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***Mines and  
Mineral  
Development  
Project (Package  
# 07)***

Review of the  
existing Mining  
Act, Rules and  
Regulations and  
Recommendations

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*PricewaterhouseCoopers Pvt. Ltd.*

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# Table of Abbreviations

Abbreviation	Full Form
<b>ADB</b>	Asian Development Bank
<b>BCMCL</b>	Barapukuria Coal Mining Company Limited
<b>BEE</b>	Black Economic Empowerment
<b>BERC</b>	Bangladesh Energy Regulatory Commission
<b>BMD</b>	Bureau of Mineral Development
<b>BOI</b>	Board of Investment
<b>BPC</b>	Bangladesh Petroleum Corporation
<b>BPDB</b>	Bangladesh Power Development Board
<b>BPI</b>	Bangladesh Petroleum Institute
<b>CBM</b>	Coal Bed Methane
<b>CPRM</b>	Companhia de Pesquisa de Recursos Minerais, Brazil
<b>CONAMA</b>	National Environmental Council (Brazil)
<b>CSD19</b>	United Nations Commission on Sustainable Development
<b>DGMS</b>	Directorate General of Mines Safety, India
<b>DoE</b>	Department of Environment
<b>DNPM</b>	Departamento Nacional de Produção Mineral (Brazil)
<b>EMRD</b>	Energy and Mineral Resources Division
<b>EMP</b>	Environmental Management Plan
<b>ERD</b>	Economic Relations Division
<b>FDI</b>	Foreign Direct Investment
<b>GDP</b>	Gross Domestic Product
<b>GSB</b>	Geological Survey of Bangladesh
<b>HCU</b>	Hydrocarbon Unit
<b>IED</b>	Industry and Energy Division
<b>IEE</b>	Initial Environmental Examination
<b>IFC</b>	International Finance Corporation
<b>IGF</b>	Intergovernmental Forum
<b>IMED</b>	Implementation Monitoring and Evaluation Division
<b>ILO</b>	International Labour Organisation
<b>IMF</b>	International Monetary Fund
<b>IUPK</b>	Izin Usaha Pertambangan Khusus (Indonesia)

<b>JICA</b>	Japan International Cooperation Agency
<b>kWH</b>	Kilo Watt Hour
<b>LPI</b>	Logistics Performance Index
<b>MGMCL</b>	Maddhapara Granite Mining Company Ltd
<b>MIGA</b>	Multilateral Investment Guarantee Agency
<b>MMMSD</b>	Mining, Minerals, Metals and Sustainable Development
<b>MMRCD</b>	Mines and Minerals Resources (Control and Development) Act
<b>MoEF</b>	Ministry of Environment and Forests
<b>MoF</b>	Ministry of Finance
<b>MoPEMR</b>	Ministry of Power, Energy and Mineral Resources
<b>MMR</b>	Mines and Minerals Rules
<b>Mtoe</b>	Million tonnes of oil equivalent
<b>MW</b>	Mega Watt
<b>NBR</b>	National Board of Revenue
<b>NRB's</b>	Non Resident Bangladeshis
<b>OH&amp;S</b>	Occupational Health & Safety
<b>PPE</b>	Personal Protective Equipment
<b>PSMP</b>	Power Sector Master Plan
<b>R&amp;D</b>	Research and Development
<b>R&amp;R</b>	Rehabilitation and Resettlement
<b>SDF</b>	Sustainable Development Framework
<b>UCG</b>	Underground Coal Gasification
<b>UNCTAD</b>	United Nations Conference on Trade and Development
<b>UNFC</b>	United Nations Framework Classification
<b>WA</b>	Western Australia

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# 1. Executive Summary

- 1.1. This report, Review of Existing Mining Act, Rules and Regulations and Recommendations, is prepared as part of the Mines and Minerals Development Project (Package # 07) of Hydrocarbon Unit, Energy and Mineral Resources Division, Bangladesh.
- 1.2. The Terms of Reference that relate to this report is “*To review the existing Mining Act, Rules and Regulations and recommend changes for sector development*”.
- 1.3. The scope of this report covers:
  - Identifying applicable rules, regulations, policies for coal and hard rock minerals in Bangladesh
  - Review of the above for identifying key areas covered under the legislations
  - Comparative study with regulatory provisions of other countries
  - Recommendations for changes
- 1.4. This report is prepared based on a review of legislation governing the mining sector in Bangladesh to identify the need for changes, considering the emergent need for sustainable development of mineral sector. The key legislation governing mineral sector reviewed in this report are:
  - The Mines Act, 1923 (as amended in year 2005)
  - The Mines and Mineral Resources (Control and Development) Act, 1992
  - The Mines and Mineral Rules, 1968 (as amended in years 1989, 1995, 1999 and 2004)
  - Limited provisions of The Mines and Mineral Rules 2012
- 1.5. In addition to above, other laws listed below, with related implication on the mining sector are also discussed in brief where relevant:
  - Industrial Policy, 2009
  - Investment Board Act, 1989
  - Foreign Private Investment (Promotion and Protection) Act, 1980
  - The Environmental Conservation Act, 1995
  - The Environmental Conservation Rules, 1997
  - Arbitration Act, 2001
  - The Companies Act, 1994
  - The Income Tax Ordinance, 1984
  - The Foreign Exchange Regulation Act, 1947
  - Acquisition and Requisition of Immovable Property Ordinance, 1982
  - Relevant Labour laws

- Lender's security interest
- 1.6. Bangladesh shares one of its principal mining laws, the Mines Act, 1923 of colonial British period, with India. This was amended in 2005 with minimal changes. Likewise, the Mines and Mineral Resources (Control and Development) Act was enacted in 1992 upon repeal of the Mines and Minerals (Regulation and Development) Act, 1967 (EP Act II of 1968).
  - 1.7. The Mines and Mineral Rules, 1968 [framed under the Mines and Mineral Resources (Control and Development) Act, 1992, earlier under Minerals (Regulation and Development) Act, 1967 (EP Act II of 1968)] was amended in 1989, 1995, 1999 and 2004. The rules were repealed recently and the Mines and Minerals Rules 2012, was enacted. Whilst a few provisions of the Mines and Minerals Rules 2012 are new, the majority of provisions are drawn from prior rules. Presently, these Rules form the set of provisions regulating the three types of mineral concessions viz., Exploration License, Mining Lease and Quarry Lease. This clearly establishes the role of the Government in the early stage of development of the mineral sector in regulating mining concessions.
  - 1.8. By means of amendments to the Mines and Minerals Rules, 1968, other aspects of managing mining activity relating to workplace safety, mineral conservation, and environment had been brought under ambit of the Rules even as it is not uncommon in many countries to have separate set of rules dealing with different aspects of mining. The same continues under Mines and Minerals Rules 2012.
  - 1.9. The Mines Act, 1923 (as amended in year 2005) provides for framing of Rules and Regulations that regulate the Safety, Health, and Employment of workmen in the mines. The assessment suggests that the current provisions are inadequate to address these issues and need to be strengthened.
  - 1.10. In this report, the provisions of existing Acts and Rules have been analyzed and compared with the comparable provisions of mining legislations in other countries with a strong mining industry. We have taken the following countries for the gap analysis - India (given the shared history of regulatory development and the similar geological set-up), Australia and Canada (considering their advanced level of mining regulations), South Africa and Indonesia (as they are major mining territories but in a developing phase) and some of the guidelines of Sustainable Development Framework (SDF).
  - 1.11. Based on the above comparative analysis, we have framed recommendations for further amendments and changes to be brought in the existing Acts and Rules or for separate legislations to be enacted with the objective of developing the Bangladesh mining sector. It may be noted for interest that based on the SDF several countries including India have reviewed and revised their sector legislation.
  - 1.12. We have kept in view the complete eco-system of mining sector development in reviewing the said legislation in order to ensure a comprehensive and complete approach to it. These are:
    - Licensing and Leasing Types and Process
    - Health and Safety Management
    - Management of Mineral Resources Information
    - Classification and reporting of Mineral Resources and Types
    - Conservation of Mineral Resources during Mining, Extraction and End-use
    - Labour employment, Workers Compensation and Welfare Legislations
    - Domestic and Foreign Investment in Mineral Sector
    - Taxation and Royalties



- Socio-economic Benefit Optimization
- Environmental Management
- Mine Closure and Post-mining Transition

1.13. **Way forward:** To achieve the objective of sustainable development of Bangladesh mineral sector, we believe that the referred legislation and associated regulations will need to be strengthened and amended. This will help in addressing:

- the requirements of technical management, viz. mineral resources classification and reporting, mineral inventory accounting, mining methods, mineral conservation, etc;
- issues relating to Occupational Health & Safety (OH&S), fair wages, working conditions;
- the social and community impacts of mining activities;
- specific environmental management relating to stress on land and water resources;
- ensuring proper ownership of mineral resources, attracting foreign technology and investment, design of proper royalty and taxation;

1.14. Accordingly, in this report, our recommendations cover:

- amendments and additions to existing laws;
- changes in licensing regime
- promulgation of new laws and authorities;
- formulation of policies addressing issues related to investments and impacts.

## 2. *The strategic context*

- 2.1. The growth of emerging economies depends considerably on the state of infrastructure, its wealth of natural resources, and the ease of doing business. The use of locally available resources gives both, a cost advantage and a security of resource availability. The resources generate wealth for the state and the materials for infrastructure and economic development. For the emerging economies, the development of national resource wealth thus is a strong imperative.
- 2.2. The history of natural resource development also forewarns against the challenges involved. The lessons learnt are in ensuring proper protection, governance, and licensing of resources, attracting the right technology and use of sustainable mining practices, protecting safety of the environment and people, and ensuring the development is aligned with national goals and priorities.
- 2.3. To achieve the aforementioned goals, an up-to-date legal framework and strong institutions are needed. The amendments to legal framework can help establish modern principles in licensing, good governance, and sustainable development. The institutional capacity needs strengthening at the same time to ensure it carries our delegated responsibility of monitoring and oversight, facilitate in flow of capital, technology, and good practices, and take all steps for development of the sector.
- 2.4. This chapter covers an overview of mining, energy and infrastructure sector of Bangladesh and sets the stage for review of the relevant legal framework.

### *i. Mining, energy and infrastructure sector*

- 2.5. Bangladesh is one the most densely populated countries in the world. It posted a consistent economic growth of around 6% for past several years (IMF, 2006-10). As many other developing economies, its growth is impeded by limitation in energy and infrastructure sector and hence a focus of policy is to develop the underlying mining sector.

#### 2.6. **The mining sector**

- 2.6.1. The Mining and Quarrying sector currently forms a small part of the output viz. 1% of national GDP. Of this, about 50% is on account of natural gas and petroleum and the balance from other mineral resources (Bangladesh Economic Survey, 2010). The main mineral resources of the nation are coal, peat, limestone, white clay, glass sand, hard rock, gravel, and mineral sand.
  - **Coal:** Bangladesh has reserves of high quality coal in northern districts. Of the estimated coal resources of 3.1 billion tonnes occurring in five known coal basins, only the Barapukuria coal field with total resources of about 390 million tonnes has been developed and is operated by underground Longwall mining method.
  - **Hard rock:** The hard rock deposit with total resource of about 2.7 billion tonnes is identified at Maddhapara in Dinajpur district. It has the only hard rock mine of the country with design capacity of 1.65 million tonnes per annum, meeting 25% of the demand with the balance met by other dispersed sources and imports.
  - **Limestone:** Bangladesh has limestone deposits that are used in production of cement. In the 1960s, the GSB discovered limestone deposit in Joypurhat with a total reserve of 100 million tonnes. It was not found economically feasible on account of high underground temperature of the mine area in relation to the general depth gradient temperature of the area (as estimated by Cementation Mining Ltd). In the mid 1990s, GSB discovered deposits at Jahanpur and Paranagar of Naogaon that are the continuation of Joypurhat limestone.

- **White clay:** Surface to near-surface deposits of white clay is concentrated largely in the Bijoypur area of Netrokona district. There are subsurface deposits of white clay in Maddhapara, Barapukuria and Dighipara of Dinajpur district and Patnitala of Naogaon district. The exposed white clay is not considered adequate quality for estimation, as per available information. It is currently used in ceramic factories mixing with higher quality imported clay. Detailed investigation on these deposits is yet to be conducted but as per preliminary information, the subsurface deposit of white clay appears difficult to mine.
- **Glass sands:** Surface to near-surface deposits of glass sands are concentrated in Balijuri of Sherpur district, Shajibazar of Habiganj district and Chaudagram of Comilla district. Sub-surface glass sands are mostly found in Maddhapara, Barapukuria and Dighipara of Dinajpur district. The surface to near-surface glass sands are quarried for the local glass manufacturing industries.
- **Gravel:** Deposits of gravel are found along the piedmont areas of the Himalayas at the northern boundaries of the country. This river-borne gravel comes from upstream during the rainy season. The total reserve of gravel deposit is about 10 million cu. m., and is being exploited at various places in the country.
- **Mineral sand:** Deposits of mineral sand have been identified along the coastal belt and on the coastal islands of Bangladesh. They are concentrated on the sea beaches of Cox's Bazaar, Moheshkhali, Kutubdia and Kuakata. Heavy minerals like zircon, rutile, ilmenite, leucoxene, kainite, garnet, magnetite and monazite are found in these sands. An Australian company conducted a feasibility study of these mineral sand deposits and has proposed an investment of USD 400 million; but decision remains pending on account of the impact it would have on tourism and coastal environment. Incidentally, these minerals are also found in the Brahmaputra-Ganges river sands.

2.6.2. As noted from the above, the overall mineral deposits are moderate and the development status remains underinvested, and is unable to meet the country's needs. The growth of mining and quarrying (including natural gas and petroleum) sector is estimated at 4.85% (FY 2010-11). The construction sector contributes to about 8% of the GDP and is estimated to grow at 6.37% (Bangladesh Economic Survey, 2011), and itself besides other sectors (discussed below), will need development of mineral sector to supply its essential and basic raw materials needs.

## 2.7. Energy sector

- 2.7.1. The primary energy consumption in Bangladesh is 24.3 Mtoe (2011) represents 0.2% of global primary energy consumption, against a global population share of about 2.4% (BP statistical review of World Energy, 2012). Similarly, the per capita power generation is low at 292 kWh (BPDB 2012-13) and electricity access covers only 60% of the population (BPDB 2012-13). This is low even in comparison with other South Asian countries.
- 2.7.2. The installed power generation capacity of 5823 MW is significantly short of demand [7518 MW for 2012 (PSMP 2010)]. The Government policy has committed universal provision of electricity to all by 2021 and is targeting a per capita consumption of 600 kWh.
- 2.7.3. A challenge to achieving these goals is the present over-reliance on natural gas which accounts for about 73% of the country's commercial energy supply even as the resources are depleting. The peak demand for electricity by 2030, as per the Power System Master Plan 2010 (JICA report) considering the Government Policy Scenario is estimated at 33,708 MW. In contrast, sustainable supply of natural gas is uncertain beyond 2030, highlighting the necessity to develop alternative sources of primary energy. Coal represents a key alternative for use in base load power plants. The total coal production currently is about 3,000 tonnes per day from the Barapukuria coal mine in Dinajpur that primarily feeds two local 125 MW power plants.

## 2.8. Infrastructure sector

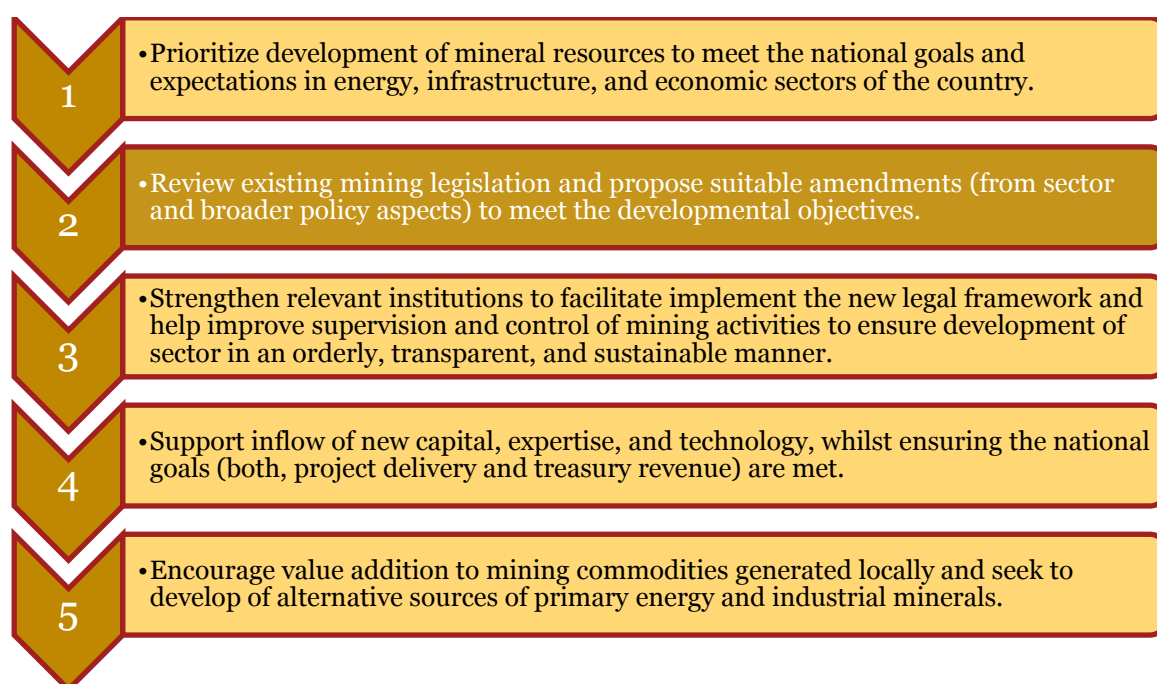
- 2.8.1. The transport infrastructure faces challenges on account of investment and terrain. Bangladesh ranks 79<sup>th</sup> on the International Logistics Performance Index (LPI of 2.74 on a scale of 5) and on the Infrastructure Index (2.49 on a scale of 5) as per the World Bank. The regular flooding in the monsoon season makes it difficult and expensive to build transport and communication network to cover the hinterland.
- 2.8.2. A large part of the road network is unpaved (less than 10% i.e., 22,726 km of the 2,39,226 km of primary and secondary roads are paved). A smaller part of the railway network (946 km) is broad gauge and the balance 1,676 km is narrow gauge. It is understood that policy measures are being put in place to address these problems by channeling investments into developing the highways, railways, seaports, and airports.
- 2.8.3. A key hurdle for the infrastructure deficiency is the poor availability of indigenous construction material. The annual demand of hard rock is about 6 - 6.5 million tonnes, towards which the only hard rock mine in the country at Maddhapara has a capacity to supply 1.65 million tonnes. This large gap in supply of hard rock makes it necessary to develop and optimally utilize the existing resources of hard rock.

## *ii. The approach for review of legal framework*

- 2.9. In this section we outline our approach for review of the legal framework, and suggest a high-level road map to realize the strategic objectives set out earlier.
- 2.10. An important principle of our review is to consider the full value chain of activities that are involved in any mining activity viz., from exploration, to licensing, to mine planning and operations, and the final beneficiation activities. The key developmental requirements of the activities differ, and hence should be considered individually to ensure no bottlenecks remain and are internally consistent.
- 2.11. In each stage of the mine development, the review covers not just the direct objectives, but the shared goals as well viz., in terms of safety, economy, efficiency, conservation, and environmental protection. In fact, most of the major mining jurisdictions have framed a set of Acts, Rules, and Regulations to systematically administer and manage achievement of these goals. These are discussed in the next chapter along with further developments these countries are making.  
  
The ongoing efforts at reform of mining law in many jurisdictions focus on abovementioned aspects. In Canada, the newly introduced Mining bill, for example, retains most of the earlier legislation, and seeks to add provisions for environmental oversight, public interest considerations, consultations with native communities, economic benefit measures and so on (this is yet to be passed into law, and so the specific provisions may vary).
- 2.12. A dominant modern theme is sustainable management of mineral resources. This has some general principles, but is also guided by issues that are specific to a resource and to the country's current and future needs and expectations. In other words, this needs to be dovetailed to the nation's broader situation and legal framework. In some situations, it may mean that the mining companies may be offered certain exemptions and in other cases they may call upon on serve broader roles in meeting the regional and national developmental needs, apart from their regular mining operations. Our local consultant team assisted the project in ensuring our review and recommendations are consistent with the national plans and expectations.
- 2.13. The key sector institutions will need to be prepared and strengthened to play the new roles expected of them, and to take advantage, in a positive manner, of the inflow of new players and capital into the country. This could, for example, be in terms of use of geological resources information; supporting

R&D initiatives; creating a talent pool of engineers, geologists, etc; helping develop local suppliers; etc., all of which have a positive reinforcement on the mining sector development.

- 2.14. The cost of doing business is always key consideration given its downstream impact of infrastructure cost, and more so when engaged in seeking overseas capital and technology. The legal framework will need to be conscious that its provisions are supportive of this need. In this context, it may be noted Coface, an international Credit Management services company rates Bangladesh as “C”<sup>1</sup> in the overall country rating and “D”<sup>2</sup> in business climate rating. Investors and bidders are often guided by ratings such as this, and the review of legal framework must consider the implications on investment climate. The treatment is limited in this report to the mining sector, and clearly, many other factors shape the investment climate (e.g., macro-economic, risks and returns, capital protection, transparency, etc).
- 2.15. Lastly, when the sector legislation is fully detailed out, would have to be supportive of and consistent with the country’s broader legal framework such as on regulatory compliance, environment, wages and employment. Further, it would have to be in compliance with the international conventions and agreements to which Bangladesh is a signatory to, and/or stand by it. It is not the intent of this report to capture these, but indicate that the focus of the report is on the mining sector related amendments and that the legislation’s completion will require other specialist policy, administrative, and legal inputs, direction, and expertise.
- 2.16. The graphic below provides a high-level policy roadmap, highlighting the key decisions and actions required.



- 2.17. The legislation relating to the mineral sector have been amended/replaced a few times in Bangladesh, but these have been largely focused on grant and regulation of exploration licenses, mining leases, and quarry leases. As indicated earlier, our approach will cover the full value chain of activities, and will capture modern trends and developments. A few key elements are:

<sup>1</sup> The business environment is difficult. Corporate financial information is often unavailable and when available often unreliable. Debt collection is unpredictable. The institutional framework has many troublesome weaknesses. Intercompany transactions run major risks in a difficult environment.

<sup>2</sup> The business environment is very difficult. Corporate financial information is rarely available and when available usually unreliable. The legal system makes debt collection very unpredictable. The institutional framework has very serious weaknesses. Intercompany transactions can thus be very difficult to manage in the highly risky environment.  
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- development of mineral inventory database to better inform policy makers, investors, developers, as a improved basis for planning and to extract best value;
- development of mineral resources using methods and technologies for maximum recovery and conservation of the mineral resources;
- management of workplace safety and health, adopting standard practices, such as ILO Codes of Practices for Underground and Surface Mining or others suitable for local context;
- management of social and environmental requirements and impacts;
- leveraging mining activities for local social and economic development;
- strengthening of capacity of key sector institutions;
- management of mine closure and effective post-closure transition; and
- enhanced local skill and business development opportunities in mining sector;

2.18. In this report, key legislation governing mineral sector in Bangladesh are reviewed to assess the need for changes in policy and legislative framework with a view to present:

- areas for enhancing management of its mineral sector; and
- key global trends and developments other jurisdictions are following in development of their mining industry

## ***3. Sustainable Development of Mineral Sector***

- 3.1. In this chapter, we discuss the Sustainable Development Framework (SDF) prepared by the Intergovernmental Forum (IGF) on Mining, Minerals, Metals and Sustainable Development (MMMSD), which many countries have used as the basis in formulating their policy and laws for the mineral sector.
- 3.2. The Brundtland Report of the World Commission on Environment and Development (United Nations, 1987, p. 43) defines sustainable development as “meeting the needs of the present without compromising the ability of future generations to meet their own needs”.
- 3.3. The key principles of the SDF, besides the mining laws in jurisdictions referred earlier, have been used in our review to identify the areas for strengthening in existing legal framework of the mineral sector in Bangladesh.

### ***i. IGF on Mining, Minerals, Metals and Sustainable Development***

- 3.4. The IGF is the institutional framework for the Global Dialogue on Mining, Minerals, Metals and Sustainable Development which was among the various Partnership Initiatives launched at the World Summit on Sustainable Development (Johannesburg, South Africa, 2002).
- 3.5. This initiative is by national governments with an interest in mining to work together to achieve goals and priorities identified for Mining et al sectors in the Johannesburg Plan of Action. In fact, the IGF (the Forum) is the sole global policy platform for the mining / metals sector with an overall objective of enhancing the governance and institutional arrangements. The major goals are to:
  - enhance and promote the contribution of the mining, minerals and metals sector to sustainable development; and
  - provide governments with a framework to discuss the opportunities and challenges of the sector;
- 3.6. The Governments of Canada and South Africa helped launch the Forum in February 2005. Any member of the United Nations can become a member of the IGF and its Annual General Meetings are conducted under the aegis of UNCTAD. The list of the members is provided in Annexure 1.
- 3.7. The revised SDF framework was last tabled in the 19th Session of the United Nations Commission on Sustainable Development (CSD19) in New York in May 2011. It was presented as a compilation of best practices for governments in managing the wide range of issues in the mining sector. It was soon recognized by the delegates, and then the industry, that this provided a systematic approach to develop the mining sectors in many emerging economies so that growth could go hand in hand with sustainable development. Further, that good governance and equitable sharing of benefits tapped from the mineral sector could also help reduce poverty and facilitate development.
- 3.8. The framework has received wide recognition and in fact meets a key requirement of developing countries engaged in opening up their mineral sectors. This alone will not be adequate, and the help of the donor nations and multilateral agencies is needed to support the capacity building and specific institutional support these developing countries need in order to ensure a sustainable growth while tapping their resources for either export or own use.



## ***ii. The Framework***

- 3.9. The following extracts from the SDF provide the basis, among others such as a comparative analysis referred earlier, for assessment of the prevailing legal and policy environment.

### ***Legal and Policy Environment***

- 3.10. In reform and development of any sector, certain key prerequisites are necessary, and among them is the need for a forward-looking and stable policy and regulatory mechanism. Progressive policies and regulations have a strong bearing in attracting new capital, technology, talent, etc., into the sectors they govern – and these are necessary for their growth in an economic and sustainable manner.

- 3.11. The key steps and factors that help align with the prevailing best practices for mining sector development are as follows:

- The generation of baseline geological, topographical, and other data necessary for sector planning is a key first step to development as it defines the resources in objective and unambiguous terms. It is important to generate sufficient information and build robust information management practices and repository, and provide data access to the various stakeholders.
- Periodic revision and updates of the policy, regulations, and standards is necessary to reflect the fast changes in knowledge, market requirements, and the best practices. These reviews should cover all parts of the value chain, from exploration to closure and post-closure management.
- Mineral resources should be classified, estimated, and reported as per internationally accepted systems and guidelines. This helps provide a credible basis for planner, investors, lenders, and the capital markets to engage with the sector. In addition, to regulate and administer effectively, the entire mineral resource base may be classified into groups as per their strategic and business significance.
- The regulatory framework must also consider conservation of mineral deposits and maximization of recovery of minerals, and minimization of losses during the mining, extraction, beneficiation, and end use processes. There should be provisions for conservation of marginal or non-economic grade minerals extracted during mining for their future potential use, wherever applicable.
- The mining industry in developing countries invariably operate under a wide range of structures i.e., from overseas mining companies and operators, to local state-owned and private entities, to the unorganized sector. It is important that labor laws are suitably aligned with the guidelines for industrial workers under ILO conventions or other international or national standards that are subscribed to by the country.
- Similarly, regulations governing occupational health and safety in mineral sector should be updated from time to time with development and adoption of new mining technologies and methods. It is important that a high standard for occupational health and safety be set through an appropriate set of legal provisions, as well as through monitoring, inspection, and enforcement activities. This is especially important in the mineral sector given the uncertain terrain, difficult operating conditions in underground mines, and the manpower intensive nature of operations.
- The policy and regulatory framework should also make it mandatory for all mining operations to institute emergency preparedness and response program prior issue of mining licenses, and set up procedures to review, test, and update these on a periodic basis.
- The procedures for issue of mining licenses or permits should be detailed out so that stakeholders see it as a well structured, transparent, and consistent process.



- The conditions for issue of mining licenses or permits must inter alia require assessment of the wider impacts such as in social (e.g., resettlement), economic (e.g., loss of livelihood), and environmental aspects and suitable propose mitigation or management measures in line with national law.

### *Financial Benefit Optimization*

3.12. The income generated from taxes and royalty levied on mining activities – from exploration, issue of licenses, mine development, exploitation of minerals, etc., - are a significant and direct value to the nation. In many countries, policy makers relooked at the value of mineral resources in recent years, making significant changes in taxation (e.g., Australia), transfer pricing (e.g., Indonesia), ownership (many countries), royalty regime and profit-sharing (many countries). Besides raising new financial resources from the mineral sector, a key challenge has been in utilizing them, and the practice in this has varied with different routes taken by countries to suit national agenda and priorities.

3.13. The best practices identified to achieve financial benefit optimization are as follows:

- The revenue generation (in diverse forms viz., direct taxes, royalties, profit sharing, concession contracts) should enable optimization of the returns from mining activities. This appears simple in principle, but in practice entails considerable work such as in flat vs., declining or increasing block rates, specific vs., ad-valorem, etc.
- The resource revenues and taxes should provide optimum return to society by gaining during the periods when commodity prices are high, and equally are not burdensome on the mining entities in periods of low prices. The design will then depend on the price volatility; and while fixed value commitments provide certainty, they will not sufficiently support or recoup value in periods of low and high prices, respectively.
- The tax provisions for mineral sector should be consistent with downstream sectors so that it does not impede development of value-added products locally, and supports conservation efforts fully. In a simple form, this would mean lower tax incidence on value-added products as against the raw materials; but will need to be seen in terms of broader incidence from other activities as well viz., import of mining equipment, processed ores, metal products, etc.
- The mining policy should ensure the price discovery for mineral resources auctioned is done so in an open, fair, and transparent manner. This will have to be balanced against the consequent impact on local commodity prices, and hence inflation. So, a careful balance needs to be drawn between maximizing revenues to the state and the cost to the consumers.
- The provisions of the mineral development concessions and licenses must keep in view the larger considerations of national policy and development goals. Specifically, the provisions cannot be stringent to the point that project delivery is impeded, and in fact, in the particular case of Bangladesh can be more relaxed as the outputs are locally consumed (and not meant for export).
- The application of direct financial resources, where raised with intent to develop the sector or the locally affected regions in terms of infrastructure development or community development, should be transparently disclosed.

### *Socio-economic Benefit Optimization*

3.14. The policy should incorporate the needs and expectations of the local community and national issues by taking into account the following best practices:

- The policy should specifically outline the local community and broader society expectations, and integrate this with the mineral sector development plan.

- The socio-economic planning, including establishing a baseline through a field survey, should be made a part of the licensing and permitting process. The impact of mine operations on the surrounding environment and society should be assessed and addressed at each stage of mining life cycle in an open and consistent manner in consultation with key stakeholders.
- The licenses issued should have scope for periodic reviews and permit revisions to reflect changes in operating standards and new situation brought to light. This is necessary as the development stage may bring new information to light that may have additional implications.
- The policy should ideally provide for development of the physical infrastructure and human resources to support further sector growth. This would have a positive feedback effect in growth of the industry, and help reduce the cost of outputs. A related aspect is that the permitting process can provide for encouraging employment of nationals, especially those from the vicinity of the mine.
- The legal and fiscal environment can encourage corporate social responsibility that the industry may engage in, such as in building local social infrastructure, vocational training, or non-mining related small industrial and service business opportunities for the local community. The support could be in form of tax credits, grant support, co-development etc.
- The domestic policies and law should be consistent with international laws and norms in respect of human rights, protection of cultural heritage, working conditions, etc.

## *Environmental Management*

- 3.15. The nature of mining operations means that the natural resources management is a continued ongoing responsibility in any jurisdiction. The location of the mineable deposits cannot be selected, which means it may be inconvenient in sense that it is close to human habitation; or nearby water source or suffer lack of it; or cover fertile lands; or lie in an ecologically sensitive area. The efficacy of resource use in all these situations is limited by the conditions, but for the context of this section, active steps to manage the situation avoid impacts.
- 3.16. So, the legal and policy framework should adopt the following best practices with regard to proactive environmental management:
- The management of water resources should have appropriate environmental management standards in place for the use of surface and ground water. These standards should be strictly monitored and have appropriate penalties and deterrents in place in case these are compromised.
  - The mining entities should ensure that the quality and quantity of mine effluents including mine works drainage are treated and managed to meet established effluent discharge norms and guidelines. The mining entities should be required to have plans and practices in place to minimize the likelihood of impacts beyond mining site.
  - The mining entities should be required to develop environmental management programs and list updates for approval, during the permitting process and whenever there is a significant process or operational changes during the operating life of the mine and beyond.
  - The mining entities should identify, monitor and address potential and actual risks and impacts on biodiversity throughout the mining cycle.
  - The mining entities should conduct monitoring on a continuous basis in accordance with national standards and the conditions laid in the operating permit, compile and submit performance assessments to government and publish regular reports that are readily accessible to the public.

- The mining entities and regulatory authorities should ensure that mining waste storage facilities such as waste and tailings dumps are planned, designed, and operated in a manner that the geotechnical risks and environmental impacts are appropriately assessed and managed throughout the entire mining cycle and even after mine closure.

### *Post-mining Transition*

3.17. The mining operations cannot be considered sustainable if they lack a progressive plan for closure during the entire lifecycle of the mine.

3.18. The following are the best practices in post-mining transition or closure of the mining operation:

- The mine closure plans prepared by mining entities should be of high standard, prepared in consultation with stakeholders and updated on a regular basis.
- A regulatory mechanism should be established for monitoring, evaluation, and enforcement of the provisions of mine closure plan.
- The mining entities should furnish adequate financial assurance before the requisite development and mining permits for a new mine are approved. Mining entities should also provide comprehensive reports on progressive closure during mine lifecycle as well as final closure and post-closure monitoring reports to regulatory bodies and public.
- The regulatory institutions should conduct periodic reassessment and get independent reviews done for closure plans as per the internationally accepted guidelines and good practices.
- The mining entities should undertake progressive rehabilitation in mined out areas which would minimize future environmental, economic and social impacts.

### *On implementation*

3.19. The objectives of sustainable development for mining sector discussed above require significant new efforts and investments for them to be achieved. The process of fully implementing these in a single step will be difficult and entails significant financial and institutional resources. In practice, the implementation may often be phased over a period of time, but it is desirable that the governing legal framework provides scope for the above listed practices right at the start, giving suitable preparatory time to achieve them. In this context, the Government of Bangladesh may undertake a comprehensive review of the current legal framework and make necessary amendments to develop the mineral sector in a sustainable manner.

## ***4. Legislative and Administrative Framework in Bangladesh***

### ***i. Background***

- 4.1. The legal system of Bangladesh inherits the legacy framework that has evolved over a long time from the Indo-Mughal era to the British period. This brings relative stability in legal traditions as well as conformance to prevailing international norms and standards. The principal laws enacted to regulate mineral sector were: the Mines Act, 1923 and the Mines and Minerals (Regulation and Development) Act, 1967 (E.P. Act II of 1968).
- 4.2. While the Mines Act, 1923 was amended in year 2005, the Mines and Minerals (Regulation and Development) Act, 1967 was repealed in the year 1992 and was replaced by the Mines and Mineral Resources (Control and Development) Act, 1992 (Act No. 39 of 1992).
- 4.3. The Mines and Minerals Rules, 1968 was framed under the Mines and Minerals (Regulation and Development) Act, 1967, through which the Government has delegated its authority to Bureau of Mineral Development (BMD) in the matters of regulating Exploration Licences, Mining Leases and Quarry Leases. The Mines and Minerals Rules, 1968, was subsequently amended in years 1989, 1995, 1999 and 2004. These Rules were repealed in June 2012 and replaced by the Mines and Minerals Rules 2012. It may be mentioned that the said Rules are published in Bangla language and only partly reviewed by us due to limitation of language, the limited review undertaken by our local experts suggests that the provisions are similar to Mines and Minerals Rules 1968 with certain additions.
- 4.4. In this chapter, the salient features of above listed legislation are discussed along with other relevant policies and legislations regulating the general business in Bangladesh.

### ***ii. Overview of Mining Legislations***

- 4.5. This section outlines the relevant legislation governing mineral sector in Bangladesh, to provide the context for subsequent review.

#### ***The Mines Act, 1923 (amended in year 2005)***

- 4.6. In 1923, the Mines Act was enacted to amend and consolidate the laws relating to the regulation and inspection of mines. The salient features of this Act are given below.
  - The Mines Act provides standard definitions for Mines, Owners, Agents, etc. and establishes their roles.
  - It provides for appointment of the Chief Inspector and the Inspectors of Mines and their powers to regulate mines through inspections, survey, measurement, examination or enquiry. Clause 4-(3) empowers the District Magistrate to exercise limited powers and duties of an Inspector subject to the general or special orders of the Government.
  - It has provisions to constitute the Mining Board representing Government, Owners of mines and Miners. It also provides for constituting a Committee to which any question relating to mine can be referred.
  - It specifies the duties and responsibilities of Owners, Agents, and Managers in operating and managing mine operations in brief.

- It provides the general guidelines for maintaining health, hygiene and safety at work place.
- It lays down conditions for the employment in mines, work hours, and limitation of employment in different situations. The minimum age for employment in mine was raised from completion of seventeenth (17<sup>th</sup>) year to completion of eighteenth (18<sup>th</sup>) year by an amendment in 2005.
- It also enables the Government to frame regulations for:
  - Qualification necessary for a person to be appointed as Chief Inspector or Inspector;
  - Prescribing manner of inspection of mines;
  - Prescribing the duties of owners, agents and managers of mines and the persons working under them;
  - Regulating the qualifications and competency of managers of mines and grant of certificates;
  - Regulating the storage and use of explosives as per the Explosives Act, 1884 and any rules made thereunder;
  - Regulating the construction, entrance and exit, mine working, ventilation, machinery and plant, electrical apparatus, signalling system, use of safety lamps etc;
  - Provisions to deal with the situation of explosions, ignitions, irruptions of or accumulation of water in mines and danger arising in such situations and prescribing the notices of accidents and dangerous occurrences;
  - Prescribing the plans and records to be kept by mines and for regulating the procedures on occurrence of accidents.
- It contains penal procedures for non-observance and non-compliance of its provisions.
- There has been no major amendment in the Act in 2005 except revision of the minimum age of employment in mine.

### *Mines and Minerals Resources (Control and Development) Act, 1992*

4.7. This Act was enacted in year 1992 (Act No 39 of 1992) for the control and development of mines and mineral resources by repealing the Mines and Minerals (Regulation and Development) Act, 1967 (East Pakistan Act II of 1968). However, all the rules made under the repealed Act and consistent with this Act of 1992 continue to have effect till they are repealed or amended. Further, all licences, leases, and facilities granted under the repealed Act remain valid till amended or altered in line with the requirements of this Act. Some of the main features of this Act are given below.

- It defines different types of licenses permitted in Bangladesh for awarding mineral rights which are Prospecting Licence (referred to as the Exploration Licence in Mines and Minerals Rules) and Mining Lease and also provide other definitions like Mineral Resources, Mine, Rules and Site.
- It requires that all the prospecting licences or mining leases or facilities shall be granted in accordance with the provisions of the rules.
- It empowers the Government to make rules for regulating the grant of prospecting licences, mining leases or facilities and for the purpose of preserving and developing mineral resources.
- It provides the guidelines for enacting Rules to have provisions for the following:

- Manner in which prospecting licences, mining leases and consent for establishing facilities shall be granted;
- Authorities authorized to receive the applications and application fees;
- Conditions for grant of prospecting licences, mining leases and facilities and renewal there from;
- Conditions for rejection of applications for prospecting licences, mining leases and facilities;
- Annulment of granted licenses, leases and facilities;
- Provision for the taxes, rents and royalties to be paid by the receivers of licences or the recipients of lease and facilities;
- Conditions for payment of the taxes, royalties and rents;
- Beneficiation of ores and applicable conditions;
- Control of the production, storage and distribution of mineral resources;
- Development of mineral resources using machinery and equipment;
- Prevention of wastage of mineral resources;
- Prevention of illegal mining and the confiscation of illegally excavated mineral resources and their utilization and
- Any matter required for or incidental to anything mentioned above.
- It empowers the Government to exempt any mineral resource or any class of mineral resource from all or any of the provisions of the rules.
- It empowers the Government to regulate the application of rules and any amendment thereof.

### *Mines and Minerals Rules, 1968 (as amended in years 1989, 1995, 1999 and 2004)*

- 4.8. Mines and Minerals Rules, 1968 (MMR 1968) was made to exercise the powers conferred by Section-4 of erstwhile Mines and Minerals (Regulation and Development) Act, 1967 which stands repealed and is replaced by the Mines and Minerals Resources (Control and Development) Act, 1992.
- 4.9. To date, MMR 1968 as amended in years 1989, 1995, 1999 and 2004 forms the most comprehensive set of provisions for governance, administration, and regulation of mineral sector in the country. The main provisions of MMR 1968 and its amendments are as follows:
  - The Bureau of Mineral Development (BMD), Bangladesh is the Licensing and Leasing Authority (under Rule 2). 'Director' as referred to under this rule is Director of BMD and is empowered for decision making.
  - The mineral tenements are classified into three categories
    - Exploration Licence,
    - Mining Lease, and
    - Quarry Lease.

- The Twelfth Schedule (under Rule 55A) provides list of minerals for Quarry Lease.
- A person may apply, in writing, to the Director, BMD (Sub-rule 3(1)) in the forms set out in
  - First Schedule for Exploration Licence,
  - Second Schedule for Mining Lease, and
  - Third Schedule for Quarry Lease.
- Separate applications are required to be made for each area and in case of two or more minerals in respect of each area and for each mineral (Rule 6).
- Non-refundable application fees based on the area applied for licence or lease are prescribed under Rule-7, which was last amended in 2004.
- Provision is made for application, grant, renewal, surrender, assignment, transfer, cancellation and mortgage of exploration licences, mining leases and quarry leases. These provisions are discussed in detail in Chapter-4 of this report.
- The principles of precedence which Director should adopt in case of more than one application made for the same area or land, are provided under Sub-rule 9 (4).
- The Director shall not grant a licence or lease without prior approval of the GoB (Sub-rule 9(5)).
- A licence or lease is granted under Rule 16 where an application has been allowed under Rule 9. An exploration licence, a mining lease or a quarry lease shall contain the conditions, as specified in the form of agreement set out in the Fifth Schedule, Sixth Schedule and Seventh Schedule respectively. The Bureau may, with prior approval of the Government, alter or add conditions to suit the necessity of a particular case.
- A licensee has preferential right to receive lease for the area demised under him subject to satisfactory compliance with the terms and conditions of the existing licence (Sub-rule 16(2)).
- MMR, 1968 provides for levying royalty, annual fee, quarry lease money, fees, payment schedules, security deposit, compensation and penalties.
- These rules requires that the provisions of Chapter V and VI of the Mines Act, 1923 (IV of 1923) and the rules, regulation and bye-laws, made there under shall apply to matters relating to health, safety, working hours, leave and holidays of persons employed in mining activities including exploration (Rule 27H).
- MMR, 1968 requires that every licence or lessee shall, before commencing operation, furnish to the Director the details of the exploration or mining resident manager under whose supervision such operation is to be carried on (Rule 27J).
- Arbitration: The provision for arbitration in case of disputes arising at any time during the continuance of the license or lease or after their termination or any related matter is provided in Rule- 27S. Under this rule, dispute shall be determined by 3 (three) arbitrators - one nominated by the Director and the other by the licensee. These two arbitrators nominate the third arbitrator, and if they fail to do so, the third arbitrator shall be nominated by the Government preferably from amongst the retired Supreme Court Judges or District Judges. The arbitrators will ordinarily endeavor to arrive at a unanimous decision, but in the case of any disagreement, majority decision shall prevail, and their decision is binding on the parties.



- The maximum areas with period of grant of licences and leases, unless the Government decides otherwise, are as follows:
  - Exploration Licence: the maximum area allowed under one licence is 4,000 hectares (Rule 29), valid for 01 year in the first instance (Rule 31). On satisfactory compliance of licence conditions, a renewal for another 12 months to complete the exploration work can be allowed by licensing authority; and the total period of the exploration licence including the renewal shall not exceed 03 years (Sub-rule 32 (1)).
  - Mining Lease: the maximum areas to be granted under a mining lease are 800 hectares for open pit mining and 600 hectares for underground mining (Rule 41). The initial term of lease shall not exceed 10 years in case of open pit mining and 20 years in case of underground mining (Rule 43). The renewal of the lease can be granted for 02 terms of 05 years each, subject to previous satisfactory performance by the lessee (Sub-rule 43 A (1)).
  - Quarry Lease: the maximum area to be granted under a quarry lease is 30 hectares (Sub-rule 55 A (1)), and if necessary an area more or less than 30 hectares of an ordinary sand or ordinary stone can be granted as an individual quarry (Sub-rule 55A (2)). A quarry lease is granted for a period of 01 year which can be renewed for another year subject to compliance with lease conditions and obligations (Sub-rules 55B (1) & (2)).
- Rule 65 prohibits unauthorized work and requires that no person shall:
  - Undertake any mining activity including exploration outside the area granted.
  - Obstruct free access of the licensee to the area for which a licence has been granted.
  - Try to obstruct or interfere with any work of the licensee in the area mentioned in clause (b).
- Further, under Rule 67 provides for checking of:
  - Unauthorized mining;
  - Unauthorized use of a quarry; or
  - Disposal of a mineral produced by unauthorized operation.
- As per Rule 68, in addition to the Act and other enactments referred to in foregoing provisions, the following enactment shall apply to a licence or a lease granted under these Rules:
  - The Mining Settlement Act, 1912 (Ben Act II of 1912);
  - The Mines Act, 1923 (Act IV of 1923);
  - The Mines Maternity Benefit Act, 1941 (Act XIX of 1941);
  - The Coal Mines Labour Welfare Fund Act, 1947 (Act XXXII of 1947); and
  - The Excise Duty on Minerals (Labour Welfare) Act, 1967 (Act VIII of 1967).
- The MMR 1968 and its amendment has the following schedules to it:
  - First Schedule: Application form for Exploration Licence (Rule 3)
  - Second Schedule: Application form for Mining Lease (Rule 3(b))
  - Third Schedule: Application form for Quarry Lease (Rule 3(c))



- Fourth Schedule: Register of applications for Exploration Licence/ Mining Lease/ Quarry Lease (Rule 8)
- Fifth Schedule: Form of agreement for Exploration Licence (Rule 16)
- Sixth Schedule: Form of agreement for Mining Lease (Rule 16)
- Seventh Schedule: Form of agreement for Quarry Lease (Rule 16)
- Eighth Schedule: Form of agreement for Assignment or Transfer of Exploration Licence/ Mining Lease/ Quarry Lease (Rule 13)
- Ninth Schedule: Register of Exploration Licence (Rule 30)
- Tenth Schedule: Register of Mining Lease (Rule 40)
- Eleventh Schedule: Rate of Royalty (Rules 44, 55E)
- Twelfth Schedule: List of Minerals for Quarry Lease (Rule 55A)
- Thirteenth Schedule: Register of Quarry Lease (Rule 55A)

### *Mines and Minerals Rules, 2012*

4.10. In 2012, Government of Bangladesh enacted Mines and Minerals Rules, 2012 repealing Mines and Minerals Rules 1968.

The MMR 2012 (referred as Rules) details the provisions under Mines and Minerals (Regulation and Development) Act to achieve the objectives of Mines and Minerals Sector administration framework.

The MMR 2012 broadly covers all the provisions of MMR 1968 with some additions to further clarify the administrative framework and address current issues of the industry. For instance, the MMR 2012 defines different types of licenses for mining activities, sets out the process, requirements, formats, the granting and cancelling authority for mining licenses, mining royalties and taxation provisions with prescribed rates and timelines, social and environmental obligations of the license holder and so on. The salient provisions covered in Rules are as follows:

- Under Rule 3, Director BMD (Referred as Director in Rules) is authorised to grant Exploration License, Mining Lease and Quarry lease. The Rules prescribe 3 type of licenses:
  - Exploration Licence – First Schedule
  - Mining Lease – Second Schedule, and
  - Quarry Lease – Third Schedule. (Quarry lease is granted for certain minerals where small scale mining is expected, the list of which is provided in the Twelfth Schedule).
- Rule 4 permits foreign companies incorporated under the clause 379 of the Company Act, 1994 (Act no 8 of 1994) to apply for exploration licences or mining and quarry leases.
- Rule 5 provides process of disposal of an application. Accordingly to the Rule, first preference for award of licence shall be to a Corporation or a Company under Corporation incorporated under an Act (i.e. first preference to Government of Bangladesh entities), followed by applicant who has conducted exploration for the same area. After these, applications will be disposed on first come first serve basis.

- Sub-rule 6 and 7 of Rule 5 prescribes timelines for the Director and GoB to respond to the application received for license;
- Rule 7 provides various application fees except in case of applying for Quarry lease for silica sand, rock and rocks mixed with sand, provision for which are provided in Rule 78;
- Under Rule 9, on award, the licence or lease area is demarcated and marked by the surveyor appointed by the Deputy Commissioner in presence of an officer authorized by the Director and another officer authorized by the Deputy Commissioner of the concerned district;
- Rule 11 allows licence or lease holder to surrender licences before expiry with prior notice on settling all dues and Rule 14 allows licence or lease holder to mortgage with prior written approval of Director.
- Rule 17 require licence or lease holder to either acquire land or obtaining permission for its superficial use from the owner.
- Rule 18 requires the licence or lease holder to compensate for all damage, injury or disturbance caused in course of work but not covered by the permission obtained for the surface use of the land, and has to indemnify the Government against all claims which may be made by third parties in respect of any such damage, injury or disturbance. Further, the licensee or lease is liable to pay compensation for any environmental damages under the Environment Conservation Act 1995 (Act no 1 of 1995)
- Rule 22 restricts the mining activities within prescribed distance from a structure of importance.
- Rule 26 empowers the Director to impose fines in case of damage to minerals due to unscientific working, lack of supervision, negligence or any other omission or commission on the part of the licensee or lessee.
- Rule 28, Rule 29 and Rule 30 empowers government to prescribe various annual rents, security deposits, annual fee and collect same from licence or lease holder.
- Rules specifically prescribes that use of Explosives shall be governed by The Explosives Act, 1884 (IV of 1884) and any rules made there under (Rule 36 (1)). Further, Sub-rules 2, 3, 4, 5 and 6 of this Rule 36 provides general guidelines for carrying out blasting activities and steps to be followed after this, specifically in case of blasting being carried out using electricity (Sub-rule 7);
- Under Rule 37, a lease holder needs to appoint Resident Mining Manager. However, no specific qualification prescribed.
- For working in underground mines, lessee must ensure life and accident insurance facility for persons (Rule 40);
- Under Rule 41, in case of injury or loss of organs or death of the workmen working in the mine, Licence or lease holder will pay compensation in accordance with the provisions of the Workmen's Compensation Act, 1923 (Act 4 of 1923 ).
- Rule 49 limits exploration licence area to 4000 hectare, except as otherwise decided by the Government (Rule 49 (1) with validity of 2 years (Rule 51) with provision of renewal by 12 months, though the total licence period shall not exceed a period of 04 (four) years (Rule 52 (1)).
- Rule 58 details process of Mining Lease application, documents to be submitted along with application and prescribe a Bank Guarantee (value equivalent to 3% of the estimated expenditure to be incurred by the lessee during exploitation (Sub-rule 10) to be submitted to the GoB.

- Rule 59 mandates employment of statutory manpower by the lessee for carrying out any activities in the Mining lease area. Under Sub rule 1, no work is to be carried out where average monthly production is more than 400 (four hundred) tons or the total average monthly sales of which is above Tk. 1,50,000 (one hundred fifty thousand), unless the lessee employs a person holding a degree in Mining Engineering or a Masters Degree in Geology from an recognized institution ;
- Rule 61 restricts size of Mining lease to 800 hectares in case of Open pit Mining and 600 hectares in the case of Underground Mining, except where exempted;
- Rule 64 prescribes lease period of 10 years for Open pit Mining and 20 years for Underground Mining. Rule 65 allows the Director to renew Mining Lease by 2 (two) terms of 5 years each.
- Under Rule 66, lease holders must pay Royalty on quarterly basis and under Rule 68, monthly production returns need to be submitted.
- Rule 69 prescribes various types of plans to be prepared by the mining lease holder.
- Working obligations (operation related obligations) for the mining lessee have been discussed in Rule 71 which details provisions such as demarcation of lease area, procedures and steps to be followed at the time of expiration or earlier termination of the lease or the abandonment of the operations, maintaining of mine work related records, samples of the extracts of various strata and water encountered in any pit, bore-hole or well and samples of any mineral discovered, etc.;
- Rule 76 provides for Quarry lease (other than for silica sand , rock and rock mixed with sand) to be not granted in area measuring more than 30 (thirty) hectares (Sub-rule 1), except in case of practical reasons as decided by the leasing authority in consultation with GoB (Sub-rule 2);
- Rule 77 (1) prescribes period of 2 years for Quarry Lease with provision of renewal by 1 year (Rule 77 (2)).
- Award of lease by the Director for Silica sand, rock or rock mixed with sand quarry according to the recommendation of the District Committee shall be through open tender (Sub-Rule (1) of Rule 78), subject to the provision in the Sub-rule(2) of Rule 78;
- Rule 83 provide right to government to restrict exports of mineral, acquire 51% share capital of any of the mining companies and ask licence holder to employ Bangladesh nationals including providing training to them.

### ***iii. Comparison of MMR 2012 with MMR 1968***

In the table below, provisions of MMR 2012 and MMR 1968 (along with all amendments) have been contrasted to summarize key changes made in MMR 2012.

<b>Rule as in MMR 1968</b>	<b>Provision in MMR 1968</b>	<b>Provision in MMR 2012</b>
Sub-Rule 5(1)	“A licensee or a lessee shall, within 60 (sixty) days after the granting of the licence or lease, get the licensed or leased out area demarcated by a surveyor, recognized by the Bureau in presence of an officer specified in his behalf by the Director, and such demarcation shall be made-in the	<ul style="list-style-type: none"> <li>• The Rule has been moved and renumbered as Rule 9(1).</li> <li>• Further, the provision has been modified as: “The licensee or the lease, within 30(thirty) days of approval of the License or lease, shall get the licensed or leased area demarcated by the surveyor</li> </ul>

	following manner :”	appointed by the Deputy Commissioner in presence of an officer authorized by the Director and another officer authorized by the Deputy Commissioner of the concerned district”
Sub-Rule 5(3)	In case of disputes between the two or more licensees or leases, the decision of <b>the licensing or leasing authority</b> will be final.	In case of disputes between the two or more licensees or leases, the decision of <b>the Bureau</b> will be final.  <i>Though the intention remains the same, “lease awarding authority” has been termed as “Bureau”</i>
Rule 6	Where an applicant requires a license or lease for two or more areas, separate application shall be made in respect of each area	Following changes have been made to the provisions of this rule: <ul style="list-style-type: none"> <li>• Sub-rule (1): "Where an applicant requires a license or lease for two or more areas, separate application shall be made in respect of each area ; However, unless otherwise decided by the Government no person shall be allowed to apply more than 5 (five) in number for the same mineral."</li> <li>• Sub-rule (2): "If more than one mineral is discovered in an area, then the applicant has to mention all the minerals in the application" Though the provision of this rule does not specify whether separate application is required for separate minerals within the same licenced or leased area.  The revised provision restricts the number of applications one party can make for same mineral at a time.</li> </ul>
Rule 6 (4)	Not Existing	MMR 1968 does not give any priority to licensee of exploration license for awarding Mining lease of the same area. While, in MMR 2012, “Licensee subject to the fulfillment of the conditions satisfactorily in particular case shall be given priority or awarding MINING lease in the area that was given under the Exploration license.”
Rule 9	Provides for receipt and disposal of an application for a license in a prescribed manner.	Moved to Rule 5 and Further Added- “(5) The Director shall not issue any license or lease without the prior approval of the Government.”

Rule 9 (6) and (7)	<p>(6)On receipt of the application, the Director,                  (ka) shall direct the applicant to submit the necessary information and papers as he considers necessary for disposal of the application                  (kha) shall being satisfied after scrutiny of the papers forward within 45 days to the Government for approval as per sub rule (5) or within the same time limit shall reject the application giving reasonable justifications and inform the same to the applicant in writing.</p>	<p>Moved to Rule 5 and changed to “(6)On receipt of the application, the Director,                  (ka) shall direct the applicant to submit the necessary information and papers within 15 days of receipt of application (kha) shall being satisfied after scrutiny of the papers forward within 60(sixty) days to the Government for approval as per sub rule (5) or within the same time limit shall reject the application giving reasonable justifications and inform the same to the applicant in writing.</p>
	<p>(7)The Government on receipt of application as per sub rule (kha)-                  (ka)may direct the Director or the applicant to furnish additional information or papers for the purpose of disposing off the application                  (kha) subject to the provision as at (ka) shall with due considerations of the enclosed reports, these rules and other relevant issues approve or disapprove the application within 45 working days and within a period not exceeding 7 working days shall send back the decision either for awarding license or lease in favor of the applicant or giving reasonable justifications inform the applicant the decision for rejection of the application.</p>	<p>(7)The Government on receipt of application as per sub rule (kha)-                  (ka)may direct the Director or the applicant to furnish additional information or papers within 7 (seven) working days and may direct the concerned Deputy Commissioner to submit comments /recommendations within 30(thirty) days, and                  (kha) subject to the provision as at (ka) shall with due considerations of the enclosed reports, these rules and other relevant issues approve or disapprove the application within 60(sixty) working days and with in a period not exceeding 20 working days shall send back the decision either for awarding license or lease in favor of the applicant or giving reasonable justifications inform the applicant the decision for rejection of the application.”                  By this change, while timelines for performing various activities is changed, the significant change is inclusion of Deputy Commissioner in decision making process.</p>
Rule 9 (8)	<p>(8) Upon receipt of an application for quarry lease for ordinary sand and ordinary stone, the deputy commissioner or an officer authorized by him in his behalf shall put his signature and official seal with date and time on the application and on the receipt to be delivered to the applicant</p>	<ul style="list-style-type: none"> <li>• This provision has been moved to Rule 5. Further, such type of land has been classified to be existing as on hills.</li> </ul> <p><i>Explanation of Hill districts means Rangamati, Khagrachari and Bandarban districts.”</i></p>
Rule 9 (9)	<p>Describes about receipt and disposal of an application for a licence in a prescribed manner.</p>	<p>Provision has been moved to rule 5. Further provision added “(9)The licensee or lessee on discovery of any radioactive minerals during the Exploration or mining shall immediately stop the Exploration or mining operations and shall inform the Bureau and Bangladesh Atomic Energy Commission.”</p>

Rule 11	"A licensee or lessee may surrender his license or lease before the expiry of the term of his license or lease. But no surrender shall be effective unless three months prior notice, in the case of a license or six month prior notice in the case of lease is given to the Director and unless all sums due on account of the license or lease are paid."	"A licensee or lessee may surrender his license or lease before the expiry of the term of his license or lease. But no surrender shall be effective unless two months prior notice, in the case of a prospective license or one month prior notice in the case of a quarry lease and 6(six) months advance notice in case of Mining lease is given to the Director and unless all sums due on account of the license or lease are paid and conditions have been fulfilled." <i>Timelines for surrender has been changed.</i>
Rule 27 C	Describes that in case where licence or lease area or part thereof has been granted through inadvertence or mistake and is found out at a later stage, the licensee or lessee shall unconditionally surrender that area without any compensation or making other claim.	Moved to fifth schedule (Form of agreement for mining license) as Rule 27. However, intent of this Rule remains same.
Rule 27 D	Describes that a licensee or lessee may at any time during the term of the licence or the lease or any renewal, surrender the rights granted by the licence or the lease in respect of all the area or any part of it.	Moved to Rule 32 and Rule remains the same
Rule 27 E	Provisions for extension or change of licensed area.	Moved to Rule 33 and Rule remains the same
Rule 27 S	"Dispute and arbitration.—(1) Where at any time during the continuance of the licence or the lease or after the termination thereof, any dispute arises regarding the licence or the lease or any matter connected therewith resulting therefrom, the dispute shall be determined by 3 (three) arbitrators, of whom 1 (one) shall be nominated by the Director and the other by the licensee or the lessee. These two arbitrators shall nominate the third arbitrator, and if they fail to do so, the third arbitrator shall be nominated by the Government preferably from amongst the retired Supreme Court Judges or District Judges. (2) The arbitrators shall ordinarily endeavour to arrive at a unanimous decision, however in the case of any disagreement among them, the majority decision shall prevail. The decision of the arbitrators shall have binding on the parties."	Moved to Rule 47 and changed to " <b>Dispute and arbitration.</b> - for any dispute under this rule , the provisions of the Bangladesh Arbitration Act 2001, ( Act no 1 of 2001) shall be applicable."
Rule 28	Provides licensee's right to undertake exploration, subject to license conditions, with the sole right to quarry, bore, dig and search for, win,	Moved to Rule 48 and remains same.

	work and carry away any specified mineral or minerals lying within, under or throughout the land specified in the licence.	
Rule 29	Requires exploration licence for area more than 4,000 hectares not to be granted except as otherwise decided by the Government.	Moved to Rule 49 and remains same.
Rule 31, 32	Rule 31 specifies a licence to be valid for one year in the first instance while Sub-rule 32 (1) has provisions for renewal subject to the satisfactory compliance of the terms and conditions of the licence including the working obligations under Rule 34 for a period not exceeding one year at a time. The total period of the exploration shall not exceed three years.	Moved to Rule 51 and increases the validity to two years with renewal for a period not exceeding 12 months at a time (Rule 52) and total period of exploration including renewal not exceeding 4 years.
Rule 33	Extends licensees the right for renewal of licence, before expiry of term, on applying for a lease until the lease applied for has been granted or refused.	Moved as Rule 53 and remains same.
Rule 34	Working Obligations (preparation of scheme of exploration): The Director shall communicate within 45 days of its receipt , his decision, along with reasons for rejection.	Changed to “The Director shall communicate the approval of the scheme to the licensee within two months of its receipt.” <i>Only time period is changed.</i>
Rule 39	Prescribes procedures for filing an application for mining lease, accompanied by the following enclosures: (a) A complete exploitation scheme for the approval of the leasing authority for working and exploiting the mineral by technically qualified personnel, containing; -the statement of expenditure to be incurred by the lessee during exploitation; -maps of the area including detailed geological maps showing the mineral deposit; -location, description of major deposits and map showing the sub-surface geological structure or the size of the basin; -estimates of proved and probable reserves on basis of feasibility reports; -minimum rate of production; -methods of mining including machinery and equipment to be used; -technical personnel to be employed at	Moved as Rule 58 and remains same.



	<p>various stages of exploitation;                      -map showing roads and other surface as well as underground construction such as store and lamp room, workshops, beneficiation, offices, residential accommodation and other amenities for staff and labour;                      (b) For the purpose of ensuring payment of royalty, annual fee, and other dues payable under these rules, a bank guarantee of 3% of the estimated cost of the scheme.</p>	
Rule 41	Provides the maximum area to be granted under a lease as 800 (eight hundred) and 600 (six hundred) hectares for open pit mining and underground mining respectively, except in cases of special exemptions granted by the Government.	Moved to Rule 61 and remains same.
Rule 42 (2)	Determines the sub-surface boundary of a lease which shall run vertically downwards below the surface towards the centre of the earth.	Moved as Rule 62 and remains same.
Rule 43	Prescribes initial term of lease as not to exceed 10 (ten) years in case of open pit mining and 20 (twenty) years in case of underground mining.	Moved as Rule 64 and remains same.
Rule 50	States detailed working obligations for a lessee.	Moved as Rule 71 and remains same.
Rule 57	Provides for cancellation and suspension of license or lease.	<p>Moved as Rule 84 and following provisions added:</p> <ul style="list-style-type: none"> <li>• Sub Rule (3) “The Director may issue immediate stay order on the work under the license or lease, in case of violation of the Act and Rules affecting the environment and local public interest.”</li> <li>• Sub-Rule (4) “The Director shall inform the Government about the stay order as in sub-Rule (3) within 7 working days.”</li> </ul> <p>Added.</p>
Rule 58 (1)	<p>“(1) ,Where the 'licensee or the lessee is aggrieved by an order of the Director or as the case may be of the licensing or the leasing authority in respect of any of the following matter he may, within 30(thirty) days, apply to the Government for revision thereof :</p> <p>(a) fixation of the pit's mouth value of minerals under rule 44 (3) or 55 (3);</p> <p>(b) an order given under rule 52 for stoppage of work;</p> <p>(c) an order of suspension or cancellation of the licence or the lease under rule 57;”</p>	<p>Moved to Rule 85 (1) and Changed to “(1) Where the Licensee or lessee is aggrieved by an order of the Director or the Authority the lessee may apply to the Government within 30 days of such order for revision thereof.”</p> <p><i>MMR 1968 provided specific conditions for which the licensee could apply to the government; these conditions have been removed in MMR2012. Now, the licensee can apply to government if he is aggrieved by any order.</i></p>



Rule 58 (2)	“(2) The Government shall, within 30 (thirty) days, of receipt of the application, dispose it off after giving concerned parties a reasonable opportunity presenting their respective case and the decision of the Government shall be final.”	Moved to Rule 85 (2) and Changed to “(2) On accepting the application as in sub rule (1) the government shall give a justified scope to present the explanations of respective parties and then dispose off the case and in such case the decision of the government shall be final.”
Rule 59	“ <b>Directions</b> —The Director in discharging his functions shall be guided on question of policy by such directions as the Government may, from time to time, give.”	Moved to Rule 86 and changed to “ <b>Instructions</b> -The Director shall be guided in discharging his duties by the instructions given by the Government from time to time.”
Rule 44	Earlier provision: Lessee shall, by 10 <sup>th</sup> (tenth) day of January and July of each year, pay royalty at the rates mentioned in the Eleventh Schedule for minerals extracted and submit a copy of the Treasury Challan in original to the Director showing payment of such royalty.	Provision moved to Rule 66 and provision changed as per following: Lessee shall, by 30 April, 31 July, 31 October and 31 January each year, pay royalty at the rates mentioned in the Eleventh Schedule for minerals extracted on quarterly basis and submit a copy of the Treasury Challan in original to the Director showing payment of such royalty. <i>Timeframe for payment of Royalty changed from Half Year to Quarter.</i>
Rule 68	Enactments as applicable to a licence or a lease granted under the Rules: <ul style="list-style-type: none"> <li>○ The Mining Settlement Act, 1912 (Ben Act II of 1912);</li> <li>○ The Mines Act, 1923 (Act IV of 1923);</li> <li>○ The Mines Maternity Benefit Act, 1941 (Act XIX of 1941);</li> <li>○ The Coal Mines Labour Welfare Fund Act, 1947 (Act XXXII of 1947); and</li> <li>○ The Excise Duty on Minerals (Labour Welfare) Act, 1967 (Act VIII of 1967).</li> </ul>	Provision moved to Rule 94 and changed as per following: <ul style="list-style-type: none"> <li>● enactments as applicable to a licence or a lease granted under these Rules: <ul style="list-style-type: none"> <li>○ The Mining Settlement Act, 1912 (Ben Act II of 1912);</li> <li>○ The Mines Act, 1923 (Act IV of 1923);</li> <li>○ The Bangladesh Labor Act, 2006(Act no 42 of 2006)</li> </ul> </li> </ul>
Eleventh Schedule	For the purpose of calculation of royalty, coal and peat were classified under the same category.	Provision for calculation of royalty for both the minerals have been separated. Now both the minerals are classified separately.

## ***iv. Laws and Policies Regulating Business and Industries in Bangladesh***

4.11. This section outlines the legislation and policies in sectors other than minerals, relating to general business and industries but with implications for mineral resource and mining activities.

### ***Industrial Policy, 2009***

4.12. Bangladesh updated its Industrial Policy in 1999 in response to the changes in the global economy and to accelerate industrial growth to improve share of GDP from manufacturing. The policy sought to enhance industrial output so that its share in GDP increased from 10% to 25% in a decade.

4.13. The key objectives of this policy are:

- To promote the private sector to lead the growth of industrial production and investment;
- To focus the role of the government as a facilitator in creating an enabling environment for expanding private investment;
- To attract foreign direct investment in both export and domestic market oriented industries to make up for the deficient domestic investment resources.

4.14. The Industrial Policy also anticipated the private sector would be the principal development force with the public sector complementing it. Further, it focused on export promotion exports, attracting FDI in industrial sector, and developing women entrepreneurship. Towards this, it encouraged investments by Non Resident Bangladeshis (NRBs) offering various tax concessions.

### ***Investment Board Act, 1989***

4.15. The “Board of Investment” (BOI) is established under the Investment Board Act, 1989, to encourage investments in the private sector and provide necessary facilities and assistance to establish all types of industries, including in the infrastructure sector.

4.16. The Board is chaired by the Prime Minister, and senior Ministers and Administrators, heads of the Chambers of Commerce and others are members. The key roles of the Board are:

- To carry out promotional activities for rapid industrialization in the private sector;
- Approval and registration of all private sector industrial projects with local and foreign capital;
- Issue work permit to expatriate personnel in private sector industrial enterprises;
- Implementation of the government policy related to capital investment in the private sector;
- Creation of infrastructure facilities for industries in the private sector;
- Financing and assistance in financing of important new industries in the private sector;
- Conciliation of disputes relating to foreign investors.

4.17. The Board also extends a number of services to private investors whose projects are registered. Upon approval of any industrial project, the Board advises the concerned authorities inter alia on:

- The extent and the terms and conditions of foreign loan and of suppliers’ credit;

- Allotment of land in the industrial areas under the control of government or local authority;
- Time-limit for giving connections of electricity, gas, water supply, sewerage system and all kinds of telecommunications;
- Time-limit for clearance of imported machinery, spares, raw materials at the customs; the Board also issues a clearance certificate to the project company for import of machinery, spares, raw materials, etc in accordance with its import entitlement;
- Time-limit for issuing clearance for environment pollution; and
- In event an industrial project faces hurdles in developing its project the Board offers to extend its support to resolve the challenges.

### *Foreign Private Investment (Promotion and Protection) Act, 1980*

4.18. The “Foreign Private Investment (Promotion & Protection) Act 1980” was enacted to promote foreign private investment in industry. The scope excludes investment by a foreign government or an agency of foreign government. It provides for:

- Fair and equitable treatment to foreign private investment through full protection security;
- The terms of sanction, permission, or license granted to a foreign private investment shall not be unilaterally changed;
- Foreign private investment will be treated on equal footing as a resident for indemnification to recover losses from any impacts arising from political disturbances and will be offered a similar recourse;
- Foreign private investment will not be expropriated or nationalized except for public interest purposes, against adequate compensation equivalent to its market value, and such payment will be made expeditiously and be freely transferable;
- The transfer of capital and the returns from it, and in the event of liquidation, the proceeds from such liquidation is guaranteed; but in exceptional financial and economic difficulties, the right is subject to the applicable laws and regulations in such circumstances.

### *The Environmental Conservation Act, 1995*

4.19. The Environmental Conservation Act 1995 was enacted to improve the quality, standard and control and to reduce environmental pollution through mitigation. It aims to protect the physical properties of earth (water, air and soil) and living organisms (human beings, plants and micro-organisms) from environment pollutant such as solid, liquid and gaseous substances.

4.20. The Department of Environment (DoE) under the Ministry of Environment and Forests (MoEF) is responsible for enforcing it. No industrial undertakings or project can be established or undertaken without environmental clearance from the DoE.

### *The Environmental Conservation Rules, 1997*

4.21. The Environment Conservation Rules, 1997 were formed under the Environment Conservation Act 1995. It was amended three times – in February 2002, August 2002 and April 2003.

4.22. The Rules define ecologically critical areas, classify projects into categories for grant of environmental clearance, prescribes the standard limit of pollution in terms of emission, noise, heat, radiation,

smoke, effluent etc. The projects are group in four categories based on their environmental impact and location, as:

- Green
- Orange A
- Orange B, and
- Red

All Mining and Infrastructure projects come under the “Red” category. In this category, applications for environmental clearance will include the following:

- Feasibility report of the industrial unit or project;
- IEE Report including program outline of Environmental Impact Assessment;
- EMP report including the process flow diagram of the industrial unit or project, layout plan, and diagram or Environmental Impact Assessment report;
- No objection certificate from the local authority;
- Pollution abatement plan along with emergency plan for adverse environmental impact;
- Outline of relocation, rehabilitation plan (where applicable).

### *Arbitration Act, 2001*

- 4.23. Arbitration provisions provide investors a scope for speedy resolution of commercial disputes between parties and necessary to attract private investment. The Arbitration Act, 2001 of Bangladesh provides for resolving disputes in a limited timeframe (90 days) in line with international standards.
- 4.24. The Act forms basis for international commercial arbitration held in Bangladesh between the citizens and other nationals; and for enforcement of international arbitral awards. The Supreme Court of Bangladesh provides the secretarial support for the arbitral proceedings. Any matter whether laid out in the arbitration agreement, or without arbitration agreement but with the consent that arises from any legal matters, can be sent to arbitration under this Act.

### *The Companies Act, 1994*

- 4.25. The Act provides for two types of limited companies – private company, which may be formed by minimum of two persons, and the public company, which may be formed by minimum of seven persons. The Registrar of Joint Stock Companies & Firms and the Securities & Exchange Commission regulate the activities of the companies.
- 4.26. As per relevant fiscal laws, any new company engaged in provision of physical infrastructure facility can avail of exemption of corporate tax for a maximum period of seven years, applicable to companies that started commercial activities by June 2005.

### *The Income Tax Ordinance, 1984*

- 4.27. The Income Tax Ordinance, 1984 seeks to consolidate and amend the laws relating to income tax. It is the principal legislation for collection of taxes and provides conditions for exemption which the government uses from time to time for purposes of policy support. An Appellate Tribunal is set up for dealing with cases appealed by assesses.

- 4.28. The National Board of Revenue (NBR) is the regulatory authority for all types of income taxes. The persons who are entitled to receive exemption from income tax provided in the Ordinance or declared through SRO collect income tax exemption certificate from the NBR. Public Limited Companies and the Private Limited Companies have to pay income tax at rate of 35% and 40% respectively on income assessed under this Ordinance and audited under the provisions of the Companies Act, 1994.
- 4.29. The legislation provides for deduction of income tax at source for payments such as to contractors. To avoid double taxation, Bangladesh has concluded bilateral agreements with several countries and is discussion with others to extend this facility.

### *Acquisition and Requisition of Immovable Property Ordinance, 1982*

- 4.30. The Acquisition and Requisition of Immovable Property Ordinance, 1982 has been enacted to legally protect the rights of acquisition and the obligation for payment through subsequent compensation.
- 4.31. Under this Ordinance, the GoB through the Deputy Commissioner of the District may acquire any property (including infrastructure assets in the private sector) under its jurisdiction by publication of notice to the holder of the property expressing the use of the property for public interest.
- 4.32. The Deputy Commissioner awards and pays compensation to the holder of the property. The process of determining compensation broadly involves the market value of the property based on the average of similar property in the vicinity of the property acquired, during the last twelve months of the publication of the notice plus fifty percent of the market value, plus values of standing crops of trees, plus value of the damage of other assets of the property holder during acquisition and loss of earnings from the asset.
- 4.33. In situations where it is difficult to apply the above due to lack of a sale history of similar assets in the past twelve months or is not a representative basis, the Act allows for compensation to be negotiated upfront, and such negotiated amount may be included in the agreement between the government and the private investor.

### *Labour Laws*

- 4.34. In Bangladesh about 47 labour laws are in operation. These relate to:
- Wages and employment;
  - Trade union and industrial disputes;
  - Working environment; and
  - Labour administration and related matters.
- 4.35. The main labour laws related to mining sector are:
- Workmen's Compensation Act, 1923
  - Payment of Wages Act, 1936
  - Maternity Benefit Act, 1936
  - Employment of Labour (Standing Orders) Act, 1965
  - Factories Act, 1965
  - Industrial Relations Ordinance, 1969. etc.

## *Lender’s security interest*

- 4.36. Infrastructure projects are capital intensive involving large investments, largely project financed, and hence with large dependence on local commercial banks and international lenders, besides local and overseas capital markets. A primary expectation of lenders is to secure their investment by creating security, and taking comfort of a sound and enforceable legal system.
- 4.37. The legislation providing the basis are: the Transfer of Property Act, 1882; the Registration Act, 1908; the Contract Act, 1872; and the Companies Act, 1994. The Transfer of Property Act deals extensively with creation of mortgages of immovable property and subsequent registration of mortgages under the provision of the Registration Act within 4 months after execution of deed to the Sub-registrar office of the project located area and the same to be registered to Registrar of Joint Stock Companies in the prescribed manner within 21 days after the date of its creation.
- 4.38. The Contract Act, 1872 governs the equity commitments by the sponsor. Creation of security over shares can be done in many ways: Pledge of shares, Lien of shares and Mortgage of shares. There is no specific law for governing the mortgage of movable property.

## *v. Governance and Administration of Mineral Sector*

- 4.39. In this section we present an outline of the current governance mechanism and administration of mineral sector in the country.
- 4.40. The flow chart below presents the simplified process for enacting national legislation. The process is not very different from other parliamentary democracies, and provides wide room for consultations in general practice before the sponsoring ministry takes it further for legal vetting, cabinet approval, prior its introduction on the floor of the Parliamentary. The enacted laws are promulgated through a gazette notification.



- 4.41. As per the Constitution, ownership of mineral wealth lies with the people of the country. This forms the basis for governance of mineral and mining sector, and is administered by the Ministry of Power,

Energy and Mineral Resources (MoPEMR), Government of Bangladesh. The MoPEMR has two major divisions:

- Power Division, and;
- Energy and Mineral Resources Division (EMRD).

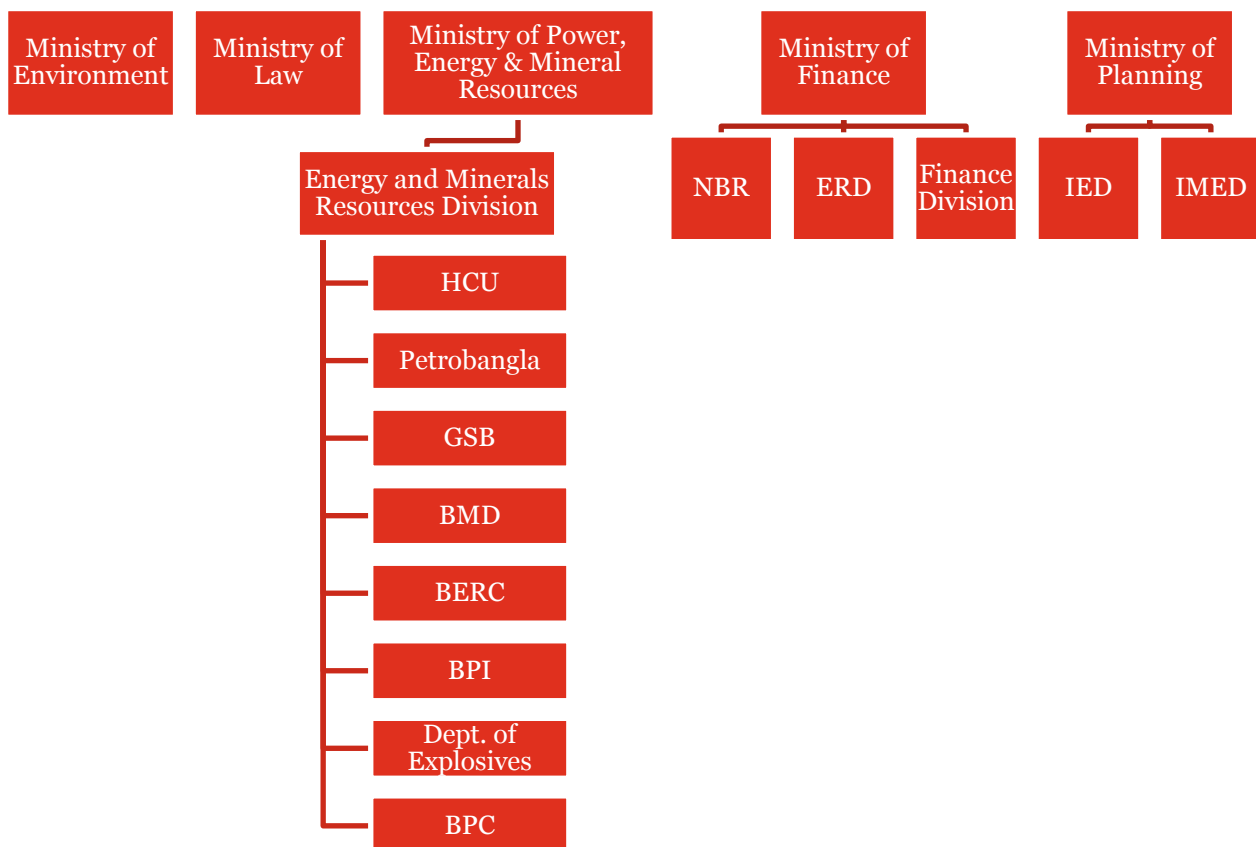
4.42. EMRD is the arm of the Ministry responsible for development and exploitation of Mineral Oil, Gas, Coal, Hard Rock and other mineral resources of Bangladesh. It oversees two major corporations:

- Petrobangla for Oil, Gas, Coal and Minerals; and
- Bangladesh Petroleum Corporation (BPC) for petroleum products.

4.43. The pre-operating, monitoring, regulatory functions commonly performed by government technical agencies such as of survey, exploration, administration, issuance of mining concessions or licences and mining leases and other regulatory measures are performed by different agencies formed under EMRD namely:

- GSB (for survey and exploration);
- BMD (for mining licences and leases);
- Department of Explosives (for safety in handling of explosives, gases, petroleum and other flammable liquids, combustible solids etc.)

4.44. The following chart depicts the governance structure for mineral sector in Bangladesh.



**Figure 1: Governance structure of Bangladesh Mineral Sector**

- 4.45. The licensing process is common for both, the state owned entities and the private sector companies. The companies apply to the government for Exploration License (EL) and conduct appropriate survey and exploration for minerals upon grant of EL. Subsequent to survey and exploration, a feasibility report to undertake mining in explored area is prepared and submitted to the BMD. The consent may allow the licensee to develop the mineral resource and undertake mining activities on the basis of viability and appropriateness of the project on grant of mining lease for 10 or 20 years as applicable.
- 4.46. Foreign companies have had long and significant presence in Oil & Gas exploration and exploitation. In the recent times, private and international companies have shown interest in developing Coal, Peat and other mineral resources. While international companies have expressed interest to undertake mining activities, FDI is limited in this sector to a solitary proposal for open cut mining in Phulbari coal basin.
- 4.47. Financing is available from well-developed local commercial banks, financial institutions, and the capital markets, besides overseas investment and borrowings. The state-owned companies may receive support from the Ministry of Finance (MoF) in form of budgetary spending and support from the local development agencies and in foreign borrowing.



## ***5. Review of Mining Acts, Rules and Regulations in Bangladesh***

5.1. In this section, we present our findings from our review of the legal provisions governing the mineral and mining sector. Our analysis provides a comparative picture of provisions commented from other countries, and the rationale for the recommendation.

### ***i. Revision and updating of Acts, Rules and Regulations related to Mineral Sector***

5.2. In the current legal framework, the “Act” forms the parent or primary law of the concerned subject and is enacted through legislation. The “Rules” are framed under the Act by delegation of power to an administrative authority, for example, the Bureau of Mineral Development, which functions under the parent Act and the Constitution. The “Regulations” are also framed under the provisions of parent law in which the responsibility of administration is further sub-delegated.

5.3. The three main legislation relating to management of the mineral sector, reviewed in this report, are:

- The Mines Act, 1923 as amended in year 2005
- Mines and Minerals Resources (Control and Development) Act, 1992
- Mines and Minerals Rules, 1968 and its amendments in years 1989, 1995, 1999 and 2004 and select provisions of the Mines and Minerals Rules, 2012 which repealed Mines and Minerals Rules 1968.

5.4. The key observations from review of the above are outlined below.

- a. The Mines Act 1923, inherited from the pre-Independence period, even with its 2005 amendment remains insufficient to capture the significant scale of changes in recent times in the mining sector globally. These changes have spanned a wide range, across licensing, revenue generation, deployment of modern mining methods and practices, investment protection, and safety and sustainability. Several developing countries are currently in the process of updating their mining sector legislation. In some jurisdictions the changes have been slower due to the smaller size of mining industry, as in Bangladesh, but the need for a comprehensive and current legislation is recognized and seen as essential for future growth of the sector, and energy and infrastructure sectors that depend on it.
- b. Our review suggests that the focus of current legislation and amendments is on management of exploration licenses, mining leases, and quarry leases, reflecting the needs of a sector in early development.
- c. There is a significant gap in prevailing mining regulations in relation to technical management of mine operations. This should cover areas such as:
  - different working methods, like- open pit, underground- longwall or room and pillar, etc
  - working conditions, such as for lighting and illumination, ventilation, etc
  - skilled manpower, their qualification, responsibilities, duties and employment conditions
  - efficiency: both, operational and energy

- mineral conservation and maximization of life of mine through optimal recovery
  - occupational health and safety, emergency preparedness, and rescue
  - general and workplace environment
  - welfare measures, such as sanitation, canteen, rest shelters, etc
  - overall mine management
- d. The review suggests cases where the various legal provisions may not be complete and consistent. For instance, the Mines and Minerals Resources (Control and Development) Act, 1992 (MMRCD Act 1992) does not specifically state that mining and allied activities are prohibited except under a license granted under the Act. The Mines Rules made under this Act prohibit unauthorized work (Rule 65) and has provisions for checking unauthorized mining, quarrying and disposal of mineral produced by unauthorized operation (Rule 67).

In general, it is appropriate that the primary Act, being the principal law, clearly censures the activities that are not in accordance with the law. This will help clearly establish preeminence and avoid future challenges and disputes. For example, the Mines and Minerals (Development and Regulation) Act, 1957 in India prohibits reconnaissance, prospecting, and mining except under a permit, licence or lease issued under the Act (Sec 4).

The Western Australian (WA) Mining Act 1978, similarly, prohibits mining activities without authority of law (Sec- 155), however, making few exceptions such as aerial survey, and mining on private land where the minerals are owned by the landowner. The penalties are stiff too, and any violation risks significant one-time and continuing penalties for the period of offence, and have to compensate by rehabilitating the land to the satisfaction of the Ministry.

In Brazil, the fundamental principles governing the use of mineral resources are defined in the current Federal Constitution enacted in 1988 and in the Constitutional Amendments Nos. 6 and 9 of 1995. Mineral resources may only be explored and mined under authorization or concession of the Federal Government, by a Brazilian person or company incorporated under the Brazilian law which has its head office and administration in Brazil, the mining product ownership being guaranteed to the concessionaire.

In Canada, all lands and minerals that have not been granted to private persons are owned by either the federal or provincial governments in the name of Her Majesty and these minerals are commonly known as Crown minerals. Ownership rights to Crown minerals are vested by the Canadian Constitution in the province where the minerals are located. Minerals underlying Indian reservations, national parks, and other federally owned lands, such as certain public harbors, are owned by the federal government. The federal government and most of the provinces lease minerals, extract royalty, and impose operating terms and conditions on alienated Crown mineral lands.

The need for strong penal provisions is increasingly felt due to rising incidence of illegal mining in many jurisdictions, driven by high commodity prices, and the avoided costs of sustainable and good mining practices that benefit illegal operations.

- e. The review suggests a need for ensuring the various definitions, terms, and terminologies used in the law, rules, and regulations, are adequate to meet current requirements, and are consistent across the various instances used. Any differences in interpretation lend themselves to potential disagreement and conflict especially when private and international operators enter the sector and competitive pressures become stronger.

For example, the MMRC Act 1992 defines a “prospecting licence”, while the MMR 2012 (earlier MMR 1968) defines “exploration licence” which does not differentiate between prospecting and exploration.

In Australia, the WA Mining Act (Sec-8) provides an exhaustive list of the definitions of the terms used, although individual sections have further definitions. The nature of the long list lies in the administrative and land management system, which is not relevant for Bangladesh. The Indian Mines Act (Sec-3) 1952 lists definitions that are also used by the Rules and Regulations framed under the Act. In Brazil however, the Mining Code does not contain any specific section covering the list of definitions used in the Code. In Canada, almost all the policies and regulations in the mineral sector have a section in the beginning covering a list of definitions relevant to the regulation.

Given this, our review suggests listing of all major terms and terminologies under the primary legislation, and use of these for all the rules and regulations made there-under.

- f. The scope of exemptions in law has to be clarified to prevent a future misuse. Specifically, it must define in what situations or to whom such exemption can be granted. The MMRC Act, 1992 currently empowers the government to exempt any mineral resource or any class of mineral resources from any or all the provisions of the rules.

In India, the Mines and Minerals (Development and Regulation) Act, 1957, exempts certain government organizations from requirement to obtain a Prospecting Licence. In Australia (WA) no general provisions for exemption from the provisions of the Acts and Rules are granted.

Similarly in Brazil, no general provision for exemption from the provisions of the Acts and Rules are granted in The Mining Code. In Canada, no person shall (a) explore for minerals, other than quarry minerals; or (b) stake out or record a claim; on or in Crown mineral land, unless he or she holds a prospecting license.

- g. The review suggests the need to reframe relevant provisions so that it is seen investment friendly and provides certainty to the private sector. For example, the MMR 2012 provides precedence to an entity set up under law (such as a Corporation or Authority) for grant of licence in event there are multiple applicants for a given mineral resource tenement.

The aforementioned provision could prove a dampener in a future auction of a mineral license, as bidders will perceive threat from the public sector. The legal framework should not differentiate on basis of the company organization, but could differentiate on basis of technical or financial capabilities.

It must be added that preferential treatment for the public sector is a recognized concept, given its wider social and economic role, but is advisable that the government in such cases of national interest “reserve” desired number of mining licenses or areas for the public sector, rather than give them right of precedence.

- h. The focus on sustainable mining, conservation, and environment protection is gaining, and many jurisdictions are bringing these issues into their primary legislation. In Bangladesh, the current mining legislation has limited reference, while the Mines and Minerals Rules 2012 provides for the licence holders to comply with the Environment Conservation Act, 1995, and the Environment Conservation Rules, 1997. Under this Act, which overrides other laws (Sec-2A), an Environmental Clearance Certificate is mandatory (Sec-12).

These provisions are not dissimilar to that elsewhere, but need to be updated for more current practices, such as for sustainability reporting. In Australia, the WA Mining Act (Sec- 6(1)) states that the Environment Protection Act, 1986 will prevail in event any provision of the Mines Act is inconsistent with it. In Canada, similarly, the environmental legislation refer specific clearances

required for mining projects from the Federal and/or Provincial government depending upon the location, type, and size of project.

In Brazil, the fundamental principles governing the compatibility of the mining activity with environmental protection are outlined in the 1988 Constitution, which defines the tools of the Public Administration to achieve this objective and the obligations of the mining company. The role of coordinating and formulating the Brazilian Environmental Policy is the responsibility of the Ministry for the Environment, and associated with it is the National Environmental Council (CONAMA), the deliberative and consultant board for environmental policy.

- i. Our review indicates that different stages of mining activity are not adequately recognized or provided for in the primary law, albeit covered in the Rules. The recognition of the development stage (viz., reconnaissance, prospecting, mining, etc) is desirable where a jurisdiction sees future potential growth in the sector, and expects this to be driven by the private sector, either directly or through PPPs. The MMRC Act, 1992 should be amended to incorporate the provisions for each of the mining license structures viz., Exploration Licence, Mining Lease, and Quarry Lease.

In Australia (WA), detailed provisions and conditions contained in the main Act describe various licenses i.e., prospecting, exploration, mining lease, general purpose lease, and miscellaneous licenses. In Canada, grant of exploration licence and mining lease and have detailed provisions that are similar to an application for renewal.

In Brazil, exploration authorization permit is granted by the DNPM after the legal and regulation requirements have been met. After exploration, the holder of the authorization can apply for mining concession which is granted by the Ministry of Mines and Energy.

- j. The minerals may also be classified on basis of nature or end-use for policy and administrative convenience. A typical classification is - Major and Minor Minerals, Energy and Atomic Minerals, Metallic and Non-metallic minerals. An example of this in Bangladesh is the Schedule for quarry lease (Twelfth Schedule, Rule 76) of MMR 2012.

In India, the Mines and Minerals (Development and Regulation) Act, 1957, categorizes minerals into major and minor minerals, hydrocarbon/energy minerals, atomic minerals and metallic & non-metallic minerals (The First Schedule), Sec 3(e). This permits decentralization, such that the Central Government is empowered for major and atomic minerals while the State Government on minor minerals.

In Australia (WA), with a similar constitutionally federal structure, there is no categorization in general but specific mention is made of Iron (Sec-111) and Gold (Sec-85B) for certain situations, given the predominance of iron ore and gold mining in WA mining.

In Brazil, there is no categorization, in general. However, some mineral resources like oil, natural gas, other fluid hydrocarbons and nuclear ore and minerals are under Federal Government's monopoly. Exploration and exploitation of other mineral resources may be performed by authorization or concession from the Federal Government.

The categorization helps in targeted policy actions for priority minerals, and is more a facilitating feature than essential. In this context, any other basis can be adopted too viz., in terms of the value of mineral, or the scale of mining, or the nature of activity.

- k. Mine closure has become an important part of mining regulatory development, and most large mining countries are updating their legal framework and administrative processes for this. The present legal framework in Bangladesh lacks provisions for scientific closure of mines and post-closure management. It is suggested that suitable amendments be made for progressive closure, final closure, and post-closure management in the primary law.

As mentioned above, several jurisdictions viz., Australia, India, US, Canada, South Africa, are in process or have prescribed updated mine closure requirements.

## ***ii. Licensing and Leasing Process***

- 5.5. The licensing and permitting process is used by the Governments to administer development of mining areas to extract the economic benefits (of revenue generation, attracting capital, or raising funds from divestment) and achieve their policy goals (of project delivery for end-use products, or import substitution, or economic development). The achievement of these goals is optimal when the process adopted is open and transparent, clearly specified, sound in law, and in consultation with all the key stakeholders.
- 5.6. The MMR 2012 (earlier 1968 and its amendments) have been reviewed for the specific rules on grant and regulation of Exploration Licence, Mining Lease, and Quarry Lease. The specific rules, and our observations, are outlined in this section.
- Sub-rule 9 (1) requires a licensee (or lessee) to get the licensed (or leased out) area demarcated within 30 (thirty) days from the grant by a Surveyor recognized by the BMD in presence of an officer representing the Director, BMD.
  - Rule 6 requires an applicant to make separate applications in case of two or more areas while restricting number of applications for a particular mineral to maximum of 5 (five) areas at a time. Further in case more than one mineral is discovered in an area, then the applicant has to mention all the minerals in the application.
  - Rule 5 provides for receipt and disposal of an application for a licence in a prescribed manner.
  - Rule 10 provides that an applicant should execute the licence within 3 (three) months of the communication of grant.
  - Rule 11 provides for the surrender of a licence or lease by a licensee or lessee before the expiry of the term by giving a 2 (two) months and 6 (six) months prior notices to the Director respectively. It also requires that all sums due on account of the licence or lease are paid.
  - Rule 12 requires that a licence or lease be assigned or transferred only with previous consent of the Director in writing, given with the prior approval of the Government.
  - Rule 13 provides the method of assignment and transfer of licence or lease.
  - Rule 14 provides the provision for mortgage of licensed or leased area with prior approval of Director.
  - A licence or lease is granted under Rule 16 where an application has been allowed under Rule 5. An exploration licence, a mining lease, or a quarry lease shall contain the conditions, as specified in the form of agreement set out in the Fifth Schedule, Sixth Schedule and Seventh Schedule respectively. The Bureau may with prior approval of the Government, alter or add such conditions to suit the necessity of a particular case.
  - Sub-rule 16 (2) provides a licensee preferential right to receive lease for the area demised under him subject to satisfactory compliance with the terms and conditions of the existing licence.
  - Rule 23 requires a licensee or lessee to allow holders of other licences or leases in respect of any land which adjoins or is approached by the land held by him, reasonable facilities of access.

- Rule 31 provides that in case where licence or lease area or part thereof has been granted through inadvertence or mistake and is found out at a later stage, the licensee or lessee shall unconditionally surrender that area without any compensation or making other claim.
- Rule 32 provides that a licensee or lessee may at any time during the term of the licence or the lease or any renewal, surrender the rights granted by the licence or the lease in respect of all the area or any part of it.
- Rule 33 has provisions for extension or change of licensed area.
- Rule 47 provides for arbitration for disputes arising out at any time during the continuance of the licence or lease or after the termination as per provisions of Bangladesh Arbitration Act 2001, ( Act no 1 of 2001).
- Rule 48 provides licensee's right to undertake exploration, subject to license conditions, with the sole right to quarry, bore, dig and search for, win, work and carry away any specified mineral or minerals lying within, under or throughout the land specified in the licence.
- Rule 49 requires exploration licence for area more than 4,000 hectares not to be granted except as otherwise decided by the Government.
- Rule 51 specifies a licence to be valid for two years in the first instance while Sub-rule 52 (1) has provisions for renewal subject to the satisfactory compliance of the terms and conditions of the licence including the working obligations under Rule 54 for a period not exceeding 12 months at a time, provided that the total period of Exploration including the renewed period shall not exceed 04 years.
- Rule 53 extends licensees the right for renewal of licence, before expiry of term, on applying for a lease until the lease applied for has been granted or refused.
- Rule 54 provides the working obligations for a licensee. The scheme for prospecting contains:
  - location, description of exploration area and targets, accelerated exploration, if any;
  - methods of exploration including machinery and equipment to be used;
  - description of technical personnel to be employed;
  - details of roads, residential accommodation for staff and labour to be constructed; and
  - estimated expenditure of the scheme along-with maps, plans and other related papers;
- Sub Section 8 of the Rule requires the licensee to keep accurate geological, geophysical and drilling plans, maps, logs and records and shall furnish to the Director all data and information as to the progress of geological, geophysical, drilling operations and other geo-scientific works.
- Rule 58 prescribes procedures for filing an application for mining lease, accompanied by the following enclosures:
  - (a) A complete exploitation scheme for the approval of the leasing authority for working and exploiting the mineral by technically qualified personnel, containing;
    - the statement of expenditure to be incurred by the lessee during exploitation;
    - maps of the area including detailed geological maps showing the mineral deposit;
    - location, description of major deposits and map showing the sub-surface geological structure or the size of the basin;



- estimates of proved and probable reserves on basis of feasibility reports;
  - minimum rate of production;
  - methods of mining including machinery and equipment to be used;
  - technical personnel to be employed at various stages of exploitation;
  - map showing roads and other surface as well as underground construction such as store and lamp room, workshops, beneficiation, offices, residential accommodation and other amenities for staff and labour;
- (b) For the purpose of ensuring payment of royalty, annual fee, and other dues payable under these rules, a bank guarantee of 3% of the estimated cost of the scheme.
- o Rule 61, as amended in 1995, provides the maximum area to be granted under a lease as 800 (eight hundred) and 600 (six hundred) hectares for open pit mining and underground mining respectively, except in cases of special exemptions granted by the Government.
  - o Sub-rule 62 (2) further determines the sub-surface boundary of a lease which shall run vertically downwards below the surface towards the centre of the earth.
  - o Rule 64 prescribes initial term of lease as not to exceed 10 (ten) years in case of open pit mining and 20 (twenty) years in case of underground mining.
  - o Rule 71 states detailed working obligations for a lessee.
  - o Rule 76 provides that Quarry lease except for silica sand, rock and rock mixed with sand, shall not be granted in respect of any area measuring more than 30 (thirty) hectares (Sub-rule 1), except in case of practical reasons as decided by the leasing authority in consultation with GoB (Sub-rule 2).
  - o Rule 77 (1) prescribed tenure of 2 (two) years for Quarry lease with provision of renewal for 1 year at a time under sub Rule (2). Further, Quarry lease shall be granted through open tender (Sub-Rule (1) of Rule 78), subject to the provision in the Sub-rule(2) of Rule 78.
  - o Rule 84 provides for cancellation and suspension of licence or lease.
  - o Sub-rule 85 (1) provides the licensee to apply within 30 (thirty) days to the Government in appeal of an order of the Director.
  - o As per Rule 86, the Director in discharging his functions is guided on question of policy by such directions as the Government.

5.7. Our observations from the review of the provisions from the MMR 1968 and the MMR 2012 are listed below.

- a. **Consultation provisions:** In our understanding the newly published Mines and Minerals Rules, 2012 provide for taking opinion of Deputy Commissioners of the relevant District in relation to issue of exploration license, mining lease and quarry lease. However, there are no provisions for consultations with local communities or other stakeholders prior such grant.

Thus Rules can provide for consultation with relevant key stakeholders, for example, potential bidders prior any private participation; or with local communities in opening new project areas; or with lenders and multilateral institutions to facilitate financing. The consultations are helpful in reducing the pre-development period, and the transaction cost for the players and for the economy as the outputs help in import substitution and improved raw material security.

In other jurisdictions too, such as in Australia, Canada, India, similar provisions for consultation with local communities and other key stakeholders are required before according final approvals for commencement of mining operations.

- b. **Eligibility of transferee or assignee:** The provision for transfer or assignment of the licence under Rule 12 is required, but should be amended to provide conditions for eligibility of the transferee or assignee of a licence or lease, respectively. These amendments should be incorporated to avoid transfer of lease to a less qualified entity thus impacting the success of the project.
- c. **Geological data repository:** A specific requirement should be incorporated in the Rules of license conditions for posting all data and information relating to the progress of geological, geophysical, drilling operations and other geo-scientific works the licensee undertakes, with the Director, BMD. It may be made explicit by requiring that that such progress report should be accompanied by relevant plans, maps, logs and records.

Further, a provision should also be made for submission of hard and soft copies of the geological report along with all logs, plans and sections and details of other scientific studies conducted by the licensee with the BMD within 6 (six) months of completion of exploration or expiry of lease period or discontinuance of exploration. This is needed as several interpretations of geological data are required before a complete geological structure of the deposit can be arrived at and maps generated and quality-wise reserves estimated to complete the geological report. The practice of partial and infrequent submission of geological data can only give a vague picture of the geology of the deposit and not meet the objectives. The provisions for timely and full submission and a suitable penalty should be incorporated in the Rules to overcome this.

- d. **Format for Application:** Rule 84 recognizes Director BMD as the regulator and authority to grant mineral concessions prescribed under Rule 5 subject to Government approval. A similar process is applicable for cancellation of mineral concessions. The information sought in application formats for grant of licenses and leases under the MMR 1968 is not sufficient for decision making and should be enhanced to include data relating to geological and geophysical work, in particular the results and reports of exploration work prepared upon completion of exploration, financial and economic viability report of mine.
- e. **Term of Exploration Licence:** The term of the Exploration License may be revised from two years to up to four years in line with global practices.

For example, In India, the exploration licence is given for 3 (three) years in the first instance and renewed up to a total period of 5 (five) years. In Indonesia, mining authorization for exploration is given for 3 (three) years in the first instance and can be renewed twice for a period one year (at each time). In South Africa, there is no provision for the period of prospecting right. Canada provides exploration licence initially for a period of five (05) years which can be renewed twice for a period of three (03) years each. In Brazil, the term of maximum validity of the exploration permit is three (03) years and can be extended for no longer than another equal period.

- f. **Application Process:** The submission by entities seeking a license should be strengthened by including the following additional data in the prospecting scheme:
  - the number of pits, trenches and boreholes proposed in the area;
  - the details of exploratory mining, if any, proposed to be carried out;
  - number of samples proposed to be drawn and analysed;
  - beneficiation studies proposed to be undertaken;
  - baseline data for prevailing environmental conditions prior starting prospecting operations;



- steps to be taken for protection of environment including prevention and control of air and water pollution, progressive reclamation and rehabilitation of land disturbed by prospecting operations, scheme of plantation of trees and such other mitigation measures;
- g. **License award:** The provisions of the licenses to be issued for mining concessions may be strengthened with the following conditions:
  - submission of detailed mining plan ensuring mineral conservation and safety, by a qualified person (which is now included in the Mine and Minerals Rules 2012);
  - detailed Environmental Impact Study (which is now included in the Mine and Minerals Rules 2012);
  - socio economic conditions relating to the local community, covering inter alia employment, relocation and rehabilitation,
  - financial model, and feasibility study of the proposed mining project;
  - mine closure and post-closure transition plan;
- h. **Institutional arrangements:** A provision could be included for government notification for the approving authority to overcome the following practical hurdles.
  - The maximum area granted under exploration licences, and mining leases & licences should be revised based on the real area of mineralization, depth of mineralization, geological control and surface features. The maximum area prescribed currently is very small, and a simplified process is necessary for the administrative agency to modify it based on the stated technical criteria.
  - The overall process for granting a licence and/or lease should be such that it is aligned with the licensees' actions, following the pre-development steps in a sequential manner. The initial prospecting licence should be followed by a licence covering a lesser area but not less than the maximum allowed for a mining lease. This progressively narrows the area over time, and when the licence-holder is convinced that the site is fit for mining operations, he applies for a mining lease.
- i. **Term of the Mining and Quarry lease:** The term currently provided for review of a mining lease may be reconsidered, as 10 years (in case of Open-pit mining) is a very short period for viable mining operations to be undertaken. The capital expenditure if amortized to recover investments in a short time period means higher annual recovery and thus higher cost of production. Further, as the time for mine development ranges from 2-4 years for Open-pit coal mines, short license term means the licensee would not be able to fully exploit the resources within the lease period. Both these factors impact viability adversely, and increase the cost of production.

It may be suggested that the lease period be increased to a minimum 20 years to ensure proper development of the mine and efficient exploitation of minerals. In India, the minimum period for mining lease is 20 years and maximum period is 30 years with scope for renewal. In Indonesia, mining authorization for exploitation is granted for maximum period of 30 years, and the Minister has authority to renew it twice, on each occasion for a period of 10 years. In South Africa, the mining right is for 30 years and can be renewed further (each renewal may not exceed 30 years).

In Brazil, the mining concession grants a company right to mine the deposit until it is completely exhausted according to the mining plan and environmental licenses. In Canada, mining leases are: (a) issued for a specific term that is renewable; (b) subject to an annual rental charge and (c) transferable with the prior written consent of the relevant provincial or territorial government.

Ontario Manitoba and Yukon mining leases have an initial term of 21 years and are renewable for further 21-year terms. Other provinces have a term between 15-30 years.

### ***iii. Waiver in case of unsuccessful exploration***

- 5.8. The mining industry often suffers from instances of unsuccessful exploration (either, inadequate, or risk, or unviable mineral deposit) resulting in significant losses. The exploration companies/ mining entities are aware of the risks and incorporate this in their risk-reward equation. However, in many jurisdictions, mining companies are extended a tax break on such spend in order to encourage more efforts on exploration, which if successful, benefits the host government and society. Given the early stage of the Bangladesh mining industry, a similar approach could be adopted.
- 5.9. In case the lease is granted to a licensee on his demised area, he should be permitted to capitalize the expenditure incurred on exploration activities for the same mineral bearing area and mineral and add it to the capital cost of the mine. For example, Canada offers tax credit for exploration expenses incurred in establishing a mining project (the exploration expenses are capitalized and depreciated as Canadian Exploration Expenses for tax benefit purposes). In Brazil, any expenses incurred during the exploration stage and when expanding the reserves of the mine can be deducted as working expenses, or capitalized and amortized for the minimum period of five years from the start-up date of the mine.

### ***iv. Health and Safety Management***

- 5.10. All nations seek to provide a healthy and safe workplace and the mining industry is no different. The experience of successful mining companies shows that high standards in occupational health and safety in fact result in a more productive, profitable, and stable operation; with fewer grievances and compensation claims. The mining entities are entirely responsible for ensuring safe and healthy working conditions in their mines and facilities, and the Government agencies regulate it through various legal and administrative (technical) provisions.
- 5.11. The relevant legislations reviewed from the context of mining operations are:
  - The Mines Act, 1923 has provisions relating to:
    - Inspectors of Mines (Chapter II)
    - Mining Boards and Committees (Chapter III)
    - Mining Operations and Management of Mines (Chapter IV)
    - Health and Safety (Chapter V)
    - Hours and Limitation of Employment (Chapter VI)
    - Regulations, Rules and Bye-laws (Chapter VII)
  - The Mines (Amendment) Act, 2005 brought the following changes:
    - age of a person defined as “Child” in the Act was raised from 15 (fifteen) years to 18 (eighteen) years (Section 3, Clause (c));

- the minimum age of a person to be employed in mines was raised from 17 (seventeen) years to 18 (eighteen) years to prohibit employment of young person below ground without certificate of fitness (Section 26A) and to limit their working hours (Section 26B);
- 5.12. The Mines and Minerals Rules, 2012 incorporate further provisions, but these can be further strengthened to deliver required occupational health and safety standards at end user level, i.e., daily operation of a mine. The relevant rules are outlined below.
- o The minimum distance to be maintained from important installations such as airports, radio and TV stations, rail lines, gas lines, highways, buildings, bridges, electricity lines, dams and barrages, etc., and any work or operation within the distance prescribed for exploration licence / mining lease and quarry (Rule 22) are prohibited.
  - o Rule 35 requires that the provisions of Chapter V and VI of the Mines Act, 1923 (IV of 1923) and the rules, regulation and bye-laws, made there-under apply to matters relating to health, safety, working hours, leave of persons employed in mining activities including exploration.
  - o Rule 36 provides the manner in which Explosives shall be used in a mining activity. Rule 36 e (1) provides that “The Explosives Act, 1884 (IV of 1884)” applies to mining activities including exploration allowed under a licence or lease.
  - o Rule 55 provides power to the Authority to enter the premises of a licensed area and inspection.
  - o Rule 68 requires submission of monthly production returns to the leasing authority by the lessee which are necessary for maintaining records of the mine production and activities.
  - o Rule 69 and its sub-rules have provisions to retain detailed, updated plans which are important for safety in mine working.
  - o Sub-rule 69 (7) (b) requires that the position of underground first aid facilities and the location of telephones shall be indicated in the Plan.
  - o Rule 70 requires the lessee to strengthen and support to the satisfaction of the Director any part of the mine, when in the opinion of the Director such strengthening or support is needed for the safety of any railway, reservoir, canal, or any other public works or any building.
  - o Rule 94 inter alia specifies the following enactments as applicable to a licence or a lease granted under these Rules:
    - The Mining Settlement Act, 1912 (Ben Act II of 1912);
    - The Mines Act, 1923 (Act IV of 1923);
    - Bangladesh Labor Act, 2006 (Act no 42 of 2006)
- 5.13. Our observations from the review of the referred legal framework with regards to operational health and safety are as follows:

**Need to strengthen legislation for effective management of OH&S:**

- a. All mining licensees should be required to develop and implement OH&S Management Plans, following the prescribed guidelines, and subject to audit by Government agencies or technical consultants appointed by them. The plans should cover provision of fully equipped hospitals for taking care of specialist requirements of mine workers for both, emergency situations, as well as for early detection of occupational afflictions.

To ensure proper safety management of the mines, guidelines for conducting safety audit of the mines should be issued by the government nominated agency. The licensees should be required to constitute safety committees in the mines comprising representative of workers, representative of contractors and representative of mine management to review safety and health issues of the mine workers and recommend corrective measures. It may also explore the option to disseminate this to other stakeholders and the general public in order to bolster confidence in the mineral sector and drive the operators to better compliance.

- b. There is mention of regulating mining operations in the Mines Acts, but an effective mechanism to conduct periodic inspections, to monitor occupational health and safety for deficiencies in process or controls or practices at the operation level, is needed. At the institutional level, there is need for a Mine Safety Inspectorate as this role requires a specialist competency and has to maintain independence.

The OH&S regulation could be developed under the Mines Act (Chapter VII), but provisions for this have been brought under the MMR 2012, which was primarily aimed at regulating mining concessions. The regulatory oversight for OH&S, which under MMR 2012 lies with the Director BMD, needs to be suitably ring-fenced to provide the necessary independence. At a broader level, the government will need to take a view on which arm would administer the provisions relating to safety and health, in order to ensure complete independence and avoid a conflict of interest. A suggestion is to house it under the ministry that is in charge of labour welfare

- c. The nominated authority (the Director, or the Inspector, in case it is established) must conduct mandatory checks, periodic and surprise inspections as prescribed under the Act and Rules. The revisions will also need to incorporate provisions for investigation and prosecution by Director or Inspector, as applicable, in event of non-compliance and incidents.
- d. The scope of the OH&S practices should be extended to surrounding areas to address the impacts on surrounding communities. A mining project has a large footprint and with local communities already engaged in communications and risk mitigation plans.
- e. The mining licensees should be required to adopt a serious and rigorous approach to safety and implement and monitor compliance with aforementioned safety management plans, and to assess all incidents and injuries for their root causes and in situations they occur, demonstrate corrective measures taken to avoid recurrence of such incidents. All mining licensees should be inter alia required to:
  - ensure that they have clearly defined processes to procure Personal Protective Equipment (PPE) meeting the prescribed quantity and quality; and use them appropriately;
  - develop a code of practice on introduction of new machinery and equipment and suitable operator training given; and these be ratified by the Director or Inspector, as applicable;

**Need to clearly define responsibilities of key personnel:**

- f. The MMR 2012 provides for appointment of a resident manager or qualified personnel under whose supervision the mining activities are carried out. However, the duties and responsibilities of this key position are not contained in detail. In other mining jurisdictions such as Australia, Canada, and India, the regulations define the requirements in greater details viz., qualifications; the numbers as per the roster and manpower; mining methods; and duties and responsibilities of the Management Representative, Mine Manager or Work Supervisors. It helps fix responsibility with the mine manager and other key personnel and sets how many numbers are required based on the size of the mine.

### Need for a specialist institutional structure for mines safety:

- g. The powers for inspection of a mine's working do not appear provided after the amendment in 1995. Prior this, the 1989 amendment to the MMR 1968 under Rule 50 extended the power to inspect plant, records, accounts, etc., of the license by any authorized person. In MMR 2012, same has been reintroduced under Rule 55 and explains the purpose of inspection, that is, to examine the mines, pits, plants, appliances, buildings, works executed by the licensee and the state of repair and its conditions.

A specialist institution is required to exercise these powers, when made available, bringing to bear its sector strengths, operational independence, and the institutional tools to analyze any incidents or early symptoms of it, to take precautions or learn lessons that will be incorporated in future regulations on mine safety. There is need for such a specialist institution at any time given the challenging geo-mining conditions in Bangladesh, and becomes imperative when commercial mining activity increases. The institution needs to be staffed with specialists with qualifications and experience to be defined under the Rules, and strengthened with appropriate training.

There are examples of similar institutional arrangements. In India, the Directorate General of Mines Safety (DGMS) is a subordinate body of Ministry of Labour and is the regulatory agency in matters pertaining to occupational health and safety, and welfare of persons employed in mines and oil-fields. It is the nodal agency engaged in assessing the regular operations of a mine, approving the plans and overseeing its implementation, and thus ensuring safety of the employed workforce. It is responsible for administration of the Coal Mines Regulation 1957), Metaliferrous Mines Regulation 1961, and other associated regulations.

- h. The mining entities, presently, follow a self defined process to report incidents to the authorities, which is not adequate, independent, and is not homogeneous or uniform across the entities. The covenant number 32 of Fifth Schedule (Exploration Licence), Sixth Schedule (Mining Lease) and covenant number 31 of Seventh Schedule (Quarry Lease) requires licensee or lessee to report to the Director any accident that occurs in the licensed/leased area, or in any pit, shaft or working therein, without delay. The review suggests a need to strengthen this practice through a clearly defined procedure, timeline, and a standardized documentation.

### Need to develop specific regulation for coal mines:

- i. There is need for a specific regulation covering the requirements for coal mines. There is a single mechanized coal mine operating today but more are likely to be developed. The MMR 2012 has general provisions for mining, but specific requirements of coal mining have to be addressed, and hence the need for a specific regulation.
- j. Coal mining is more specialized, encounters conditions and challenges that are specific to it, and risk elements that need to be addressed to ensure a safe environmental and labor friendly mining conditions. A few of these specific issues are:
- in coal mines, the gas trapped in the seams is released which in underground mines poses risk of mine explosions and bumps if not controlled in a scientific manner, and towards this specific regulations are instituted to control the mine operations, size, airflow etc., to ensure its safety;
  - challenges arising from heat, water seepage, etc., are more pronounced in coal mining than in other minerals;
  - the mined out areas (goaf) left after coal is mined is a source of trapped methane and thus a potential danger, and requires specific steps for scientific closure;

- supervisory requirements in coal mining are more rigorous than for other minerals to deal with specific elements such as mine district creation, insulation of mine districts, monitoring and supervision, ventilation, safety, and use of fire proof equipment;
- k. Given the above requirements, it is advised that specific regulations for coal mining are instituted and this may, among others, cover the following aspects:
- notice of opening, re-opening, abandonment, discontinuance of mines, notice of accidents and disease, notice of change in ownership and appointment of agent, monthly and annual returns;
  - procedure for conducting examination and grant of certificates of competency and of fitness to mine managers, engineers, surveyors and other technical supervisory staff and workers having relation with mine safety;
  - appointment of inspectors and mine officials and their qualifications;
  - duties and responsibilities of workmen, competent persons and officials;
  - plant and sections to be maintained in mines;
  - means of Access to and Egress from mines;
  - transport of men and materials in mines and winding in shafts;
  - mine working, including development work, extraction of coal by underground and opencast methods, support of underground mine working and other precautions and protective measures for safety of mine and workers;
  - precautions against dangers from fire, dust, gas and water;
  - ventilation of underground workings;
  - lighting and safety lamps;
  - explosives and shotfiring;

**Need to develop specific regulations for Metalliferous mines:**

- l. There is need for a specific regulation covering the requirements of metalliferous mines. There is only one hard rock mine currently, and is guided by the Mine Regulation on Labour Safety and Management. This legal framework strengthening, and there is justification for a Metalliferous Mine Regulation to be framed, on the lines of the Coal Mines Regulations mentioned above, to address specific matters, such as:
- there are specific safety related challenges in hard rock mines relating to strata strength, underground development dimensions, rock burst etc;
  - the variation in rock characteristics will be wide due to wide variation of minerals, and will need more universal provisions to address the different circumstances;
  - the mining methods used in hard rock mining will be different with different configuration of excavation especially in underground mines, and so regulations will need to be suitably modified to reflect it;



### Need to develop vocational training regulation:

- m. The anticipated growth of mining activity requires to be accompanied by skilled professionals in specific vocations. In mining sector, the knowledge and skills required are specialized, such as mining supervision, use of explosives, operation and maintenance of mechanical and electrical systems, mine ventilation etc.

Given there, it is suggested that a Mines Vocational Training Rules be framed to mandate necessary training of mine workers before their induction into mines for employment, besides periodic refresher training to current staff. In addition, the miners will need to undertake additional training whenever their jobs are changed or they are deployed to operate or maintain a different type of equipment. The abovementioned Rules must provide for adequate number of trainers with proper specified qualification and training, and properly equipped in-house training facilities and galleries.

### Need for Rescue Rules and Emergency Response Mechanism:

- n. A set of regulations needs to be developed to address any eventualities which cannot be entirely prevented in any mining operation. A clear set of Rules for Rescue and Emergency Response will help deal with accidents and other incidents that endanger life of person working in the mine and living in surrounding area, and damage property and other infrastructure. The regulations would cover quick response and effective management of rescue operations in all manner of incidents such as mine collapse, fires, explosion, inundation, etc. The regulations should provide for an adequate number of rescue stations, people trained in rescue operations at each operating mine, and the rescue equipment that must be maintained at each mine and at the rescue stations.

## v. *Management of Mineral Resources Information*

5.14. The management of mineral resources information is one of the most important tasks for any nation with mining interests. It has bearing on shaping the government policy and giving proper value to the resources, in giving confidence to lenders and investors in the sector, permitting various regulators to exercise their functions more effectively including sustainable development of resources, and helps the operators optimize the plans and operations.

5.15. The key steps in developing and managing mineral resources and mineral bearing areas are to:

- generate baseline information on topographical, geological, cadastral, environmental and socio-economic parameters;
- collect and systematically manage data pertaining to mineral resources and mineral bearing areas through an administered data repository;
- conduct systematic techno-economic study and analysis of a mineral deposit following the global practices in this discipline;
- provide access to information as and when required by planners, explorers, potential investors and other stakeholders in mineral resource development in a transparent manner; and
- develop guidelines for generating, analyzing and reporting the mineral wealth of the country;

5.16. The key legislation reviewed for assessing the adequacy of management of mineral information are outlined below. MMR 2012 has several provisions for collecting, maintaining and administering information related to licences and leases, such as:

- Sub-rule 8 (1) requires the Director to maintain separate registers of applications for licenses in the form given in the Fourth Schedule. In case of ordinary sand and ordinary stone, the Deputy Commissioner of concerned district is required to maintain separate register of applications in the form given in the Fourth Schedule.
- Sub-rule 8 (2) provides that each register be open to inspection on payment of a fee.
- Rule 15 requires the Director to publish notices of grant, surrender, cancellation, determination, transfer or assignment in the Official Gazette stating the name of the licensee or lessee, transferee or assignee giving descriptions of the area.
- Rule 32 requires a licensee or lessee during surrender of the rights granted to submit the data on geological, geophysical, drilling or other geoscientific works of the surrendered area.
- Rule 50 requires the Director to maintain a register of licences granted in the form given under Ninth Schedule.
- Sub-rule 54 (6) requires the licensee to furnish, within 30 (thirty) days after every 3 (three) months, a progress report of explorations carried out during last 3 (three) months. The report has to be in a form specified by the Director and contain a statement of the depth reached in each drill-hole or pit along with relevant data on geological or geophysical work carried out.
- Sub-rule 54 (7) requires the licensee to furnish, within 60 (sixty) days after end of each year, a report of exploration operations carried out during the year, with a plan showing the position of all works executed in connection with the exploration in a form specified by the Director.
- Sub-rule 54 (8) requires the licensee to keep accurate geological, geophysical and drilling plans, maps, logs and records relating to the area granted and furnish all data and information as to the progress of geological, geophysical, drilling operations and other geo-scientific works.
- Sub-rule 54 (9) provides, subject to Rule 89, the Director to make required data available to the Geological Survey of Bangladesh and any other Government department or agency.
- Under Rule 60, the Director is required to maintain a register of leases granted by him in the form as given in the Tenth Schedule.
- Rule 68 requires the lessee to submit monthly production returns after the commencement of mining operation within the first 7 (seven) days of each month showing the production in the preceding month to the leasing authority in the form specified by the Director.
- Sub-rule 69 (1) requires lessee to prepare detailed plans by recognized surveyor or consultant in accordance with the provisions of these rules, and the plans shall:
  - bear the name of the mine, number of mining lease and name of the lessee;
  - show the scale together with the latitude and longitude and the relevant data;
  - be properly inked on tracing cloth or on durable paper;
  - be on a scale of 1 (one) centimetre to 10 (ten) metres; and
  - bear the name, signature and address of the surveyor recognised by the leasing authority;
- Sub-rule 71 (6) requires the lessee to keep accurate records in a form approved by the Director of the drilling, deepening, plugging, filling up or abandonment of all pits, bore-holes and wells and of any alteration to the casing thereof and a log of all bore-holes and wells shall be kept in a form approved by the Director containing particulars of the following matters:



- the sub-surface strata and subsoil through which the bore-hole or well was drilled;
  - the casing inserted in any bore-hole or well and any alteration to such casing;
  - any petroleum, water workable minerals or mine working encountered; and
  - any other matters required, and to deliver copies of these records and logs to the Director for interpretation, evaluation and monitoring of these geoscientific data;
- Sub-rule 71(7) requires the lessee to keep, properly label, and preserve with sufficient characteristic for reference for the whole period, samples of the extracts of various strata and water encountered in any pit, bore-hole or well and samples of any mineral discovered in the area granted, and the Director or a technically qualified officer authorized by him shall have access to such samples at all reasonable times and entitled to have specimens, not exceeding 1/2 (one half) of any such sample.
  - Sub-rule 71 (8) requires the lessee to furnish to the Director, within 30 (thirty) days after the end of each calendar quarter, reports in a form approved by the Director from time to time, of the progress of the mining operations carried on by the lessee and the reports shall contain:
    - a statement of the depth reached in each drill hole or pit; and
    - a statement of areas in which any geological or geophysical work has been carried out;
  - Sub-rule 71 (9) requires that the lessee shall keep accurate geological, geophysical plans, maps and records relating to the area granted and furnish such plans and information of the progress of operations as the Director may require.
  - Sub-rule 82 (5) requires the lessee to furnish within 30 (thirty) days after every three months, the progress report of the quarry operations carried on during the three months, containing:
    - a statement of the depth reached in each drill hole or pit; and
    - a statement of geological or other geoscientific work or data has been carried out;
  - Sub-rule 82 (5) requires, in case of quarry lease for ordinary sand or ordinary stone, the lessee to furnish in 30 (thirty) days after every 6 (six) months, progress of quarry operations carried out during the 6 (six) months containing:
    - a statement of the depth reached in each drill hole or pit; and
    - a statement of geological or other geoscientific work or data that has been carried out;
  - Sub-rule 82 (7) requires lessee to furnish within 60 (sixty) days after the end of each year a report of quarry operations carried out during the year, with a plan showing the position of all works executed in connection with the operations in a form specified by the Director.
  - Sub-rule 82 (8) requires the lessee to keep accurate geological and drilling plans, maps, logs and records relating to the area granted and shall furnish to the Director all data and information of the progress of geological, drilling operations and other geoscientific works.
  - Rule 89 requires all logs, geological or geophysical records, plans or maps which the licensee or the lessee is, or may be from time to time required to furnish under the provisions of the licence or the lease, shall be supplied at the expense of the licensee or the lessee, and shall except with the consent in writing of the licensee or the lessee which shall not be unreasonably withheld, be treated by the Director as confidential for at least 5 (five) years, which period may be extended by the Director.

- Rule 96 is applicable in case of discovery of other minerals than the one for which licence is granted or any treasure of archeological value. Under this Rule, a licensee or a lessee or an auction certificate holder shall, without delay report to the Director about the discovery of any mineral other than the mineral for which the licence or the lease or the auction certificate has been granted, or about any significant archaeological treasures and other discoveries.

5.17. We outline below our review of the referred legislation and recommendations based on this and other comparable jurisdictions.

- a. From the aforementioned, it is clear that the MMR 2012 (earlier MMR 1968 and amendments) have strong provisions to collect, maintain and report information related to a licensee. The BMD also has the authority to collect and maintain this to regulate the licensees and to use this data to support mineral sector development.
- b. From experience elsewhere, similar robust provisions to collate data do not necessarily translate into desired outcomes. The sector actions, from policy-making to project development often suffer due to lack of proper information, or extra efforts having to be invested by multiple parties in developing the needed understanding of the asset. The data generated by state agencies or submitted by other operators may not be organized in a form that permits its full use.
- c. We advocate development of a central data repository for mineral resource information and inter alia “mineral accounting”. This should not be limited to cadastral and geological information but designed to provide all baseline information needed to develop a mineral endowment, such as of environmental and socio economic aspects, geological information, exploration data, licences granted, production, quality, and so on.

In Australia, the nominated agency is Geoscience Australia under the Resources, Energy and Tourism portfolio. It provides geoscientific information and knowledge, enabling the government and community make informed decisions on resource exploitation, environment management, safety, and other aspects. In Canada, the provincial government departments responsible for mines, mining, and mineral resources serve as good sources of information such as the Alberta Energy, BC Ministry of Energy, Mines and Petroleum Resources.

In Brazil, Companhia de Pesquisa de Recursos Minerais – CPRM, is a state-owned company, under the jurisdiction of the Ministry of Mines and Energy, known as Geological Survey of Brazil. CPRM’s mission is to carry out programs, projects and services required for planning and the rational use of the country’s natural potential resources, with emphasis on the knowledge and development of its mineral and water resources. It undertakes institutional government programs and works as a service provider, supplementing the work of private enterprise. The National Department of Mineral Production - DNPM, government regulatory agency linked to the Ministry of Mines and Energy, Brazil structure has the objective of planning and fostering the exploration and exploitation of the mineral resources and oversee geological, mineral and mineral technology research, as well as to ensure, control and oversee the mining operations throughout Brazilian territory.

- d. The database for each leased mine should include benchmark data from at the commencement of mining operations and updated at periodic regular intervals to monitor development and prevent revenue leakage from illegal mining or unaccounted removal of minerals from the mine. The rise in commodity prices and the consequent implication on valuation and royalties make it necessary to monitor this rigorously.
- e. Typically, in the past and in many cases even today, the government agencies conduct the initial surveys and geological works to ascertain mineral resources. It is not uncommon for budgetary and manpower resource constraints to impact these efforts in terms of delays and gaps in data. A repository will help leverage these investments which private efforts can supplement.

- f. The mineral resource data and information collected and analysed by different agencies presently lies with them individually, making it hard for effective data management which needs integrated data points. For instance, the resource and reserves lie with respective exploration agencies such as the GSB and Petrobangla. Likewise, the mine operations data is with BCMCL and Petrobangla and BMD has limited visibility of this information. It is suggested that the Rules provide for development of a central repository for all mineral data.
- g. There is a need to develop the institutional capacity, and it should start with BMD as it holds the primary authority delegated by the Government for regulation and development of the mineral sector. This will cover a number of aspects, including induction of proper skills (for example, BMD does not have an expert in geology or mine planning to review information coming from the exploration agencies or mining entities); organizational positions (for example, the Act provides for the post of Chief Inspector, but such a position is not sanctioned for BMD); training; tools; reference materials; and other inputs needed for a fully equipped organization.

## ***vi. Classification and reporting of Mineral Resources and Types***

5.18. The classification and reporting of mineral resources and types, as per the internationally acceptable systems, is one of the most important actions that the government must do. The mineral information gathered (discussed in earlier section) on proper classification forms the basis that policy makers, investors, operators, and lenders use for their actions. A robust reporting system increases confidence of international mining companies, financial institutions, and capital markets in the sector. Following features characterize a good reporting system:

- The mineral resources are classified in terms of their economic potential and technical viability for development and exploitation;
- The mineral resources classes provide assurance, in an objective manner, identifying them for their economic development and exploitation on basis of:
  - level of geological exploration work undertaken,
  - knowledge of mineral deposit and mineralization,
  - technology adopted for exploitation and use,
  - commercial market conditions,
  - environmental footprint, and thus the cost of impacts that is built in, and
  - socio-economic impacts on similar basis;
- Mineral types are classified on basis of their economic and strategic importance for the nation, and hence, will be seen in context of prevailing governance and regulation (for example, classified into Major, Minor, and Strategic minerals);
- The sub-classification is based on standards defining their physical, chemical, and end-use specific properties (for example, the rank of coal);
- Reporting of mineral resources and their classes is based on national guidelines which advisably should be in line with the internationally accepted system, guidelines, processes and standards, and be able to withstand scrutiny; and

- The reported classes of minerals and estimates (i.e., the tonnage / volume, grade) are subject to the conditions laid in the system, and should be updated regularly when additional studies are conducted, or in cases when one or more qualifying criteria are revised.

5.19. The key legislation relevant to classification and reporting of mineral resources and types reviewed in this report are as follows:

- The current legislation has no specific provisions for reporting mineral resources in accordance with any of the internationally accepted Mineral Resources Classification and Reporting System.
- There is no distinct list of mineral types under the Act or Rules, except the Twelfth Schedule of MMR 2012 (under Rule 76) which lists minerals for Quarry Lease. MMR 2012 also recognizes Shale (which can be produced without using machines) as mineral unlike MMR 1968.
- Another list of minerals is specified in Eleventh Schedule (under Sub-rules 2 (26), 66 (4), 81 (5)) of MMR 2012 for levying Royalties.

5.20. The observations from our review of relevant legislation for classification and reporting of mineral resources is outlined below:

**Uniform mineral classification system:**

- a. The geological works carried out in the past for coal, peat, hard rock have been estimated by different methods and were based on assumptions specific to the mineral bearing areas (viz., coal field), and of the agencies that carried out the work. Given this, it is hard to make any comparison between different mine areas and the overall mineral resource assessment is impaired. Investors and lenders will lack confidence in such data.
- b. In this project, one of our tasks is to recommend a suitable mineral resources classification system for Bangladesh. Based on a detailed comparative and specific analysis, various experts' views, and consultation with all key stakeholders, viz., GSB, BMD, Petrobangla, academicians, the UNFC System is recommended for adoption for future classification and reporting of mineral resources. Efforts are also made by several agencies to report the current resources in accordance with the UNFC System as far as possible. These are presented in separate report submitted to the HCU as part of the Mines and Minerals Development Project.
- c. To ensure that the adopted mineral resources classification and reporting system is followed by all the licensees, and government and private sector exploration and mining entities, the legislation and regulations must be suitably amended bringing in mandatory provisions. Further, it will set the basis for issue of detailed guidelines and methods to be followed to assess and report mineral resources.

## ***vii. Conservation of Mineral Resources during Mining, Extraction and End-use***

5.21. Conservation of mineral resources is seen as “efficient extraction and use, not hoarding”. The goal of sustainable development of mineral resources requires that principles of mineral conservation are followed in all stages of mining lifecycle right from planning to end use (waste use and recycling, in cases where it is possible). The relevant policy and legislation must exhibit the following with regard to conservation:

- Mineral bearing areas should clearly identify the main mineral, and co-existing mineral or rocks of potential economic value.
- The mine development plan takes into account mineral losses and dilution during the life cycle of mining and extraction process.
- The mining process is designed to achieve maximum recovery of minerals, and mining companies are seen as clearly working towards continued process improvement. Further, poor recovery of minerals is deterred through effective regulatory and control measures.
- The recovery and losses of minerals during exploitation are properly accounted and reported by the mining entities. Further, the mineral losses in exploitation are classified as temporary and permanent losses.
- “Marginal value minerals” exploited during mining are handled separately in such a manner that it can be used when the economics become favorable; and
- The wastes during mining and extraction are assigned values as per the economics of current and potential future uses. Accordingly, the handling, storage and usage of wastes are designed.

5.22. The legislation reviewed relevant to the conservation of mineral resources in mining, extraction and end-use are outlined below:

- Under Section 4 (2) (i) of MMRCDA Act 1992, the Government is empowered to make rules with provisions to stop wastage of mineral resources.
- MMR 2012 have provisions for mineral conservation as discussed below:
- Rule 26 empowers the Director to assess and claim compensation for damage to mineral property caused by unscientific working, lack of supervision, negligence by the licensee. The licensee or lessee is liable to pay compensation assessed in the same manner as arrears of land revenue and royalties.
- Rule 73 has provisions against non-conservational mining activity. In instances where licensees run such activities in any part of their area jeopardizing conservation of mineral wealth, the Director can stop the work. The lessee is given an opportunity to cure defects, arising from such non-conservational mining activities within 90 (ninety) days and if found compliant, it is then allowed to continue normal operations.
- Clause 39 of Fifth Schedule (Exploration Licence), 38 of Sixth Schedule (Mining Lease) and 36 of Seventh Schedule (Quarry Lease) under MMR 2012 likewise empowers the Director to assess and claim compensation for damage of mineral property. The covenants provide that any damage to mineral property due to unscientific working, lack of supervision, negligence on part of licensee or lessee, will be assessed by the Director, as the sole judge, for the extent of damage and compensation payable. The compensation is payable within 60 (sixty) days of assessment and any default is treated in the same manner as arrears of land revenue under Public Demand Recovery Act, 1913 (Ben. Act III of 1913).

5.23. Our review and observations on the legislation relevant to the conservation of mineral resources in mining, extraction and end-use are outlined below:

- a. In our view, the prevailing provisions of the Rules are reactive nature, in effect dealing with a failure that has come to notice. The legislation has to be strengthened with proactive measures that provide for suitable check at the approval stage of Mine Plan, which is a prerequisite for grant of mining lease. The Mine Plan should be required to be based on the principles of mineral

conservation, high recovery, and value addition of run-of-mine output, where applicable. A violation of the approved Mine Plan will amount violating provisions of the principal Act.

#### **Coal (Conservation and Development) Act and Rules:**

- b. The majority of coal mines in the country have multi-seam deposits with seams varying in thickness from a few meters to over 40 m. Conservation of coal resources in mining such deposits pose a technological challenge i.e., it is not easy to do so, but can be undertaken where deemed desirable. Given this, it is suggested that a Coal (Conservation and Development) Act and Rules be framed by the Government of Bangladesh to ensure conservation of coal deposits recognizing the geological challenges; and provide financial support (such as through tax credits) for use of measures such as stowing and other protective works that improve recovery of coal in mining.

#### **Depletion Policy:**

- c. A depletion policy i.e., the period over which a relatively scarce resource or mineral will be tapped to serve the national needs should be formulated. This is important for energy minerals, such as coal, whose development is driven by goals viz., growth, supply security, import substitution, etc., which operate on different timescales.

#### **Categorisation of minerals on basis of value:**

- d. It is advised that the legislation provide for classification of minerals as per its value, so that the marginal value mineral is not treated as waste, but is conserved for future use. Further, there is a good rationale for provision of incentives to operators for methods that value-add marginal grade minerals and ensure higher recovery in extraction. For example, in hard rock sector a developer may be offered incentives if he mines dimension stone rather than aggregates, wherever possible. Further, the mining policy may encourage use of waste generated during extraction of minerals, as well as in its end use.

## **viii. Labour Laws, Workers Compensation, and Welfare Legislation**

5.24. Mining is a labour intensive and hazardous industry that demands physically fit, trained, and skilled workforce. The level of capital stock invested in form of heavy mining equipment, such as in modern mines, reduces some of the manpower needed, but the industry remains relatively labor intensive. It is important then, that legislation is strengthened to assure:

- the legal rights of workers are upheld and safeguarded;
- the compensation is based on fair wages principles and revised periodically;
- social security schemes are in place;
- workers receive suitable technical and functional trainings to upgrade knowledge and skills;
- a safe and healthy workplace is provided by mining entities; and
- industrial disputes are resolved fairly, and in a timely and consultative manner;

5.25. For the assessment of labor laws, compensation, and welfare, we have reviewed the relevant sections of the legislation listed below:



- The Mines Act, 1923 has Limitation of Employment (Chapter VI) which specifies various aspects of work conditions in regular mining operation, such as for:
  - weekly day of rest
  - hours of work above ground and below ground
  - special provisions for night time working
  - prohibition of employment of certain persons
  - notices regarding working hours
  - limitation of hours of work for females
  - exemption from provisions on employment in case of an emergency involving serious risk to the safety of the mine or persons working therein
  - minimum age and fitness certificate for employment
  - register and record of employee information along with working hours, rosters, intervals of rest, days of rest, etc.
- MMR 2012: Rule 35 states that the provisions of Chapter V and VI of the Mines Act, 1923 (IV of 1923) and the rules, regulations and bye-laws apply to matters relating to health, safety, working hours, etc of persons employed in mining activities including exploration.
- Rule 40 requires a lessee to insure life and extend accident insurance facility to staff working in underground mines, and to facilitate actions so that beneficiaries get the benefit of the insurance within a reasonable time.
- Rule 41 requires that a licensee or lessee shall pay compensation calculated in accordance with the provisions of the Workmen’s Compensation Act, 1923 (VIII of 1923) for injury or loss of organs or death of the workmen working in the mine.

5.26. Our review and observations on legislation for matters relating to employment, compensation, safety, welfare, and related matters, is outlined below.

#### Application of ILO codes:

- a. It is advised that on the matters such as of health, safety, working hours, leave and holidays of persons employed in mining and exploration works, the ILO Codes of Practices be followed and regulated in effective manner. Currently there are no specific safety and occupational health related regulations framed for the sector. In mines, the operators use their own codes of practices which are in accordance with native law and are not regulated properly due to lack of regulations. Many countries which have developed or recently revised their regulation pertaining to safety and health have followed provisions under ILO Codes of Practices.

#### Insurance:

- b. Life insurance and Accident insurance facilities should be extended to all persons employed in mining, exploration, and allied activities (it is currently applicable only for workers employed in underground mining) irrespective of their status of employment viz., permanent or contractual. The nature of accidents differ but all carry the risk and hence the inclusion of all in the insurance cover.

#### Wages:

- c. The law regulating minimum wages may be suitably revised and the legislation specific to mines specify the minimum wages for each category of workers. The wages for workers in mine may be separately determined considering the nature of work and the hardship associated.
- d. For determination of wages or additional benefits for workers in mines, including any incentive or profit sharing mechanism, stakeholders' views from the industry, as well as from departments in charge of labor, industry, finance, and health may be taken. This will help balance the interests of producing and consuming industries.
- e. An effective and transparent mechanism to redress the workers' grievances relating to wage and other benefits should be instituted.

#### Welfare officer:

- f. To administer the labour welfare measures and amenities, welfare officers with specified duties and responsibilities should be appointed at the mines and an enabling provision is needed in the current legislation.

## ***ix. Domestic and Foreign Investment in Mineral Sector***

- 5.27. The mining and mineral processing sectors involve large capital investments, the early stages of which entail significant risks of failure in exploration and development. Further, to tap the marginal reserves or those in difficult geological conditions, advanced technology and mining methods will be needed.

Given this, development of the mining sector requires investor friendly policies to attract both local and overseas investors and lenders. The natural resources sector is also import intensive requiring import of heavy earth moving machinery, spares parts and consumables, test equipment, skilled operators, and so on, all of which are in active demand by mining companies from around the world. For this reason, it is important to assess the investment attractiveness of the mining sector to both local and overseas investors.

- 5.28. The key legislation with relevance to domestic and foreign investment in mineral sector reviewed for this task are as follows:
- Rule 4 provides for a company incorporated outside Bangladesh to apply for grant of exploration licence, mining lease, quarry lease if it is registered under the Section 379 of Companies Act, 1994 (Act No. 18 of 1994) of Bangladesh.
  - Rule 88 provides that a foreign entity, registered in Bangladesh, ceases to do so, it will intimate the Bureau, which in turn may lead to the licensing authority cancel the licence or lease, unless it is assigned or transferred in accordance with Rule 13.
  - Rule 99 provides for an Import Licence, under which a licensee or a lessee may import, as per the Government policy, any machinery and equipment for:
    - exploration activity;
    - use in the mine or in the quarry; or
    - related infrastructure development;



The equipment imported should be clearly demonstrated to be in the list of items for which the licence for import has been issued; and should be used for the purpose indicated.

5.29. Our observations and recommendations on strengthening the legislation with regard to domestic and foreign investment in the mineral sector, are as follows:

- a. It is advised that a clear FDI policy for the mineral sector be issued along with guidelines covering the details such as of the permitted level of investment and shareholding, restricted activities, any state support in form of facilitation or incentives offered, provisions for repatriation of dividends and capital, import of capital goods, payment of royalties, and other measures arising from government policy.

A number of examples are available from other mining jurisdictions, providing rich feedback of the outcomes. In India, 100% FDI is allowed in mining of coal and most other minerals except for strategic use, such as Atomic minerals. South Africa allows foreign ownership of mineral assets subject to condition that within the specified timeframe at least 26% of equity ownership should be transferred to disadvantaged communities under the BEE program.

- b. The foreign investors should be provided suitable protection under international law, and given consent where sought for the purposes of commercial and political risk guarantees such as that offered by MIGA or the ADB.

## ***x. Taxation and Royalties***

5.30. The mineral sector, globally, generates significant treasury revenue in form of taxes and royalties. Most countries levy royalty, but there are exceptions such as Mexico, which does not impose a mining royalty. In the recent years, many countries, prominently Australia, but many others too, have sought to review the mineral resource taxes. This is a prerogative of the governments, but is desirable that stability in the taxation and royalty regime is maintained in order to maintain a positive investment climate for private and overseas capital.

5.31. The deployment of tax and royalty revenues derived from exploration, mine development, and mine operations are an important issue in the industry. The revenues reflect the value of minerals to the society, and will be assessed and deployed as per government policy. Any discussion on this is beyond the scope of this study, but it may be noted that in most jurisdictions, some part of it is deployed for local area development, for both, social benefit and for connecting infrastructure such as in roads, ports, and power supply.

5.32. The government will need to conceptualize a policy for generation and deployment of mineral taxes and royalties. Some of the alternative principles it may adopt for this are:

- optimizing return from mining activities; and taxation provisions for foreign and local investors reflect a commercial reality;
- optimizing the resource levy revenues to society during times of high prices, while minimizing the pressure on mining companies to reduce or cut-back production during times of low prices;
- considering the mineral sector integrated with downstream (i.e., end-use) sectors in order to maximize the overall economic benefits of the mineral sector (viz., project delivery and creation of infrastructure, and its multiplier effect); and
- innovative tax programs that support the industry and help reduce volatility of revenue inflows as a better aid to economic and fiscal planning;

5.33. The relevant legislation and rules we reviewed with regard to taxation and royalty provisions relating to the scope of this study are as follows:

- The prevailing law has detailed provisions to collect fees, royalties, security-deposit, penalties in a manner and schedule prescribed under several rules of MMR 2012. The schedule of charges under the Rules has been provided.
- Rule 7, last amended in 2004, prescribes non-refundable application fee with submission of each application for licence or lease, and is based on applied area and scheduled rates for exploration licence, mining lease and quarry lease. Rule 12 requires a licensee or lessee to pay a prescribed fee for assignment or transfer of licence or lease.
- Rule 24 requires that licensee or lessee to provide a properly constructed and efficient weighing machine or other suitable means for determining the weight or quantity of the mineral produced.
- Rule 28 details the annual fee to be paid by the licensee or lessee, and delayed payment attracts penal fee at the rate of 5% (five percent) of total annual fee. Further, if the penal fee is not paid in 180 (one hundred eighty) days after scheduled date, the licence or lease is liable to cancellation with notice.
- Rule 30 requires the licensee or lessee to pay to the Government in respect of the licensed or leased out land the yearly revenue, rent, cess and water charges at such rate as maybe determined by the concerned authority.
- Rule 34 has a schedule of Security Deposit to be paid by licensee or lessee, without which any licence or lease will not take effect.
- Rule 66 has provisions for payment of royalty. The lessee, by 30 April, 31 July, 31 October and 31 January each year, pay royalty at the rates mentioned in the Eleventh Schedule for minerals extracted on quarterly basis and submit a copy of the Treasury Challan to the Director showing payment of such royalty.
- Sub-rule 66 (2) has provisions for non-payment or delayed payment of royalty and prescribes:
  - the first 30 (thirty) days as grace period;
  - penalty at 10% of the royalty if payments are made after expiry of the 40th (fortieth) day;
  - a further penalty of 10% in addition to above for delay to 120 days; and
  - if royalty along with penalty is not paid as above by the 180<sup>th</sup> day, the mining lease is liable to be cancelled under Rule 84.
- Sub-rule 66 (3) has provisions to deal with cases where in opinion of the Director, the pit's mouth value of mineral shown by the lessee is incorrect. The Director on basis of a spot inspection by an authorised officer of the Bureau, has power to fix pit's mouth value of mineral extracted or sold out or dispatched or exported.
- Rule 67 requires the lessee to maintain accounts and permit inspections. The accounts at the mine premises must show the quantity and particulars of the mineral extracted, dispatched, exported and taken away for testing and beneficiations of the mineral, the number of persons employed and complete plans of the mine. Further, the lessee must allow any qualified officer authorized suitably at any time to examine such accounts and plans.
- Sub-rule 67e (2) empowers the Director to determine the correct amount, if he deems the accounts and particulars shown by the lessee incorrect, after ascertaining production sold out,

dispatched or exported. The lessee is required to maintain details of production, dispatches, sales, extraction and export in the forms specified by the Director.

- Rule 72 has checking measures under which the Director prescribes measures to assess the production and transportation of minerals, and this may include installation of barriers.
- Rule 81 (1) provides for payment of royalty or quarry lease money on quarterly production return basis.
- Rule 90 allows the licensee or the lessee to take away the quantity of minerals provided in the Fourteenth Schedule for the purposes of testing without payment of any royalty.
- Rule 91 has provisions for checking of:
  - unauthorized mining;
  - unauthorized use of a quarry; or
  - disposal of a mineral produced by unauthorized operation;
- Rule 97 provides rights of distress. If any of the outstanding dues, fees and royalty payable by the licensee or the lessee are not paid within 365 (three hundred sixty five) days, the licensing or the leasing authority has power to cancel the licence or the lease and proceed to recover the dues, fees and royalties from the security money and the bank guarantee, the remainder shall be recovered as arrears of land revenues under the Public Demand Recovery Act, 1913 (Ben Act III of 1913).

Further, if the right under licence or the lease has been mortgaged under Rule 14, the licensing or the leasing authority must inform the mortgage of its intention to cancel the licence or the lease to recover the dues; and the said authority shall, then be entitled to enforce the sale by auction of the mortgaged property and apply the sale proceeds first towards the expense of the rate, then towards the satisfaction of the dues referred in Rule 30, and then towards the satisfaction of the dues, fees and royalties payable under these Rules.

If still the amount recovered from the sale does not cover the claim under these rules, the said authority has powers to recover such claim as arrears of land revenue under the Public Demand Recovery Act, 1913 (Ben Act III of 1913).

- Rule 98 requires that all deposits under these Rules, such as annual fee or security deposit or fine, shall be made by treasury challan and the royalty or the quarry lease money will be deposited by treasury challan.

5.34. Our observations and suggestions from a review of the legislative provisions relevant to matters of taxation and royalties is detailed below:

**Principles for determination of royalty:**

- a. The current policy could be enhanced by detailing the principles for determination of royalties. There is scope for refinement too, for example, addressing the rates for coal and peat which are rated equally in the Eleventh Schedule of MMR 1968, whereas the royalty is differentiated on basis of whether produced by underground mining or open-pit mining and quarrying. While MMR 2012 specifies separate rate of Royalty for Coal and Peat, differential royalty based on mining method is still in vogue.
- b. At an overall level, the royalty structure is similar to that in several countries such as South Africa, Canada, India, i.e., on ad-valorem basis on the sale price of the mineral. However, there is scope for innovation in the details:

- the rates may be differentiated on the type: for example, in India, the royalty rate is even across all grades of coal, while in Indonesia it varies by type;
  - the rate for a particular mineral should reflect the value of the end product, accounting for the conversion cost; which would suggest that as coal and peat generate electricity with different relative efficiency, they ought to reflect a different rate of royalty;
  - the base may be widened; for example as in Tanzania wherein the Mining Act introduced in 2010 replaces the “net back value” applied under the previous law with the “gross value”;
- c. The royalty rates should not be such as to be a “cut” on profits; a provision that does not exist today. There are different practices to address this: in some countries, the mining royalty rate is not entirely fixed varies beyond a range increases when the operating profit increases, and vice versa. In general, the royalties paid are deductible in most countries for purposes of determining profits for corporate income taxes.

#### Taxation:

- d. We have no observations on the general tax provisions.

A specific issue relating to mining sector is how multiple licenses belonging to a company are treated i.e., whether as they are seen separately or as belonging to the same company. In general, they are treated as one entity but some other practices are seen of late too. In Kazakhstan, the subsurface users operating multiple contracts must keep separate records for tax purposes and cannot offset costs of one mining contract against income from another contract. In Tanzania, a similar “ring fencing rule” is applied wherein losses incurred in one mine cannot be used to offset profits in another mine, even if both mines are owned by the same company.

- e. It is suggested that the tax efficacy of the full chain of mineral products is studied so that remains progressive. For instance, the tax rates on end products such flooring tiles, are suitably structured vis-à-vis taxes on minerals, say hard rock, so that the local mineral industry has a level playing field with the imports if the sector objective is primary, as opposed to lower cost flooring material irrespective of the origin, if the end-use sector goals are primary.
- f. Some countries offer fiscal stability to investors, meaning that certain defined tax increases will not be applied to the company. In Argentina, statutory fiscal stability agreement has a term of 30 years. In Chile, the “Decree Law 600” provides defined rights and benefits to overseas investors, which include specific mining tax rate and mining licenses. The policy may consider some of these options as the mining industry is capital intensive and the limited nature of resources make it necessary to attract global mining companies to develop the mineral sector of the country.

#### Windfall gains:

- g. This subject has come under considerable discussion given high commodity prices and thereby the profits made by mining companies. The aim may differ by country viz., the exporting nations may seek to retain a higher rent, while the importing countries may seek to limit unreasonable increases in prices by mining companies seeking import price parity.

In Australia, the Mineral Resources Rent Tax is a form of economic rent on mining profit applied on specific resources (coal, iron ore, etc) prior any processing or value-add. In Indonesia, holders of an IUPK (Special Mining Business Licence) pay an additional royalty of 10 percent of net profit. In Zambia, Copper companies pay additional taxes if copper prices are above defined trigger level. In Brazil, a higher tax rate applies when income is higher than certain level.

The context in Bangladesh is different i.e., as an importing country, will seek to safeguard against mining companies using restrictive trade practices to increase prices on par to imports. This may be addressed through the country's competition law or its equivalent.

**Exemptions:**

- h. To deal with diminishing reserves, a specific tax credit that may be offered to mining companies. In the United States, a depletion incentive is provided to mining companies for federal income tax purposes.
- i. To attract green-field capital investment, some jurisdictions offer tax incentives. In Indonesia, a set of tax incentives are offered (viz., 30% investment credit, accelerated depreciation, lower withholding tax on dividends, and higher tax loss carry forward period from 5 years to a maximum of 10 years).
- j. For attracting exploration, similar tax credit may be offered. In Mexico, mining companies can offset pre-operating costs including during the mine development stage, over a 10 year period from their taxable profits.
- k. To support local area development, investments approved by the relevant authority are offered tax credits. In Peru, mining companies can deduct as an expense any investment in infrastructure qualifying as a public service (i.e. water supply, electricity, roads).

## ***xi. Socio-economic Benefit Optimization***

- 5.35. The outputs of the mineral sector, which are seen as a national resource, have a broader benefit whilst the direct costs are borne by the communities that fall in the impact area. This requires the local areas are both, consulted in the planning process and are preferentially extended the benefits in order to soften the impacts from mine development.
- 5.36. There is a risk of local costs getting disconnected from the broader benefits when planners focus on optimizing the broader national income and benefits, leading to local dissatisfaction and opposition to mining activities. For this reason, the policy and legal framework must provide for the following actions:
  - integrate planning for the mineral sector development into the local and national development agenda;
  - make socio-economic assessment a formal part of the permitting process, and make planning subject to review and approval of the original permit;
  - ensure full consultation with key stakeholders, especially the impacted community, at every stage of the mining cycle, and ensure full documentation and periodic reporting;
  - legislate a supportive legal and fiscal framework that encourages mining entities to actively offer opportunities for local communities in employment, provision of local area development services, and other inclusive measures;
- 5.37. The legislation (MMR 2012) reviewed with regard to the socio-economic benefit optimization and occupation of land for exploration or mining activities are outlined below.
  - Rule 17 (1) provides for occupation of land by a licensee or lessee upon grant of a licence or lease. Further, that prior occupying any land, it either purchases the land or obtains permission for its superficial use from the owner of the land.

- Rule 17 (2) provides that in event the licensee has failed to purchase the land or obtain permission for use in a reasonable time, it may apply to the Deputy Commissioner for requisition or acquisition under the Acquisition and Requisition of Immovable Property Ordinance, 1982 (III of 1982).
- Rule 18 requires the licensee or lessee pay reasonable compensation for all damage caused by him under the licence or lease, but not covered in the permission obtained for the surface use of the land. It also causes the licensee to indemnify the Government against claims that may be made by third parties in respect of any such damage.
- Rule 19 requires the licensee or lessee to give 30 (thirty) days' notice before commencement of exploration, mining, or quarrying to the owners of the lands in which the operations are to be carried out.
- Rule 21 prohibits a licensee or lessee from erecting any building or carrying out any surface operations in a public place, such as a burning or burial ground, place held sacred by any class of persons, any house or village site, public road or any other place that has been excluded by the Director from such operation. A similar restriction also covers all right-of-way, well or tank without suitable permission.

5.38. Our observations and recommendations on the strengthening of legislative framework on the subject of socio-economic benefit optimization are outlined below:

**R&R and rights valuation of local community:**

- a. It is suggested that the mineral policy recognize and outline the process for rights valuation of the local community affected by any mining operations, exploration, or related development project. The prevailing framework needs to be strengthened for issues specific to the mining sector, as the provisions of typical R&R packages used for infrastructure projects may not be adequate.

**Consultation:**

- b. The policy should provide for a process of stakeholder consultation and inviting objections from the communities in the project area. Whilst in all jurisdictions a general process is prescribed, the specific for mining projects differs. In India, the mining policy has no provision for consultation in the initial approval stage, and the defined process comes at a later stage. In Western Australia, whilst no specific provisions cover consultations, there is a mechanism for disposing of objections by a warden upon a hearing.

**Social responsibility:**

- c. In several jurisdictions, mining companies actively work with local communities in provision of social amenities, economic and livelihood support, skill development, and market out-reach programs. These are sometime required in law, or specific concession agreements, or undertaken as corporate social responsibility actions. In the absence of specific legal or contractual provisions there is a possibility that companies may cut back on such spending, especially after receipt of the consents to develop their projects.

It is suggested that the legislation be strengthened to make it necessary for mining entities to set aside resources for provision of such social and economic support to local communities. This may be direct or participatory i.e., supporting a government program with defined contribution.

The practices for social contribution vary across countries (as listed below), and the policy would need to take a decision on the format it would follow:



- mandatory provision for social contributions exists in Australia, Democratic Republic of Congo, Indonesia, Kazakhstan, Philippines, Russia, South Africa;
  - voluntary provisions for social contributions are in vogue in Argentina, Canada, Mexico, Tanzania, Ukraine;
  - no specific requirements for social contributions are listed in Brazil, Chile, the UK, the US;
  - dual provisions, such in Mexico, a mandatory profit sharing payment requires mining entities to distribute 10% of its annual taxable income to its employees;
  - in India, a recent mining bill provides the local population an annuity through a 26% share of profits for coal mining projects or an amount equal to mineral royalty for other minerals by creation of a District Mineral Fund;
- d. There are no definitive suggestions on the deployment of these funds. Generally, studies are undertaken to assess the communities' requirement, a consultation process is run, and guidance is taken from the local government in order to dovetail with ongoing programs. Typically, mining companies use the funds to develop local physical infrastructure (e.g., connecting roads, water supply), social amenities (e.g., primary health centers, schools), livelihood support (e.g., farming, poultry, dairy), and others (e.g., sports promotion, neighborhood development).

## ***xii. Environmental Management***

5.39. Environmental management includes management of the natural resources base besides that of the ecosystems, and is the continuous responsibility of the mining entity and the government.

5.40. The salient legislation (MMR 2012) reviewed for environmental management in the context of this study are as follows:

- o Rule 19 (2) requires entities engaged in exploration, mining or quarrying operations in a reserved or protected forest, to give the Divisional Forest Officer 30 (thirty) days notice before taking up any activity;
- o Rule 20 prohibits cutting or injuring any tree on unoccupied and unreserved Government land without written permission;
- o Rule 25 requires all work conducted in a reserved or protected forest follow conditions that the Government may prescribe;
- o Rule 42 requires a licensee to take following steps to control environmental pollution:
  - follow the provisions of prescribed laws (Environment Protection Act ,1995 and the Environment Protection Rules 1997);
  - take steps to ensure emissions from machines used in the mine, waste products, harmful gases from the mine do not pollute environment; and
  - plant trees in possible areas, in the area granted;
- o Rule 75 requires every licensee to indicate if it is authorized to sell timber arising from mining operations for specified area and quantity;

5.41. Our observations and recommendations on the subject of environment management, in the context of this study, are as follows:

- a. The prevailing legal framework needs to be strengthened to address environmental concerns. In particular, the fragile hydrological and hydro-geological setup of Bangladesh demands special attention. A set of Codes of Practices will have to be drafted to clearly define the expectations at operational the level.
- b. The mineral basins of Bangladesh relevant to this report, especially coal, are located in densely populated areas. This requires the environmental management plan be developed with extensive consultation between the executing agency, landowners and local community, and the policy makers responsible for the mineral sector.
- c. The legal framework should encourage mining methods that adopt energy efficient equipment, machinery and methods, and have a comparatively smaller carbon footprint. This is an important issue as mining operations are energy intensive, and yet present a significant scope for reducing power consumption.
- d. The legal framework should encourage waste remediation, specifically, the mining methods that help in conservation of minerals and reduced generation of waste material. This is necessary given the modest mineral reserves and the direct impact conservation has in extending mine life.
- e. The mining legislation should have provisions for dealing with issues specific to mining, setting the threshold limits for different pollutants affecting water, air, soil, flora & fauna, and human health, ground subsidence, covering both, mine working and the surrounding area.
- f. The mining legislation should regulate the small-scale mining activities such as quarrying at the river beds by authorizing the local or district administration. This is necessary to help curb the un-scientific means used in exploitation of this mineral, in turn resulting in serious environment impact over time.
- g. The mining legislation should have provisions for regular reporting by mining companies on the key environment parameters of the mine operation and permitted for access in the public domain for research and other studies for understanding conservation requirements better.
- h. The mining legislation must require the licensee or lessee (mining entities) to conduct a thorough Risk Assessment, identify the risks associated with environmental hazards and safety, develop a corporate policy to mitigate them; and most importantly to ensure there is a documented emergency preparedness plan that is periodically tested.

### ***xiii. Mine Closure and Post-mining Transition***

- 5.42. Mineral resources at a site are finite in quantity and the mine's economic life is determined by factors such as the available reserves, extraction technology and costs, commodity prices, fiscal and tax regime, etc., that change over the period of mine life. Thus, the time available to mining companies to prepare for and implement actions for safe closure of the mine is both, limited and unpredictable in some cases.
- 5.43. In addition, in order for any mining operation to be consistent with sustainable development, it must have active plans and actions for closure over the entire period of operations. Indeed, the definition of "mine closure" is wide and covers: risk assessment, environmental management, community risk assessment, community consultation & planning, program design, monitoring, research, pilot programs, redesign, implementation & post-implementation monitoring and remediation as needed.
- 5.44. The key legislation reviewed for the purpose of mine closure and post-mining transition are outlined below:



- The current legal framework lacks provision for mine closure and post-mining transition in the form that is necessary under sustainable development practices. This is not unusual, and many countries are presently strengthening their legal framework for this, especially given the growth of area under mining activities and concessions given to private mining companies.
- The MMR 2012 has several provisions to deal with cases of abandonment, expiration, or termination of licenses or leases. The salient provisions related to these are as follows:
  - Sub-rule 69(10) provides that where the lessee abandons the leased area or keeps the mining operation discontinued for a period of 365 (three sixty five) days without permission of the leasing authority, the lease stands cancelled on such abandonment.
  - Sub-rule 69 (11) provides that a lessee intending to transfer or assign or abandon the leased area or to discontinue the mining operation has to give a 30 (thirty) days' notice and shall send to the leasing authority the latest plan prepared and maintained under rule for that period.
  - Sub-rule 71 (3) requires that upon the expiration or earlier termination of the lease or the abandonment of the operation, whichever shall occur first, the lessee shall remove at its own cost, the structures, machinery and other property installed on the leased out area.
  - Sub-rule 71 (4) requires that within 60 (sixty) days after the expiration or termination of the lease or abandonment of the operation, the lessee shall deliver all productive bore-holes, pits and excavation in good order and fit for further working and plug or fill up the abandoned ones.
  - Sub-rule 71 (5) requires that within 60 (sixty) days after the expiration or termination of the lease or the abandonment of the operation, the lessee, at its cost shall plug securely all boreholes and fill up or fence all holes and excavations. Also, the lessee remove wastes and rubbish from the area granted and restore so far as may be reasonably possible to their natural or original condition.
  - Rule 74 requires the lessee to deliver demised premises and all mines at the determination of the lease in a proper and workman-like state, except where abandonment has been sanctioned by the Director.

5.45. Our observations and suggestions on strengthening legislation for the purpose of mine closure and post-mining transition is outlined below:

- a. The legal framework has reasonably adequate provisions to deal with the safe closure of mines at the end of life or on abandonment or termination of licenses or leases. However, the legislation lacks the provisions and regulatory framework necessary for mine closure activities as prescribed for sustainable mining development and for post-mining transition. It is recommended that these provisions be introduced.
- b. The mine closure plans should be made mandatory under the legal framework and must require the licensees and lessees to prepare high standard mine closure plans and update them on regular basis. Further, the legal framework should ensure adequate financial assurance by a licensee or lessee (in form of guarantees and setting up a fund) before the requisite development and mining permits for a new mine are approved.
- c. The Department and the regulatory institutions will need suitable institutional capacity to review, periodically monitor, and enforce the provisions of progressive mine closure plans. This will need a suitable organization design, specialist manpower, training, and tools & systems to perform its role, and the specific requirements can be assessed from the expected mining activity based on the government plans for sector development.

- d. Mine closure is a specialized technical area demanding technical expertise from jurisdictions that have advanced mining and mine closure practices. The policy must encourage mining entities use such specialist expertise to develop their closure plans, validate the risk assessments, undertake studies and activities associated with high risk elements, such as tailings dams, waste dumps, and acid rock/mine drainage.
- e. The legislative framework should have provision for stakeholders' consultation in developing mine closure objectives and plans, and should include consultation with the local community.
- f. The legal framework, in its development and detailing, can draw upon various international standards, guidelines, and best practices, such as the IFC Performance Standards on Social and Environmental Sustainability), and require the mining entities to follow them.
- g. The legal framework should provide for periodic reassessment and for independent auditing of the mine closure plans. The reviews will need to be more frequent for mines with a shorter mine operating life, for example, quarry lease for ordinary sand and ordinary stone, and at less frequent intervals for large mining operations with a longer economic life expectancy; and
- h. The legal framework may also contain provisions that require proper closure and rehabilitation of past mined out areas. These may not have a recognized owner or lack viable remaining life to absorb the closure costs, and may have to be undertaken by the state agencies, and funded through a cess or interest on deposits it may collect towards sustainable mine closure. A proper mine closure will avoid reduce future liabilities from potential accidents and reverse or minimize mining related environmental impacts.

## 6. Way Forward

6.1. In Chapter 5, we presented our observations and recommendations on the provisions of various Acts, Rules and Regulations governing the mining and mineral sectors. The recommendations were based on our analysis of the local requirements, but were also in line with progressive global practices which were presented in a comparative form. We outline below the way forward to implement these recommendations to achieve the defined sector and national objectives.

### To implement proposed amendments to legislation:

- a. The Government may set up an Empowered Committee from across relevant ministries to study the recommendations made in the report and adopt suitable elements it believes can be taken for amendment in the various mining laws, regulations and rules.
- b. The Empowered Committee and the Government's law ministry will need to assess the proposed changes are compatible with the constitutional law, existing legislation and government policies. This is necessary given the wide range of subjects covered such as the environment, labour, explosives, and various end-use sectors such as energy and infrastructure.
- c. A particular emphasis is needed to cover regulation of mine operations and scientific closure of mines, introducing them either under the existing legislation or by promulgation of new rules. In light of the proposed investments in the mineral sector, and entry of new private sector operators and investors, this legal framework becomes important.

Further, given the specific aspects discussed in the report for coal mines and metalliferous mines, a suitable amendment to existing legislation or new rules such as the Coal Mines Regulations may be introduced.

- d. A separate set of recommendations have been made under health and safety, and the need for rescue rules and emergency response mechanism. These may be pursued covering all the licensees including currently in operation. Similarly, another set of recommendations cover conservation, socio-economic benefit optimisation, and environmental management which should be framed early on in order to cover all new development activity.

### New institutions and capacity building of new and existing institutions

- e. To implement the recommendations of this report and other reports under this study viz., the Report on "Coal Sector Development Strategy" and "Action Plan for development of CBM, UCG and Hard Rock", the Government of Bangladesh will need to establish new institutions, strengthen the organization structure, and build institutional capabilities in areas that have been detailed in the referred reports.
- f. It may be mentioned that the process of proposed changes in institutional arrangements and capacity building will need to start in parallel with the revision of the legal framework so that the functions can be properly discharged. The Government may set up an Empowered Committee to similarly study the recommendations on the creation of new bodies, institutions and authorities and align these recommendations with policy of the Department of Personnel and with the due process to implement this.

A particular emphasis is recommended for establishment of proposed institutional arrangements for management of mineral resource information. The resource data is important for the country to get better terms for its mineral wealth, securing financing, and use the resource efficiently.

- g. The capacity building of said institutions including transfer or recruitment of suitable personnel, office infrastructure, tools and equipment, and training will be a significant undertaking. It is suggested that the government take early steps to work with donors and multilateral agencies to develop suitable capacity building program.

**Other aspects**

- h. The report in several instances makes observations and presents comparative assessment on related aspects such as of licensing policy, fiscal incentives offered, tax and royalty policy, etc., which have implication outside the mining sector and will need to be reviewed by the government in order to strengthen the policy framework.
- i. On vocational training, the government may take note of recommendations on assessment of skills required and the need for training facilities and galleries. The gestation period for these is longer and early actions are needed in order to maximize opportunities for local population and ensure availability of right skills for anticipated mine development.

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## **7. Annexure**

### ***i. Members of IGF on Mining, Minerals, Metals and Sustainable Development***

- Argentina,
- Bolivia,
- Botswana,
- Brazil,
- Burkina Faso,
- Burundi,
- Canada,
- Dominican Republic,
- Ethiopia,
- Gabon,
- Ghana,
- India,
- Jamaica,
- Kazakhstan,
- Kenya,
- Kyrgyz Republic,
- Madagascar,
- Malawi,
- Mali,
- Mauritania,
- Mexico,
- Mongolia,
- Morocco,
- Mozambique,
- Namibia,
- Niger,
- Nigeria,
- Papua New Guinea,
- Peru,
- Philippines,
- Republic of Guinea,
- Romania,
- Russian Federation,
- Senegal,
- Sierra Leone,
- South Africa,
- Suriname,
- Swaziland,
- Tanzania,
- Uganda,
- United Kingdom,
- Uruguay,
- Zambia.

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