces/interactions include:
98. The development of a "one stop shop", if properly implemented, will have its greatest impact as the **first door** for investors and the interested public to enter for mineral sector related information and services. The one stop shop within the lead agency or Ministry would act as the client’s lead agent in facilitating all necessary discussions, notifications and permissions with other concerned agencies, which in Pakistan will also involve the agencies implicated in environmental and water related matters. Ideally, this requires formal agreements with all relevant Ministries and agencies, and established liaison arrangements with relevant external agencies.

4.0 **ENVIRONMENTAL AND SOCIAL ASPECTS**

99. **Background.** As previously addressed, in order to succeed in attracting private investment, the execution of mining sector reform involves a fundamental shift in the role of governments in the mineral sector, from being both owner-operator and referee to that of administrator-regulator. The private mining companies are expected to take the lead and the risks in exploring, developing, processing, smelting, refining and marketing mineral resources. The efforts of reform are focused on the definition and enactment of clear, consistent, non discretionary and explicit policies and rules for the sector on the administration of mineral rights, on the compilation and provision of basic geological information, and on the enforcement of internationally and locally acceptable social strategies and environmental standards that foster the sustainable development to the surrounding local communities. An important observation, from experiences with mining sector reform during the 1990s, is that most successes were achieved in those countries that undertook a comprehensive approach, including legal, fiscal, institutional and enterprise reform, together with the development of appropriate environmental regulations for the sector.

100. Serious investors prefer clear, consistent and realistic environmental policies reflected in workable legislation, as the absence of clear environmental policies increases their difficulty to raise financing in international capital markets. Thus, the global nature of the markets for financing mineral resource projects facilitates the enforcement of responsible environmental performance. Additionally, an effective public administration with competent agencies, and adequate regulations has become indispensable for enabling a proper environmental management. These involve the
provision of detailed operating rules standards, and the monitoring of compliance by mining companies with those rules and standards. There are two main approaches for the regulation of environmental aspects concerning the mineral sector: a) the central approach, with environmental legislation and enforcement institutions common to all economic sectors; and b) the sector approach, with environmental responsibility delegated to the individual ministries, which results in assigning the Ministry accountable for mining with responsibility for environmental standards, assessment evaluation, monitoring and enforcement within the mining industry.

101. **Mining and the Environment in Pakistan** In the past, the UNDP and World Bank did contribute to incorporate environmental practices and management. Presently, it is well recognized in Pakistan that: a) the role of the Government in a private-sector-led mining industry includes ensuring that mining development is environmentally and socially sound; b) the comprehensive and objective methodology to formulate and implement mining sector reform must contain environmental and social protections which foster the sustainable development of the surrounding communities; c) the institutional units responsible for the inspection of mineral activities must make certain that exploration and mining work conforms to national and internationally acceptable environmental, social, and worker health and safety standards; and d) the application of best/selected environmental practices and procedures must include adequate inter-ministerial and inter-agency linkage, coordination and cooperation.

102. In the above context, the process of mining sector reform involves the execution and adequate completion of steps already advanced in Pakistan towards: i) the liberalization of mining-related legislation, including stable and equitable fiscal regimes; ii) the modernization of government institutional arrangements in the mining sector; iii) the reform and privatization of state owned mining enterprises; and iv) the establishment of sound environmental and social management systems. In this respect, the analysis in previous sections has reflected the incorporation and adoption of sound environmental protection strategies and practices.

103. **Additional Considerations.** Considerable work remains ahead to address social and environmental aspects in a manner that facilitates the sustainable development of the mining sector. There is a need to formulate and establish a social and an environmental framework acceptable locally and internationally, which can foster sustainable development to the surrounding local communities. These frameworks should address in detail the policy, strategic, regulatory, institutional and compliance aspects, and should reflect some of the conditions, which are intrinsic to the mining industry, as summarized further below. Additionally, it should be noted that mining sector reform commences with the modernization of the policies, laws and regulations that govern it, and that most successful reforms have established clear and non-discretionary rules in statutes, which are grounded in constitutional principles and protections. Such reforms have focused particularly on the role of the state, access and transferability of mineral rights, security of tenure, freedom to operate on a commercial basis, responsiveness to social issues of neighboring rural communities, incorporation of appropriately phased environmental responsibilities adapted to the mining sector, and establishment of competitive and stable fiscal regimes. In particular, emphasis has been given to ensure that fiscal regimes reflect sensitiveness to the inherent
characteristics of mining, such as high exploration risk, long project development periods, intense use of capital, and cyclical fluctuations in demand and prices of mineral commodities. Accordingly, the reformed fiscal conditions, in the more successful countries, usually take into account all of the expenditures that mining companies are expected to make for environmental protection and social infrastructure, by allowing such expenses to be deducted from taxable income. They also permit the carrying forward (and in some cases backward) of losses, in light of the cyclical nature of the business.

104. The new role of the state in the reformed mining countries has also required the restructuring of the sector’s institutional framework as addressed above. The main public mining institutions needed to administer a private sector led mining sector include: a) Ministry or Department of Mines to co-ordinate the various institutional functions specific to mining, to interface with other governmental ministries, agencies and institutions to assure policy consistency, and to carry out investment promotional activities; b) a Mining Cadastre Office to administer all aspects of the licensing function on an open, transparent and efficient basis through a public registry of mining titles; c) a Geological Survey to develop, analyze, and publish scientific and technical information on the basic geology of all regions of the national territory, in order to be used for promoting the country’s investment potential; and d) a Mining Environmental Office to develop sector-specific technical norms and guidelines, evaluate environmental assessments and operating plans, and monitor environmental compliance and impacts.

5.0 CONCLUSIONS AND RECOMMENDATIONS

105. The recent institutional organizational structure of the mineral sector has not been conducive as a framework to implement and develop the mineral sector objectives of the Government. In order to encourage and promote a new private sector led economic initiative, this setup/structure needed to become a neutral, transparent entity with no real or perceived conflict of interest with private or state-owned operational enterprises. It was therefore recommended that:

- The institutional setup of the mineral sector should be reorganized in the manner outlined in this section. This has been so far initiated through the establishment of mineral sector organizational structures in each province, and the ongoing implementation of the new National Mining Policy for sectoral development in Pakistan;
- The further use of bilateral cooperation become re-focused to assist the country in this reorganization, especially as it relates to the collection and dissemination of fundamental geo-scientific information. This is underway with the continued support from JICA for staff training, and maintenance and modernization of laboratory, equipment and facilities of GSP in Islamabad;
- The Mineral Development Corporations, and any other state-owned mining enterprises, should operate on a transparently equal basis with other private sector enterprises. Any exclusive rights to mineral development and mandatory special status as a preferred domestic partner (either informal or formal) should be avoided,
and formally rescinded id existing;

- beyond the mandate of a new Mining Investment Code, agreements must be reached with relevant Ministries, Agencies and authorities to facilitate the functioning of a new ‘one-stop-shop’ for focused mineral sector administration and regulation, and coordination of all necessary interfaces an applicant or title holder must face to satisfy the laws of Pakistan. This is being initiated with the recent reorganization of the Federal General Direction of Mines, which although understaffed and with scarce resources, includes a strong focus on activities of mineral investment promotion, coordination and administration, which are currently being structured to function along the pattern of a one-stop-shop.