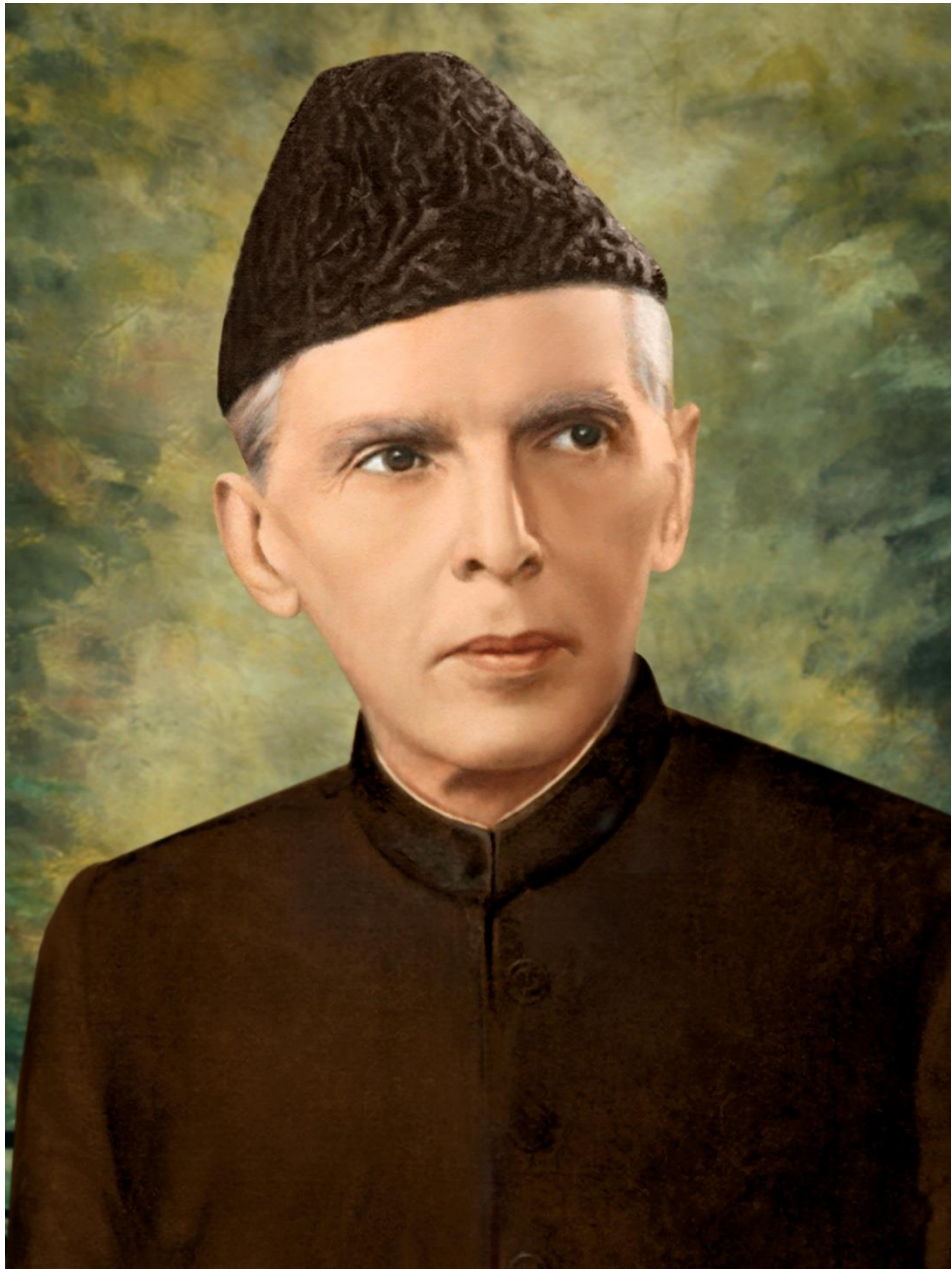


Draft Punjab Mineral Policy, 2017



Mines & Minerals
Department
Government of the Punjab

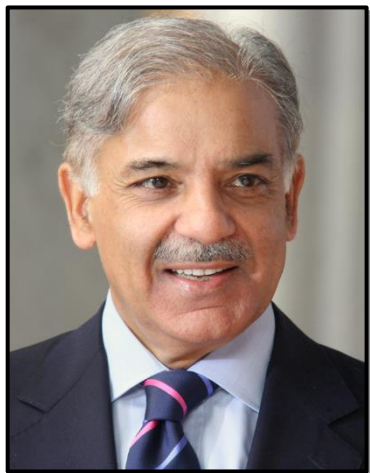
Founder's Message to the Nation



"Nature has given you everything: you have got unlimited resources. The foundations of your State have been laid, and it is now for you to build, and build as quickly and as well as you can. So go ahead and I wish you God speed."

Quaid-e-Azam Muhammad Ali Jinnah
August 14, 1948

Message from His Excellency Muhammad Shehbaz Sharif Chief Minister, Punjab



I am honored to present the first Punjab Mineral Policy, 2017, which is going to be a stepping stone towards a progressive and developed mineral sector of the Punjab. By the grace of Almighty Allah, Punjab is blessed with a highly prospective geology, which has demonstrated the potential for hosting rich mineral deposits, including but not limited to copper, gold, iron, coal etc. The development and exploitation of this mineral wealth is vital for our national and provincial growth and, with concentrated efforts, can anchor the economic development that takes place in the Province.

The Government of the Punjab aims to play a proactive role in the effective and safe exploitation of minerals, and sustainable development of the mineral sector in Punjab, in order to achieve self-sufficient growth and maximized benefit. The Government of the Punjab desires that the private sector and foreign investors come forward and contribute in their respective scope to stimulate opportunities and make the best use of available resources.

The Government of the Punjab has already made efforts to channelize its mineral resource, with the aim of transforming the mineral sector into a contemporary and competitive sector of international standards.

I feel great pride in sharing the recent accomplishments of the Government of the Punjab, such as the flagship project of Chiniot / Rajoa Iron Ore, which has been under development since 2014 and is now an integral part of the Province's steel production strategy. It is expected to be a game-changer for the sector, as well as the Punjab and Pakistan in general vis-à-vis employment, revenues, secondary and tertiary sector stimulation and Gross Domestic Product (GDP) growth.

The fundamentals for a progressive mineral sector over Pakistan were laid down in the National Mineral Policy (NMP) 2013, but with the ownership of minerals vesting with the Provinces and enhanced provincial autonomy, the Government of the Punjab considers it to be essential that a Provincial Mineral Policy be shaped and implemented within the Province. This Policy shall highlight the vision of the Government of the Punjab, along with the initiatives and strategic developments that will ensure a promising mineral sector. These initiatives have

my full support and the Government of the Punjab is fully committed to realizing our vision of sustainable development of the Mineral Sector.

I strongly believe in our ability and determination to accomplish our goals and move towards a brighter future for our people. I wish great success to all stakeholders who are part of this process.

Message from Mr. Chaudhry Sher Ali Khan Minister, Mines and Minerals, Punjab

Under the enterprising vision of his Excellency, Muhammad Shehbaz Sharif, Chief Minister of the Punjab, the Ministry of Mines and Minerals, Punjab recognized the dire need for formulating a Provincial Mineral Policy for the Province of the Punjab. This Policy successfully aims to address the modern challenges faced by the mineral sector by envisioning a new, modern and transparent policy structure for the proponents of the mineral sector in Punjab.



The broad goals of this policy are investment promotion, modernization and reformation of the existing public sector entities in Punjab's mineral sector and inculcation of a sustainable development approach amongst the operators in the mineral sector.

Message from Dr. Arshad Mahmood Secretary, Mines and Minerals Department, Punjab

The Province of the Punjab has been endowed with substantial mineral potential. While adequate exploitation of this mineral potential can bring about economic prosperity for the Punjab, its people and our highly valued investors, it can also help us at a national level to alleviate poverty, fuel the infrastructural and social development and drive Pakistan forth towards the right direction.



In past few years, the Mines and Minerals Department Punjab has undertaken revolutionary steps for the well-being and economic success of mineral sector in the Punjab. From introduction of modern techniques for exploration to legal framework reviews, the Mines and Minerals Department Punjab has undertaken a series of events to underpin the prosperity and affluence of the mineral sector. The Punjab Mineral Policy, 2017 is a part of the series of these events and aims to achieve the similar

objectives.

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Acronyms

AusAID	Australian Agency for International Development
ASM	Artisanal and Small Scale Mining
BOI	Board of Investment
CIM	Chief Inspectorate of Mines
CPEC	China-Pakistan Economic Corridor
CSR	Corporate Social Responsibility
DC	Development Corridors
DG MM	Directorate General of Mines and Minerals
EIA	Environmental Impact Assessment
EITI	Extractive Industries Transparency Initiative
EPD	Environment Protection Department
ESG	Environment, Social and Corporate Governance
ESIA	Environmental Social Impact Assessment
FBR	Federal Board of Revenue
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GIS	Geological Information System
GNI	Gross National Income
GOP	Government of Pakistan
GoPb	Government of the Punjab
GSP	Geological Survey of Pakistan
H&S	Health & Safety
HDI	Human Development Index
HRD	Human Resource Development
IEE	Initial Environmental Examination
IFC	International Finance Corporation
IGF	Intergovernmental Forum
IIED	International Institute for Environment and Development
ILO	International Labor Organization

IMF	International Monetary Fund
IP	Induced Polarization
ISO	International Standards Organization
JV	Joint Venture
LARWG	Land Access for Resources Working Group
LSM	Large Scale Mining
MDFP	Medium Term Development Framework
MLWO	Mines Labor Welfare Organization
MMD	Mines and Minerals Department
MPNR	Ministry of Petroleum and Natural Resources, GOP
MTDF	Medium Term Development Framework
NMP	National Mineral Policy
NOC	No Objection Certificate
OHS	Occupational Health and Safety
PAYE	Pay As You Earn
PBIT	Punjab Board of Investment and Trade
PLA	Personal Ledger Account
PMC	Punjab Mineral Company (Pvt.) Ltd.
PMCR	Punjab Mining Concession Rules, 2002
PMMA	Punjab Mines & Minerals Authority
PPP	Public Private Partnership
PUNJMIN	Punjab Mineral Development Corporation
SBP	Stat Bank of Pakistan
SEZ	Special Economic Zone
SMMEs	Small Micro and Medium Sized Entrepreneurs
SOE	State-Owned Enterprises
SOPs	Standard Operating Procedures
SSM	Small Scale Mining
UNCTAD	United Nations Conference on Trade and Development
UN-PAK	United Nations Pakistan
Vision 2025	Pakistan National Vision 2025

1. Introduction

This first provincial mineral policy for the Punjab reflects the growing importance of mineral development for the province and positions the mineral sector as a critical player in the national mineral development landscape.

The introductory section describes various aspects of national mineral development, contextualizes the minerals governance regime, and places Punjab's mineral sector development within the framework of national and provincial development priorities.

1.1. National Mineral Endowment

Pakistan has been blessed with significant mineral reserves including precious and semi-precious stones, iron ore, copper, coal, marble, gypsum, limestone, dolomite, salt, silica sand, china clay, fireclay and gravel, etc.

Vast resources of coal, copper, gold, silver, lead-zinc, manganese, chromite, iron ore and precious and semiprecious stones have been identified in different parts of the country. Huge resources of gypsum, fire clay, china clay, fullers earth, rock salt, basalt, bentonite, building stone and construction materials are available in all the provinces. Pakistan is the 3rd largest producer of iron oxide pigments, 10th largest producer of barite and 16th largest producer of cement. The country is also among the world's 18 leading producers of white cement.

1.2. Federal-Provincial responsibilities in mineral development

The Constitution of the Islamic Republic of Pakistan, 1973, grants the responsibility for ownership and management of minerals, except for oil and gas and nuclear minerals and those occurring in special areas (Federally Administered Tribal Areas, Islamabad Capital Territory and International Offshore Water Territory) to the Provinces. Provincial Governments are now responsible for the regulation, detailed exploration and development of the mineral sector whereas the overarching geological mapping and geophysical survey function lies with the Federation, i.e. Geological Survey of Pakistan (GSP).

Pakistan's first mineral policy was launched in 1995. It intended to provide an enabling institutional and regulatory framework for the development of its mineral resources and to increase the focus on the mineral sector, resulting in the segregation of the Mines and Minerals Department from the Directorate of Industries and Mineral Development in 2002.

The second mineral policy of Pakistan was launched in 2013 that sought to address mineral sector challenges and to reflect more comprehensively the global trend toward the sustainable development of mineral resources. The policy also envisaged multiple consultative and stakeholder engagement forums, including a Mineral Investment Facilitation Authority (both at Federal and Provincial level) and a Mineral Investment Board, to strengthen the relationship between the federal and provincial governments and to have a joint effort in developing an investment friendly regulatory regime.

1.3. Socio-Economic Development Context

Many jurisdictions in the world have been built on a base of mineral wealth. Canada, South Africa and Australia are among these nations. The development potential of the mineral sector is particularly important in jurisdictions such as Pakistan, countries that are faced with a range of socio-economic challenges.

The socio-economic condition of Pakistan has improved significantly in the past few decades. Pakistan was starting from the position of an extremely vulnerable state at the end of the 1990s due to many factors, including: a financial crisis, domestic tensions, and external isolation. However, the country has achieved a remarkable turnaround.

Between 1990 and 2015, Pakistan's Human Development Index (HDI) value increased from 0.404 to 0.550, an increase of 36.2 percent. Pakistan is now categorized by the United Nations as a "Medium Development Country."¹

Figure - 1 reviews Pakistan's progress in each of the HDI indicators. Between 1990 and 2015, Pakistan's life expectancy at birth increased by 6.3 years, mean years of schooling increased by 2.8 years and expected years of schooling increased by 3.5 years. Pakistan's Gross National Income (GNI) per capita increased by about 57.5 percent between 1990 and 2015.

¹ Pakistan Human Development Index - "United Nations Development Programme"
http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/es/PAK.pdf

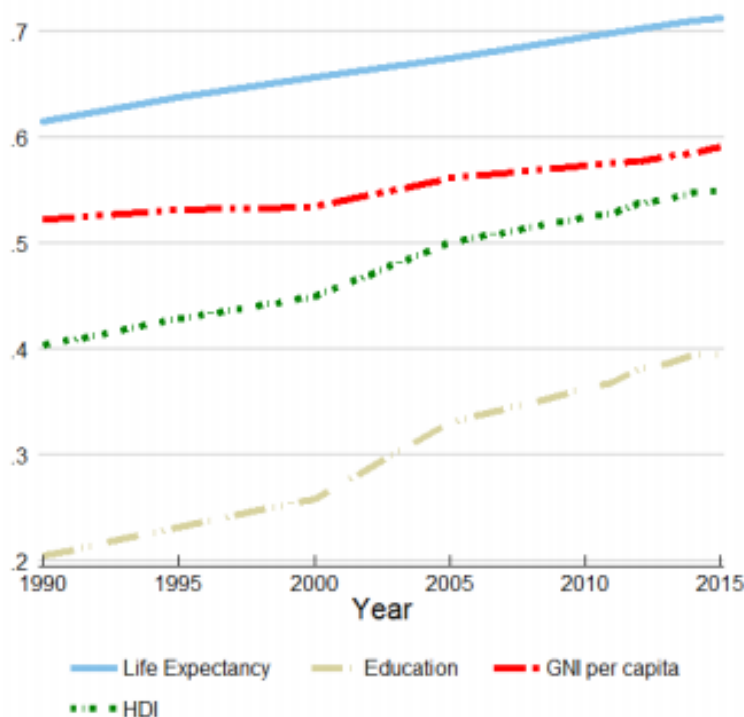


Figure 1 - Human Development Index - United Nations Development Programme

A major factor behind this turnaround is strong leadership in the country with internal cohesion and a clear sense of direction. The government has been committed to fundamental political, institutional, economic, social and gender transformation for Pakistan's transition to a modern Islamic state with opportunities for both local and foreign investment.

Despite its aspirations and commitments, the country still faces formidable socio-economic development challenges. These include: political issues; safety and security concerns; relatively limited health facilities; relatively low literacy and educational levels especially in rural areas; high unemployment rates, especially for the youth; and energy availability. These factors are particularly challenging within the context of a global economic downturn when many multi-national extractive sector companies are contracting instead of expanding their operations.

An enabling mineral policy that seeks to attract responsible mineral investment, even in challenging times, can offset many concerns of international investors. Investors assess a country's risk that is associated with social, environmental, economic and political pressures. When these are catered for in an effective mineral policy based on sustainable development, this risk is diminished. And with

the growth of the mining industry, many socio-economic benefits can cascade down into local, provincial and national economies.

1.4. Role of Mineral sector in Provincial and National Growth and Development

Any type of sectoral policy, whether national or provincial, must take its direction from the relevant growth and development strategies of the particular jurisdiction. In Pakistan, the national growth plan is The Pakistan National Vision 2025 (Vision 2025).² The plan's overarching goal is to provide the impetus for Pakistan to achieve a level of growth that would place the country within the top 25 economies globally. For this to occur, the poverty level would need to fall to less than 20%, increasing the tax-to-GDP ratio from 8.5% to 18%. For many developing jurisdictions that have economically viable mineral resources³, the development of mineral sector can be the quickest way to achieve significant revenue through taxation over a relatively short time.

The Vision 2025 includes a number of objectives that when achieved will result in a stronger economy and sustained growth. These include: developing social and human capital, achieving sustained, indigenous and inclusive growth, governance, institutional reforms and modernization of public sector, energy, water and food security, private sector-led growth, developing a competitive knowledge economy and modernizing transportation infrastructure and greater regional connectivity.

Punjab's development priorities are fully aligned with those of the Federal Government, and the Punjab Growth Strategy 2018 and the Federal Government's Vision 2025 are an outcome of the same strategic thinking. Working with the Federal Government is essential for Punjab to achieve its objectives. Further, Punjab's Growth Strategy 2018 is underpinned by Punjab's Medium Term Development Framework (MTDF) 2018.

Flowing from the principles and objectives articulated in the Vision, 2025, the Punjab Growth Strategy 2018⁴, has taken into account the Vision 2025 priorities and has outlined the following objectives to help achieve its vision:

- Achieving 8% economic growth (real GDP growth rate) in Punjab by 2018

² Pakistan National Vision, 2025 - "Planning Commission - Ministry of Planning, Development and Reform" <http://pc.gov.pk/uploads/vision2025/Vision-2025-Executive-Summary.pdf>

⁴ Punjab Growth Strategy, 2018 - "Planning and Development Department, Government of the Punjab" - www.pndpunjab.gov.pk/system/files/Punjab_Growth_Strategy_2018_Summary_0.pdf

- ▶ Increasing annual private sector investment in Punjab to USD 17.5 billion by 2018
- ▶ Creating 1 million quality jobs every year in Punjab
- ▶ Training 2 million skills graduates in Punjab by 2018
- ▶ Increasing Punjab's exports by 15% every year till 2018
- ▶ Achieving targeted Sustainable Development Goals in Punjab by 2018
- ▶ Narrowing security gap with regional neighbors such as India and Bangladesh by reducing crime and improving law and order in Punjab

Many of the objectives outlined in the national and provincial development plans are reflected in the Punjab Mineral Policy. The policy is based on principles of sustainable development that aims to create a responsibly managed mineral sector that will catalyze industrialization and leads to better transportation, energy and water infrastructure. The policy recognizes that private-sector led growth that will attract both foreign and domestic investment is the most cost-effective way to increase mineral exploration activity, and results in identification of economic mineral deposits.

The Punjab Mineral Policy articulates that the development of high value minerals, and especially when produced with added-value, will support the creation of spatial resource corridors and contribute to better regional integration. A more technologically advanced mineral sector will participate fully in a competitive, knowledge-based economy. The spin-off benefits of this increased industrialization will improve the standard of living of all citizens, particularly those living in communities adversely affected by mineral development. Further, the pragmatic exploitation and industrial value addition of mineral resources like iron-ore, rock salt, and limestone has the potential to lead to import substitution and export of steel, chemicals and cement etc. contributing towards the export objectives of the Punjab Growth plan.

Additionally, the improved governance goal of the Vision 2025 is reflected in the Punjab Mineral Policy.

As aligned with the Vision 2025⁵ and Punjab Growth Strategy, 2018, the Punjab Mineral Policy recognizes that the institutions governing the mineral sector must become more efficient so that the mineral sector is better supported. The Government of the Punjab (GoPb) intends to accomplish this institutional strengthening through more capable and well trained personnel, sophisticated

⁵ It calls for a "responsive, inclusive, transparent and accountable system of governance...envisaged through adoption of a holistic approach — from policy to strategy to implementation and delivery, encompassing all administrative levels — federal, provincial, regional, district and local — in a rule-based, result oriented perspective. "

mineral resource management systems, better and easily accessible geological data, and more strictly enforced monitoring of compliance. The legislative framework that will be implemented by the mining administration must be clear, implementable, based on leading international practice, and reduce the opportunities for transactional irregularities.

The Vision 2025 states that the share of Pakistan's informal economy is estimated to be more than 50% and employment trends also show that informal sector is the largest employer of the workforce. The Vision notes that the informal sector provided employment to 73.5% of non-agricultural workforce in 2010-11 and trending upward.

The objectives in the Vision around formalizing the Pakistan workforce apply particularly to parts of the Punjab mineral sector. Many of the mineworkers employed by mining companies in the province have not been registered formally. These workers are working in sub-optimal conditions and without adequate socio-economic benefits. Without this type of formalization, a large number of mining companies that use informal employment may not be contributing sufficiently to the tax base (through Pay As You Earn - PAYE, for example). Operating outside of the regulatory framework through the informal nature of their operations, these companies are also unlikely to be complying with articles in the labor law that relate to provision of social infrastructure, fair wages and acceptable conditions of employment for mine workers.

The objective of Vision 2025 is to ensure that at least half of the businesses in the informal economy will have entered the formal economy. The Punjab Mineral Policy includes objectives related to the development of the small scale mining sub-sector, including support to up-scale mining companies that are not adding value to mineral products.

1.5. Provincial Mineral Policy for the Punjab

The stability of the federal and provincial democratic process coupled with dynamic political leadership has resulted in a positive impact on the economic outlook of the country. Game-changing initiatives like the China-Pakistan Economic Corridor (CPEC) have opened up significant opportunities and will provide the right impetus for our economic growth in the 21st century and beyond.

In light of Pakistan's National Vision 2025, Punjab Growth Strategy 2018 and the objectives set out by the National Mineral Policy 1995 and 2013, the Government of the Punjab, under the visionary leadership of the Chief Minister of Punjab - Muhammad Shahbaz Sharif, has formulated the Punjab Mineral Policy, 2017 to complement the National Mineral Policy, 2013.

2. Punjab Province Context

2.1. Mineral Endowment of Punjab

Punjab is the second largest province of Pakistan by area spanning 205,345 sq. kms, and the largest in terms of population, estimated at 103 million in 2016.⁶ The province has considerable known minerals including salt, coal, iron-ore, limestone, gypsum, silica sand and fire clay, and other potentially high value metals and minerals not yet discovered. The minerals in Punjab can be broadly categorized under construction, industrial and energy minerals depending upon their intended use.

Geologically, minerals are found in the main mountain ranges falling under the provincial jurisdiction of the Punjab. These include the Salt range, Kala Chitta Range, Potowar Plateau and Sulaiman Range, as well as scattered hills of Indian Shield named as Kirana Group.

The largest deposits of iron ore of marine origin have also been found in District Mianwali. According to the United Nations Pakistan (UN-PAK) Mineral survey project report (1962-1963), total estimated reserves of iron ore are 350 million tons. Development of a metallurgical process for Kalabagh iron ore is under active consideration of the GoPb

Recently, good quality iron ore deposits associated with other precious / semi-precious metals have been discovered at Chiniot under the flagship programme of concerted provincial investment and leadership. The iron ore reserves of good quality are estimated at 150 million tons on NI 43-101 Canadian Standards and 190 million tons on Chinese Standards. The GoPb is taking expeditious steps to further explore and develop these resources.

Good quality rock salt deposits are found throughout the southern escarpment of the Salt Range in the Salt Range Formation. Good quality of gypsum and average quality of bauxite/ laterite deposits are present and abundant limestone deposits are available in all the mountain ranges of Punjab.

Medium to good quality bituminous / sub bituminous coal is being mined from the Salt Range where resources of around 600 million tons on JORC Standards have been determined by Australian Consultants (M/s Snowden). Up scaling of the said study is also underway by German Consultants (M/s Fugro- SST). Eastern Sulaiman Range in DG Khan is another potential area for the exploration of Coal. Medium

⁶ Population Profile of Punjab - "Population Welfare Department, Government of the Punjab"
http://www.pwd.punjab.gov.pk/population_profile

to good quality silica sand and fireclay deposits are available and being excavated for the manufacturing of glass and ceramic products of Punjab. Dolomite deposits are developed in the Kingriali Formation in Mianwali District. Other industrial minerals include Fuller's Earth in DG Khan, Bentonite in District Jhelum and Ocher/ red oxide in Miawalli District. Abundant building material including river sand, sandstone, gravel and slate-stone deposits are available in the readily accessible areas of the province.

Minerals currently being excavated in the Punjab include the following:

- | | |
|---------------------|------------------|
| ▶ Argillaceous Clay | ▶ Fireclay |
| ▶ Bauxite | ▶ Fuller's Earth |
| ▶ Bentonite | ▶ Gypsum |
| ▶ Brine | ▶ Iron Ore |
| ▶ Diorite | ▶ Laterite |
| ▶ Tuff | ▶ Lime Stone |
| ▶ Basalt | ▶ Rock Salt |
| ▶ Coal | ▶ Silica Sand |
| ▶ Ocher | ▶ Sand Stone |
| ▶ Dolomite | ▶ Sand Gravel |

The above mentioned minerals in the Punjab are currently being extracted by approximately 1,700 licensed entrepreneurs, most of whom are operating at a small scale. These operations are constrained by outdated management techniques, inadequate capital and limited technical understanding. The extracted minerals are consumed by local manufacturing industries including cement, soda-ash, caustic soda, fertilizers, glass, ceramics, construction, and chemical industries, etc.

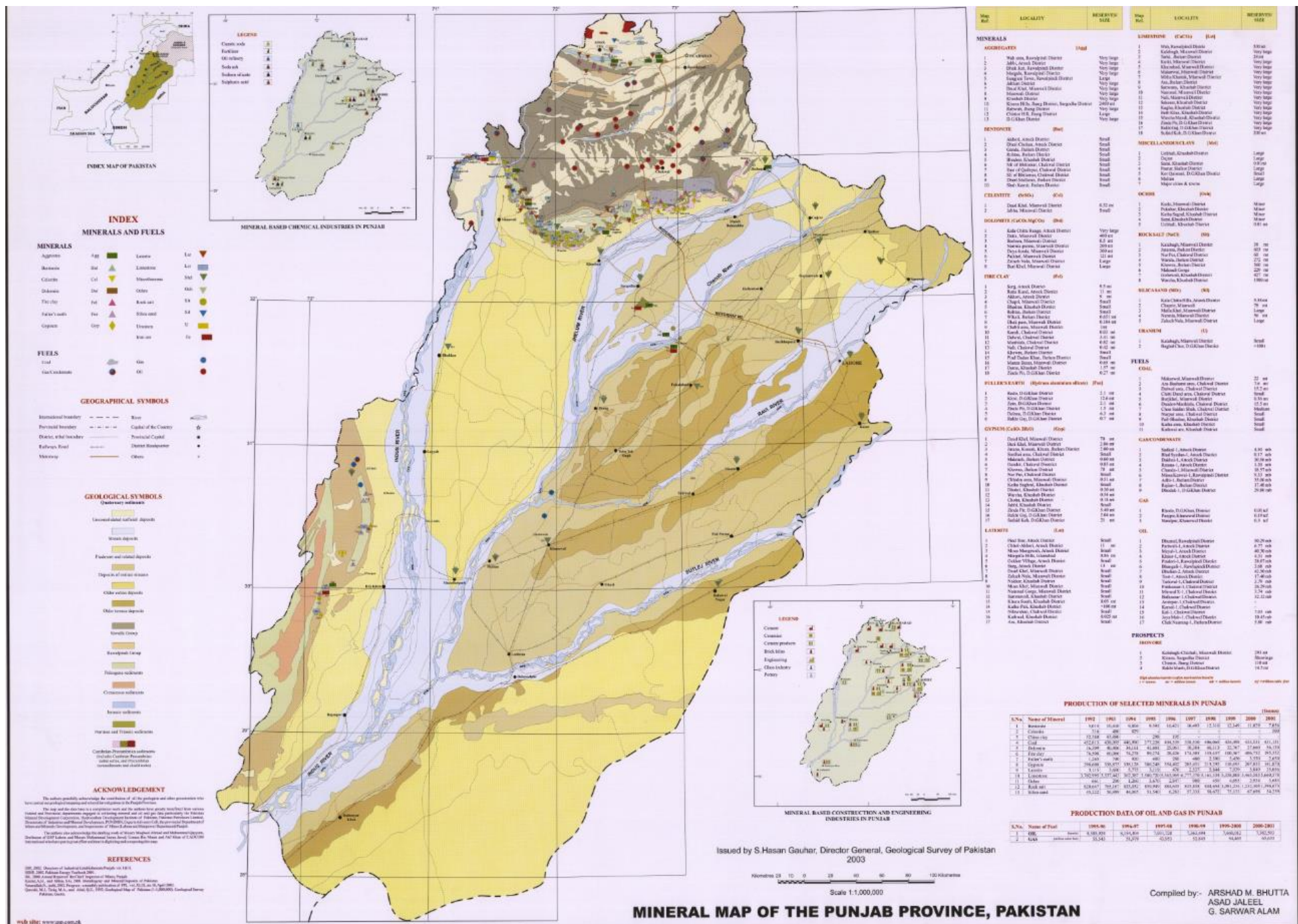
According to a World Bank report⁷, based on the experience of other countries with similar geological endowment, it is estimated that Pakistan can harness its potential and generate significant growth and local economic development. It is further reported that the mineral sector, with sufficient capital and a favorable investment climate, has the capacity to contribute annual revenues and foreign exchange in the range of USD 1.5 - 2.0 billion or 2 - 3 % of GDP, stimulate secondary and tertiary economic activity, promote growth and provide employment and community development in largely remote regions of the country.⁸

⁷ Mineral Sector Development Policy Note, 2003 - "Ministry of Petroleum and Natural Resources and World Bank Group"

<http://siteresources.worldbank.org/PAKISTANEXTN/Resources/pdf-Files-in-Events/Mineral-Sector/MSPN.pdf>

⁸ Mines and Minerals - "Punjab Board of Investment and Trade, Government of the Punjab"

<http://www.pbit.gop.pk/mines-and-minerals>



2.2. National and Provincial (Punjab) Contribution of the Mineral Sector

The mineral sector in Pakistan contributes 3% to the national GDP.⁹ This somewhat modest contribution is mostly due to the application of outdated management and mining techniques, inadequate capital investment, lack of a skilled labor workforce and outdated information on mineral endowment. However, the GoPb is committed in addressing these challenges and heavily investing to address such concerns.

The mineral sector in the Punjab provides the resource base to a number of industries including cement, soda ash, caustic soda, ceramics, glass, fertilizer, plastic, paper, ghee, construction and steel industries. Apart from these industries, the majority of the mining activity is limited to the extraction and sale of raw minerals with very little or no value addition to the mineral through processing and industrialization.



Figure 3 - Mineral Based Industries

⁹ Pakistan Economic Survey 2015-16 - "Ministry of Finance, Government of Pakistan"
http://www.finance.gov.pk/survey/chapters_16/03_Manufacturing.pdf

The mining industry in the Punjab provides employment opportunities to a nearly 40,000 person workforce, including skilled, unskilled labor and professionals. The majority of the skilled and unskilled work force come to Punjab from the northern region of Pakistan during the winters and follows a migratory trend. A major reason for the migratory trend of labor is lack of the facilities such as adequate labor barracks / colonies and other benefits related to the health, safety and education of mineworkers and their families.

Local (Punjab) skilled and unskilled labor historically has not been attached to the mining industry due to limited socio-economic benefits as compared to the risk and rewards of mine employment or contracting.



Figure 4 - Socio-economic context

2.3. Legal and Regulatory Framework

According to Article 142 (3) of the Constitution of Islamic Republic of Pakistan, minerals (other than mineral oil, natural gas and minerals for use in generation of nuclear energy) are not part of the Federal Legislative List¹⁰. Hence, the subject matter of minerals falls within the domain of the Provincial Government. It may be noted that the above position of Article 142 was a result of amendments to the Constitution in 2010 (the "**18th Amendment**"). Some of the laws pertaining to the mineral sector were enacted by the Parliament a long time before the same. These laws, however, are in field and are now being administered by the Provincial Government.

The Constitution also provides the basis for the conduct of business by respective Governments. According to Article 139(3) of the Constitution, Provincial Governments are to make rules for the allocation and transaction of their business. As a result, the Punjab Government Rules of Business, 2011 (the "**Rules of Business**") have been made by the Government of the Punjab.

Through the Rules of Business, various Departments have been set up under the umbrella of a Secretariat, each Department working in a distinct specified sphere of business as allocated to it. For the mineral sector, the relevant Department is the Mines and Minerals Department (MMD). The Minister of Mines and Minerals on behalf of the Government of the Punjab holds the responsibility to implement mining legislation and to administer the sector.

Salient administered laws governing the mineral sector include the following:

- ▶ Mines Act, 1923
- ▶ Payment of Wages Act, 1936
- ▶ Regulation of Mines & Oil fields and Mineral Development (Government Control) Act, 1948
- ▶ Consolidated Mines Rules, 1952
- ▶ Coal Mines (Fixation of Rates of Wages) Ordinance, 1960
- ▶ Excise Duty on Minerals (Labour Welfare) Act, 1967
- ▶ Industrial & Commercial Employment (Standing Orders) Ordinance, 1968
- ▶ Excise Duty on Minerals (Labour Welfare) (Punjab) Rules, 1971
- ▶ Punjab Mineral Development Corporation Act, 1975
- ▶ Punjab Minor Minerals (Cancellation of leases) Ordinance, 1977

¹⁰ Article 142(3) provides that Parliament shall not have power to make laws with respect to any matter not enumerated in the Federal Legislative List, and such power shall lie with the Provincial Assembly

- ▶ Punjab Mineral (Cancellation of sand leases in Restricted Area) Ordinance, 1984
- ▶ Punjab Mining Concession Rules, 2002

2.4. Institutional Framework

The Mines and Minerals Department initially had been working under the Directorate of Industries and Mineral Development since 1964 and was performing the regulatory functions under the Punjab Mining Concession Rules, 1986 and Punjab Minor Mineral Concession Rules, 1990.

However, after the implementation of the National Mineral Policy, 1995 and on the recommendations of Australian Agency for International Development (AusAID) report, an independent Mines and Minerals Department was established in 2002. The Punjab Mining Concession Rules, 2002 were also drafted and replaced the previous mining concession rules.

The current institutional arrangement for the Mines and Minerals Department includes three attached departments and two autonomous organizations as given below:

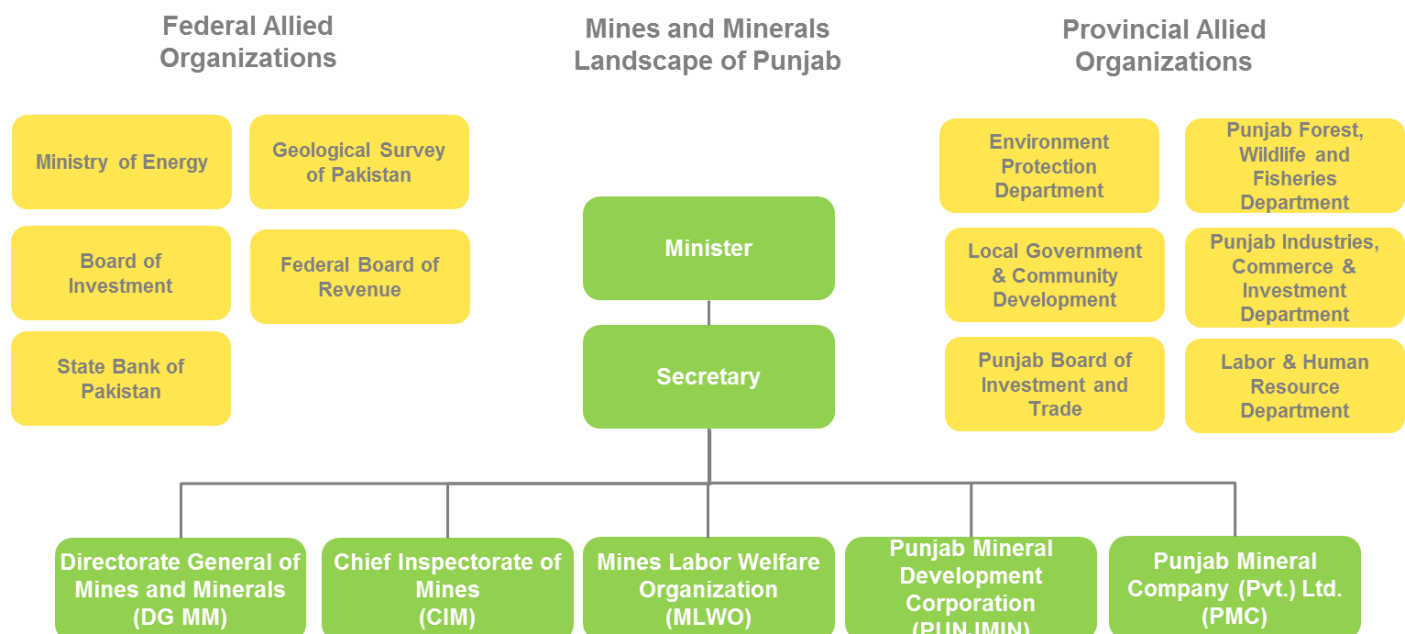


Figure 5 - Current Sectoral Structure

Attached Departments

Directorate General of Mines and Minerals

The Directorate General of Mines and Minerals (DG Mines and Minerals) went through major reforms on the recommendations of the AusAID report and resulted in an increased role. It evolved from being only a licensing and regulatory body towards also being responsible for the execution of exploratory work, estimation of mineral resources and executing studies / development scheme for the uplift of mineral bearing areas in the province. This Directorate also works in a facilitation role with the Environmental Protection Department to mitigate the environmental aspects of the mining..

The DG Mines and Minerals has its head office located in Lahore with nine regional and seven sub-regional offices. Head office is responsible for the processing and granting of mineral concessions whereas the regional and sub-regional offices are responsible for conducting auctions of surface minerals and for carrying out inspections to ensure compliance with the working conditions and prevention of illegal mining.

Broad major functions of DG Mines and Minerals include the following:

- ▶ Resource mapping and resource estimation
- ▶ Licensing and leasing of mineral titles
- ▶ Inspections to ensure compliance with working obligations
- ▶ Environmental facilitation
- ▶ Information promotion

Chief Inspectorate of Mines

The Chief Inspectorate of Mines (CIM) has existed since pre-partition and has been working under the administrative control of the Labor and Human Resource Department until the implementation of National Mineral Policy, 1995. After the implementation of the policy, the Chief Inspectorate of Mines was brought under the Mines and Minerals Department as an attached department in 2003.

CIM is responsible for the safety of mines and health and safety of mining labor and has its head office located in Lahore with 14 regional and sub-regional offices. Head office is responsible for the management of field operations, training and prosecutions of Health and Safety (H&S) non-compliance whereas the regional and sub-regional offices are responsible for carrying out H&S inspections, rescue operations, mine environment sampling, and the provision of educational certifications and hands-on mining training.

Major functions of CIM include the following:

- ▶ Ensure safety of mines
- ▶ Ensure health and safety of mining labor
- ▶ Disaster Management and rescue services at mines
- ▶ Human Resource Development of mining labor

Mines Labor Welfare Organization

Mines Labor Welfare Organization (MLWO) is responsible for the well-being of mining labor including provision of housing, health and education facilities. Major functions of MLWO include the following:

- ▶ Collection of excise duty on minerals
- ▶ Provision of health, education, housing and water supply facilities to mining labor and their families
- ▶ Implementation of labor laws in the mineral sector

Autonomous Organizations

Punjab Mineral Development Corporation

Punjab Mineral Development Corporation (PUNJMIN) is a statutory corporation established in 1975 and is the only provincial public sector entity involved in mining operations within the Punjab.

The reason for the establishment of PUNJMIN was to act as a role model and stimulus for the mineral sector, to attract investors and to turn the sector into a safe, prosperous and healthy segment of the national economy.

The main functions of the Corporation are to draw up schemes, for the development, surveying, prospecting, exploring, mining, processing, industrial exploitation and purchase and sale of minerals including their import and export and for the improvement of communications, water supply, power and such other ancillary matters as may be conducive to the attainment of these purposes in the areas selected by the Corporation.

Punjab Mineral Company (Pvt.) Ltd.

Punjab Mineral Company (Pvt.) Ltd. (PMC) is a wholly owned company of Government of the Punjab which was initially incorporated in 2009 with the name of Punjab Coal Mining Company, for the exploration of coal within the Punjab province.

The role of the company has evolved over the years and the company recently transformed its operations from coal exploration towards being responsible for the exploration and promotion of strategic minerals (especially metallic minerals) in the Punjab province. In 2013, the name of the company was also changed to Punjab Mineral Company (Pvt.) Ltd.

Provincial Allied Organizations

Environment Protection Department

Environment Protection Department (EPD) is responsible for the protection, conservation, rehabilitation and improvement of the environment and provides Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) to the concessionaires for carrying out the mining activity in case there is a risk of environmental damage

Punjab Forest, Wildlife and Fisheries Department

Punjab Forest, Wildlife and Fisheries Department is responsible for the protection, conservation and management of natural resources and provides No Objection Certificate (NOC) for carrying out the mineral activity in the areas marked under Forestry, Wildlife and Fisheries land.

Local Government & Community Development Department

Local Government & Community Development Department is responsible to ensure that the local governments perform their functions within the provincial framework and provides assistance to the concessionaires in the resolution of conflicts with the locals in the mining area

Industries, Commerce & Investment Department

Industries, Commerce & Investment Department is responsible to promote industrial development, trade and investment in the province and strengthens the linkages between the mineral sector and the industries dependent on the mineral sector

Punjab Board of Investment and Trade

Punjab Board of Investment and Trade (PBIT) is responsible for facilitation of new and existing businesses and advocates policies for creating a mutually beneficial business environment for all sectors including the mineral sector

Labor and Human Resource Department

Labor and Human Resource Department is responsible for the protection of labor rights, labor welfare and implementation of labor laws including for the mining labor

Federal Allied Organizations

Ministry of Petroleum and Natural Resources

Ministry of Petroleum and Natural Resources (MPNR) is responsible to ensure the availability and security of sustainable supply of oil and gas for economic development and strategic requirements of Pakistan and to coordinate development of natural resources of energy and minerals.

Geological Survey of Pakistan

Geological Survey of Pakistan (GSP) is responsible for the scientific evaluation of geological framework and geological, geophysical, geochemical survey and mapping of whole of Pakistan

Board of Investment

Board of Investment (BOI) is responsible for promotion of investment, facilitation of local and foreign investors, enhancement Pakistan's international competitiveness and contribution to economic and social development.

Federal Board of Revenue

Federal Board of Revenue (FBR) is a semi-autonomous federal agency of Pakistan which is responsible for enforcing fiscal laws and collecting revenue for the government of Pakistan

State Bank of Pakistan

Stat Bank of Pakistan (SBP) is the central bank of Pakistan regulates the monetary policy, issues currency notes and performs both the traditional and development functions to achieve the micro-economic goals

3. Sector Challenges and Departmental Initiatives

3.1. Key Challenges

The process of preparation and formulation of the Punjab Mineral policy (2017) included various in-house consultations and stakeholder sessions to assess the key factors influencing the sector's performance. The situation analysis resulted in identifying a number of key challenges that are currently being faced by the mineral sector as given below:

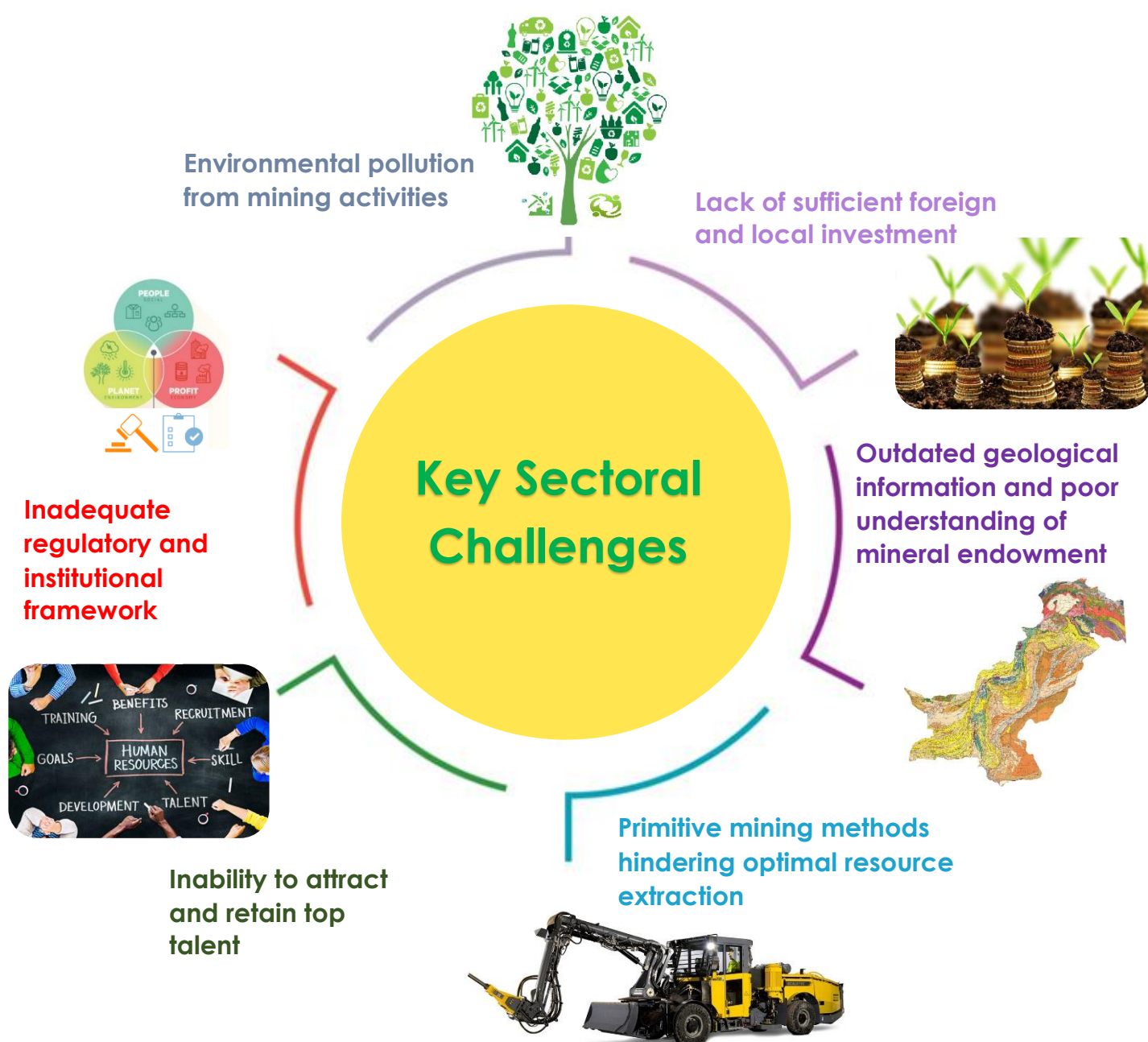


Figure 6 - Key sectoral challenges

Government of the Punjab is not stagnant to the face of the challenges and have taken number of initiatives to improve the mineral landscape of Punjab. Major current interventions taken by GoPb are aimed at shaping up the mineral resource corridors in Punjab, based on the international standards of resource estimation, to develop the asset base for attracting large scale mining operations through local and foreign direct investment. These include detailed exploration of metallic minerals in Chiniot, Rajoa and rest of Punjab, resource estimation for coal in the salt range for the establishment of indigenous coal fired power plants, legal and regulatory framework review to update the outdated mining legislation and rules, and the institutional restructuring of Mines and Minerals Department to give it a modern and investment friendly outlook

4. Vision, Mission and Strategic Objectives

The previous section outlined the key challenges facing the mineral sector in Punjab Province. These challenges are global in nature. All jurisdictions that are in varying stages of developing their mineral sector face similar issues. All mineral rich countries, whether a highly developed one like Canada or a rapidly developing one like Botswana, need a set of conditions for their mineral sector to thrive. Essentially, an approach to mineral development that is based on internationally recognized principles of sustainable development will ensure that all of these challenges are met. Mineral resources are finite and so the “sustainable development” of these must lead to greater prosperity, higher levels of industrialization, infrastructure that will attract other industries, an environment that is not compromised, and communities that welcome a large-scale mine into their “neighborhood”.

This section presents the Vision of the GoPb to attain this sustainable development approach for its mineral sector; the Mission of the Mines and Minerals Department to engage in activities to support the realization of this Vision; and Strategic Objectives that bring life to the economic, social, environmental and governance components of a sustainable and responsible mineral sector in the Punjab.

4.1. Vision

GoPb's vision is to have a modern, innovative, dynamic and private sector driven mineral sector that is environmentally responsible, socially sustainable and safe; and that contributes significantly to the Punjab's and Pakistan's overall economic growth.

4.2. Mission

Mines and Minerals Department aims to ensure responsible mineral development that contributes the optimal level of mineral revenue while respecting the principles of sustainable development.

4.3. Strategic Objectives

The Punjab Mineral Policy 2017 has been developed to realize the Vision and Mission of Government of the Punjab to make the sector attractive for both local and foreign investors and to contribute significantly to the provincial and national economy.

The following strategic objectives have been laid down by Mines and Minerals Department to describe the desired outcomes from the implementation of this policy:



4.4. Mineral governance

Inclusive Broad Based Strategic Decision-making and Consultation

Issue / Context:

Global trends in mineral development have focused on the growing requirement to situate mining within the context of the society in which it operates. According to the internationally recognised Natural Resource Charter, “a national [mineral development] strategy is more likely to be successful if it is the product of inclusive processes that are open and participatory. A plan debated in public will expose policy conflicts and inconsistencies sooner, constrain self-dealing and corruption, and render inevitable course corrections less disruptive”.¹¹ The needs and aspirations of all stakeholders, including the mining industry and the stakeholder groups affected by mining deserve to be considered so that the mineral sector can be developed responsibly and sustainably. In implementing this strategy in mineral sector policy and decision-making (where appropriate), government and industry can achieve a higher degree of stakeholder cooperation and buy-in to mineral policies and implementation.

The MMD has not had the benefit of the formal mechanisms that would support inclusive consultation on mining issues of concern to a broad range of stakeholders. Such an approach would enable the mining regulator to identify issues of concern earlier and more easily so that the province and country's reputation for responsible mining is enhanced.

Policy Statement:

The GoPb will support a unified direction and commitment of all stakeholders, both private and public (Federal and Provincial) sectors towards mineral sector development.

The government is committed to:

- ▶ developing the mineral sector in keeping with sustainable development principles of the mineral sector that include attention to environmental and social issues as well as economic development priorities; and
- ▶ Creating a high level multi-stakeholder Policy Advisory Council headed by the Provincial Minister which provides for strategic policy advice and information-sharing on key sectoral issues and developing other participatory

¹¹ Natural Resource Charter - “Natural Resource Governance Institute”

https://resourcegovernance.org/sites/default/files/NRCJ1193_natural_resource_charter_19.6.14.pdf

mechanisms for a range of stakeholders affected by the mineral sector on an as-needed basis.

Capable and Effective Institutions Supporting Private Sector Driven Growth

Issues / Context:

The Mines and Minerals Department is relatively new, having been part of the Directorate of Industries and Mineral Development, and became a separate, functional organization about 15 years ago.

Currently the core functions of MMD includes licensing, inspection, resource estimation, and information provision. These functions report to Director General Mines and Minerals who, in turn reports to a Secretary of Mines. This model is one of the most common types of institutional arrangements world-wide for regulation of the mineral sector. However, there are disadvantages of this type of arrangement according to country-specific public sector conditions.

The Punjab province public sector wage classifications do not sufficiently take into account salary scale provisions related to regulation of large, industrial sectors. There is a need for some level of wage parity between senior managers employed by an industrial sector like mining, and the senior mine licensing and inspection staff in a mining administration. Without this, the mineral sector may attempt to hire (known as poaching) scarce skills in the mining professions from government; or worse, may not consider the mining regulator seriously, due to extreme imbalances in respective salary levels.

Secondly, it has been identified (through the Gap Analysis of MMD) that there is a need to provide a diffused decision-making function around the granting of exploration and mining licenses (particularly at a larger scale). In the proposed Punjab Mine and Minerals Authority structure, a Board of Directors with mining technical capacity would make recommendations around licensing decisions.

Both of these arguments support the creation of a Mines Authority to replace the licensing function, in particular, that currently resides under the Director General of Mines and Minerals.

Key responsibilities falling under the MMD that have been described in the introductory section include core functions such as resource mapping and resource estimation; licensing of exploration and mineral activities; and inspection and monitoring to ensure compliance with licensing terms and conditions.

The MMD has followed leading practice by ensuring that there is a function related to environmental facilitation. This function supports the Environmental

Protection Department's responsibilities to ensure that Environmental Impact Assessment (EIA) and management plans accompany the application for new licenses as well as for renewals of licenses.

Given the nascent state of the mineral sector in Punjab Province coupled with the relatively recent establishment of the department as a separate entity, there have been challenges in bringing some parts of the organization up to a completely professional standard.

Human resource features such as job descriptions and key performance indicators are lacking in some areas, and the licensing and inspection sections that are the key mining regulator functions require more capacity and review of the current mandate. As noted, improvements to decision-making structures around licensing, and integration of mine inspection functions are particularly needed.

Additionally, the mandates and structures of the two State-Owned Enterprises (SOEs), PUNJMIN and PMC need strengthening in keeping with the needs not only of the existing mineral sector but in anticipation of the arrival of a more extensive large-scale mineral sector in the near future.

Policy Statement: The GoPb will structure its mining regulator to ensure: that it maintains a sufficiently professional level of senior managers compensated by competitive salaries that relate to the technical responsibilities of administering a complex industrial sector such as mining; that decision-making around licensing is supported by a diverse range of public and private sector technical expertise; that personnel are sufficiently trained and resourced; that each division has clear mandates that respond to the current mineral sector's requirements and that facilitate private sector led growth and development of future needs of the mineral sector.

The GoPb is committed to achieve this policy intention by:

- ▶ Strengthening the institutional framework of the MMD, its attached departments and related organizations to become a progressive, investor-focused organization with improved transparency, diffused decision-making around licensing, better internal and external coordination, and improved regulatory and enforcement capacity;
- ▶ Providing sufficient technical capacity in the MMD to provide an appropriate attention on mineworkers, communities and social infrastructure;
- ▶ Building the capacity of the MMD and its attached departments/ organizations through better policies for talent attraction and retention; and

- ▶ Providing the MMD with modern, up-to-date human resource tools that include job descriptions, key performance indicators, career paths and mentoring within restructured divisions that reflect the requirements of a growing mineral sector.

Clear and fair mining legislation (based on internationally accepted practices)

Issue / Context: The basis for the responsible management of any country's mineral development should be the policy and legal framework. There are many aspects to consider with respect to provision of a regulatory framework that both attracts investment and ensures responsible development but is not too complex or difficult for the mining regulator to enforce.

The Intergovernmental Forum on Mining, Minerals and Sustainable Development is a multi-government body related to the United Nations Conference on Trade and Development (UNCTAD) and based in Geneva has developed a model mineral policy template for governments to use and adapt to their own priorities.

Commenting on an appropriate mineral development regulatory regime, the Intergovernmental Forum (IGF) policy template notes that Mining codes and standards should be revised and updated to reflect changing knowledge and best practice. They should deal with all aspects of mining from exploration to closure and post-closure management. The data and reporting requirements by entities should be made explicit in exploration and operating licences so that authorities can make informed decisions.¹² The Natural Resource Charter also states that the challenge for all mining regimes is to create an enabling and responsible mineral regulatory framework that reduces discretion, increases transparency and is flexible enough to accommodate changing economic conditions of the mineral sector.¹³

The main legislative document that governs the mineral sector in Punjab is the 2002 Mining Concession Rules. There have been attempts in the past half-decade or so to revise these rules to ensure that they are implementable by both the regulator and the operator; to reduce the discretion in decision-making; and to provide for the implementation of sustainable development principles more comprehensively, including corporate social responsibility guidance. However, the current set of Rules remains in place and needs attention to provide a clear and coherent legislative framework for the current and prospective mineral sector.

Further, these 2002 Mining Concession Rules have not been guided by a specific Punjab Provincial Mineral Policy. Such a Punjab-specific mineral policy would

¹² IGF Mining Policy Framework - "Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development" - <http://igfmining.org/wp-content/uploads/2017/02/MPF-English-Oct-2013.pdf>

¹³ Natural Resource Charter - "Natural Resource Governance Institute" https://resourcegovernance.org/sites/default/files/NRCJ1193_natural_resource_charter_19.6.14.pdf

provide clear policy intentions of the GoPb, including the specific types of minerals and industry sub-sectors in the province requiring attention.

Policy Statement: This policy will guide a revamped legal and regulatory framework in line with modern jurisprudential principles and relevant recognized international mining governance frameworks, such as The Natural Resource Charter

The GoPb will realize this objective by ensuring:

- ▶ Transparency in award of concessions/ mineral titles, also ensuring security of tenure;
- ▶ Rationalization of primary and secondary legislation;
- ▶ Structuring of discretionary powers to make the licensing and regulatory process clear and predictable; and
- ▶ Balanced and clear accountabilities and responsibilities of mine owners, miners, community and government.

Access to Land and Coordinated Land Use for Mineral Development

Issue/Context:

A. Land Access: One of the key issues for mining companies in any part of the world is access to land for mineral exploration and extraction. When governments cannot provide an appropriate and enforceable regulatory framework to ensure that this access is granted, companies will be reluctant to fund large exploration programs, particularly Greenfield exploration. When land use is not well managed, conflicts between land owners and mining companies can be fractious and result in a poor reputation for that particular jurisdiction. Additionally, government must ensure that there is no confusion through duplication of land allocation or blurred boundaries between lease areas.

The government of Australia has recognized that there is a critical policy imperative related to mining and land. The Australian Government's work with state and territory governments on the Land Access for Resources Working Group (LARWG) is one initiative aimed at addressing this issue. The Group is mandated to ensure that Australia's resources sector remains internationally competitive and attractive to investors, though the adoption of a responsible approach to exploration and resource development; transparent and consistent regulation; and that industry is able to maintain access to land for exploration and resource development.¹⁴

The MMD is aware of the importance of land use and land allocation issues for the mineral sector and is working with other government bodies to address these. GoPb has developed a land use classification methodology that categorizes land into residential, commercial, agriculture, peri-urban and industrial, based on the predominant land use in the area. It is governed by Punjab Land Use Rules, 2009 (classification, re-classification and re-development). There is need for preparation of land use classification maps, particularly for mineral rich districts, indicating resource corridors, to be incorporated into respective district master plans to stream line mineral based commercial and industrial activities.

Land allocation for mineral development takes into account this predominant land use noting where urban development exists and where are the protected areas, as defined by the National Environmental Protection Agency.

To date, there have been issues related to negotiation of agreements between land owners and the exploration or mining lease holders. This process can be time-

¹⁴ Land Access and Social Licence to Operate - "Department of Industry, Innovation and Science - Australian Government" - <https://industry.gov.au/resource/Mining/Pages/Land-Access-and-Social-Licence-to-Operate.aspx>

consuming and there needs to be sufficient support for the mining operator to negotiate a surface rights fee (Malkana). Apart from this instance, there have not been significant conflicts around land use, and the delineation of land allocation for mineral development has been accomplished quite efficiently. It is expected that this process may grow more complex, as the mining industry expands and requires more land.

B. Resettlement: As much as the mineral sector needs access to land for exploration and development, communities that may be occupying a portion of this land must be resettled to a new location with as little physical and emotional stress as possible. If communities are not handled well during this process, there may be acts of civil disobedience. This can affect the international reputation of the jurisdiction negatively. The most recognized international standard on Involuntary Resettlement has been developed by the World Bank: World Bank's Operational Directive 4.30, Involuntary Resettlement (OD 4.30).¹⁵

In the context of mineral development in Punjab Province, there are likely to be significant resettlement issues related to the development of the recently discovered large iron ore deposit located at Chiniot Rajoa. This deposit is located on the periphery of a large, urban area and may require significant resettlement of a portion of the population. This resettlement process and others need to be undertaken according to international standards to ensure that this usually quite traumatic process proceeds as smoothly as possible, and with requisite compensation.

Policy Statement: The GoPb will ensure that the mineral sector has access to identified mineral rich land for exploration and development while considering the requirements of other economic land use sectors to the extent possible without compromising the mineral sector's need for land access; equally, government will ensure that the often challenging process of community resettlement is undertaken as efficiently as possible.

The GoPb is committed to:

- ▶ Enabling integration of mining concepts and activities into the Master Land Use Plan;
- ▶ Developing a mining cadaster based on Geological Information System (GIS) Principles that will systematize the allocation of land for mining use in consultation with the Master Land Use Plan;

¹⁵ *Handbook for Preparing a Resettlement Action Plan- "Environment and Social Development Department, International Finance Corporation" -*
<http://www.ifc.org/wps/wcm/connect/22ad720048855b25880cda6a6515bb18/ResettlementHandbook.PDF?MOD=AJPERES>

- ▶ Supporting the mineral lease holder in their efforts to secure and agreement with the landowner on access to land for exploration and extraction;
- ▶ Ensuring that comprehensive multi-stakeholder resettlement processes are required in the regulatory framework, based on international standards such as the World Bank Resettlement Action Plan Guideline; and
- ▶ Providing a legal framework for the appropriate compensation values of different types of land use (including agriculture, cattle grazing, etc.)

4.5. Economic Development

Equitable and Fair Revenue Generation and Collection Regime

Issue/Context: Mining regimes worldwide implement various types of royalties, the key vehicle used for “resource rents”. Mining royalties can be profit based, revenue based or some combination of these. Revenue based royalties can also include some allowances for costs related to insurance, handling and transportation of minerals, for example. Revenue based royalties are easier to administer, as profit based royalties can allow the company to deduct expenses that may not be legitimate. The identification of these expenses in company balance sheets can be difficult for the particular government (Finance) official and so such a system can be challenging to administer. Most developing countries that regulate the mineral production of large scale mining tend to choose a revenue based form of royalty.

The International Monetary Fund has provided guidance on the “best” forms of mining taxation, that is, the highest levels of tax revenue to be gained for the country without negatively affecting the competitiveness of the mining jurisdiction for investment.

In discussing the relative merits of different types of tax treatment, an International Monetary Fund’s (IMF) guidance report on the design of fiscal regimes for mining notes that royalties based on gross revenues provide revenue to government from the commencement of mineral production. However, they add to cost of extraction and therefore can deter investment on the development of marginal deposits.¹⁶ It is important to establish a royalty regime that gives the best return for the government, but that also takes into account financial needs of the mining industry (especially given the long-term nature of mining development from conception to construction).

Tax policy and collection are federal responsibilities in Pakistan. However, the setting of mineral royalty rates and collection of non-tax revenues such as royalties falls within the purview of GoPb. The current practice for the setting of royalty rates for the majority of minerals produced is unit based, that is, a rate is charged on a per metric ton basis. In keeping with global practice, the royalty rates depend upon the type and market of a specific mineral, and are determined based on the value of the mineral across the value chain.

¹⁶ *Fiscal Regimes for Extractive Industries - “International Monetary Fund”*
<https://www.imf.org/external/np/pp/eng/2012/081512.pdf>

Due to lack of resources and inadequate inspection the royalty collection regime has been outsourced to third parties for small to medium scale mining projects. For large-scale operations, the royalty collection is based on self-assessment. Better monitoring of this process is needed to ensure accurate determination of royalty payments. Further, there is a lack of system in place to reconcile the royalty collection against the reported and actual production.

Recent changes to the royalty collection regime through a more efficient auction process has increased the amount of revenue multiple times. However, there is a need to review both the royalty determination and royalty collection processes to make them transparent, effective and efficient.

Policy Statement: The GoPb will enable an equitable, competitive and progressive royalty regime which balances investment, improves revenue management and effective resource allocation to increase provincial revenue generation. Further, the GoPb in coordination with the Federal government under the NMP, will design a competitive mining fiscal regime that assures a fair value of mineral resources of Punjab while offering incentives that provide a fair and reasonable return to local and foreign investors.

The GoPb is committed to achieve this strategic objective by:

- ▶ Using channels envisaged in the NMP to recommend suitable changes to fiscal policy and more specifically the taxation regime;
- ▶ Developing a stable and predictable mechanism for determination of royalty rates through establishment of a mineral pricing cell; and
- ▶ Building capacity of MMD and provide with adequate resources to implement a rigorous and transparent collection regime.

Strategic Mineral Resource Development Management and Value Addition

Issue/Context:

Most countries that have a significant mineral resource base have debated the issue of how to provide value addition to mineral products. Natural Resources Canada, the federal department in charge of mining, has developed a strategy dedicated to promoting value addition of minerals produced in Canada. In the context of the paper, Toward a Value-Added Mineral and Metal Strategy for Canada¹⁷, the term, “value-added” is explored. In the Canadian context, “value added,” refers to any economic, environmental or social benefit that results from the further processing and manufacturing of minerals and metals. Therefore, the goal is not only to increase the GDP associated directly with mineral and metal processing, but also to increase the employment and other benefits that accrue from processing and manufacturing with minerals and metals, and from the many supplier industries, such as engineering, design, environmental technologies, equipment supply and others, that depend on the minerals and metals sector for their survival.

Currently, there is no process or policy in place to institutionalize the concept of value addition or sufficient capacity for strategic decision-making around medium to long term mineral development in Punjab Province. To maximize the value of mineral resource development, commodity price tracking and financial modeling must be undertaken as part of the regular business of the MMD. This is necessary to ensure that the MMD focuses on those minerals that should be mined and sold according to the commodity price cycle and as new economic opportunities arise. Additionally, one of the economic tenets of sustainable development is to ensure a sufficiently lengthy life of mine so that employment and spin-off benefits can be maximized.

¹⁷ *Toward a Value-Added Mineral and Metal Strategy for Canada* - “Natural Resources Canada”
<https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/mineralsmetals/pdf/mms-smm/poli-poli/pdf/val-eng.pdf>

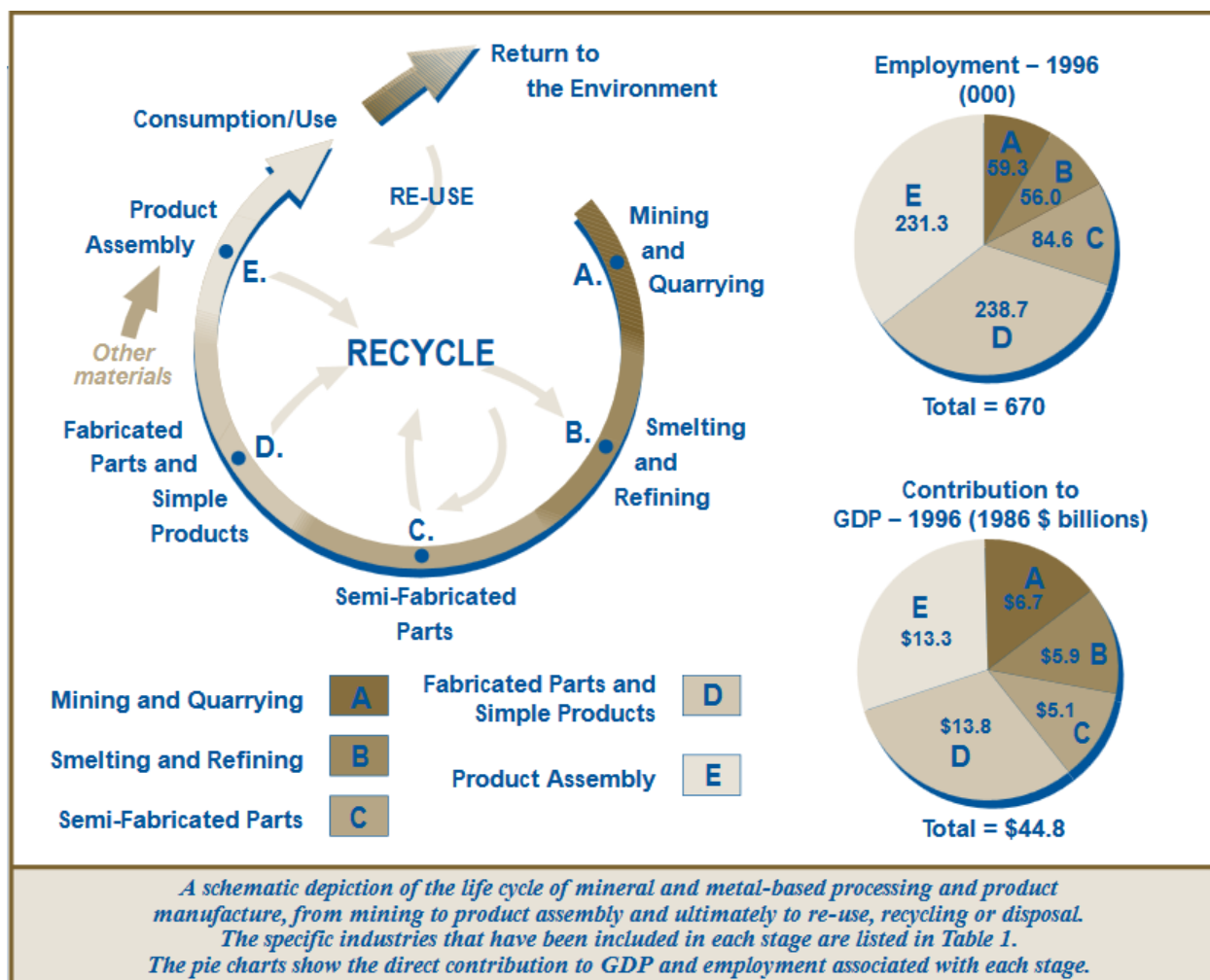


Figure 7 - Toward a Mining and Metals Value Added Strategy for Canada; Natural Resources Canada

Secondly, one of the GoPb's strategic priorities should be exploring ways to support the development of a value-added industry around mining. Value through processing (to various stages) should be added to raw materials before they are sold to increase the sale value of these products; create employment; increase industrialization; modernize the province's infrastructure and raise the contribution of minerals to the development of secondary industries.

These are key elements of sustainable economic development in the mineral sector.

Policy Statement:

The GoPb will support optimal resource utilization and sustainable economic value addition for the Province.

To achieve this objective, the GoPb will:

- ▶ Maximize mineral extraction in a sustainable manner by ensuring that mineral rich land is not sterilized through inactive licenses;
- ▶ When required, the terms and conditions of license that are inactive will be revised to reduce the size of land under lease and provide opportunities for new entrants;
- ▶ Create an innovation / revolving fund from mineral revenue generated by MMD to support research and development;
- ▶ Promote research, technology transfer and innovation that create growth and competitiveness;
- ▶ Provide impetus for growth and development through investing in development of strategic and high value reserves;
- ▶ Promote use of international standards in exploration and resource estimation (such as NI - 43-101);
- ▶ Attract bigger players to the mineral sector who can bring innovation, modernization and optimal beneficiation (mineral value addition), by offering economically viable mineral blocks and availing benefits available under Special Economic Zones regime (details given in Annex - A); and
- ▶ Facilitate and enable linkages across the mining value chain to promote mineral processing industry and value addition.

Supporting Small to Medium Scale Mining

Issue/Context:

The International Institute for Environment and Development (IIED) estimates that 15-20 per cent of global minerals and metals derive from [small scale or] artisanal mining (IIED, 2013). Though globalization of mining processes is not new, it has led to new sourcing of raw materials in resource-rich but also more isolated areas of sub-Saharan Africa, Latin and South America, and [Central] and South East Asia. This more pronounced penetration of mineral buyers and small investors into relatively isolated regions of the world gives rise to further concerns over how small scale and artisanal mining is both impacted by these market demands, and how efficiently this sub-sector can adjust.

Artisanal and Small Scale Mining's (ASM) potential for value-added activity can form an important part of a government's rural livelihood diversification strategy. ASM is linked to the job creation objectives of many governments where the presence of minerals suitable for small scale mining is significant. Small scale mining often presents a viable economic activity in rural areas where there are few other opportunities for income generation. If materials from small scale mining can be processed, even to a modest degree, the value of these products will be enhanced.

Research has shown how artisanal and small scale mining assists rural households in building more dynamic and resilient livelihood strategies by, for instance, ‘dovetailing’ artisanal mining and farming economies. Further, it is a stimulus for trade and subsidiary business development around mine sites. The question of linkages—how mining interplays with other aspects of local economies—and how to promote better integrated rural development strategies to capture mineral benefit distribution is an important question linked to artisanal and small scale mining.¹⁸

Almost exclusively, miners employed by “small-scale” licensed owners extract mineral resources in Punjab Province. Within the context of the current legislative framework, small-scale mining licenses are awarded to mining projects with a capital investment of PKR 500 million / or less.¹⁹ The Rules do not provide for an Artisanal mining license or a medium-scale mining license.

¹⁸ Artisanal and Small Scale Mining - “World Bank Group”

<http://www.worldbank.org/en/topic/extractiveindustries/brief/artisanal-and-small-scale-mining>

¹⁹ Punjab Mining Concession Rules, 2002 - “Mines and Minerals Department, Government of the Punjab”

<http://www.punjabcode.punjab.gov.pk/public/dr/Mining%20Rules%202002.doc.pdf>

Small scale mining in Punjab can either be undertaken by mechanized or non-mechanized means. Typically, for coal mining, a contractor who is hired by the mine owner employs miners who often work in difficult conditions underground with manual labor using picks and shovels to extract the coal from the seam and use donkeys to transport the product out of the mine.



Figure 8 - Small scale miners in a deep-level coal mine

The GoPb's objectives concerning SSM focus on reducing the number of primitive mining operations where poor conditions for miners create health and safety problems as well as negative impacts on the environment. The government wishes to up-scale and consolidate these operations so that they reflect the type of modern small scale mining currently operating in a number of mineral sub-sectors in the province. Additionally, the government aims to create a mid-tier scale of operation, medium-scale, where current mining companies that are producing raw materials and selling these for low prices are empowered to undertake a modest level of processing or "value-added" before the point of sale. This type of activity would add significant value to a range of minerals being exported in raw form today.

Policy Statement: The GoPb undertakes to support the small scale mineral sector to improve the existing wage scale, working conditions and other types of infrastructure, including a reduction in manual labour through greater use of mechanization; and up-scaling current small-scale mining operations to a medium-scale level where a modest or first-stage degree of processing is performed before sales.

The GoPb commits to developing a comprehensive small-scale mining development strategy that includes but is not limited to the following activities:

- ▶ Creation of a mine equipment pool that would include mechanized mine equipment, access to jointly shared processing facilities, etc.; to be used on a rotating basis;
- ▶ Support for the consolidation of small mines and operators into a larger and more profitable type of JV company or cooperative;
- ▶ Support creation of enabling infrastructure to ensure access to mineral areas where required (road construction) and provision of other necessary inputs such as water and electricity, etc.
- ▶ Training and capacity building on mine methodology (how to mine a deposit most profitably and based on extending life of mine); health and safety measures; environmental and social impacts of mining;
- ▶ Facilitating access to capital through lease collateral; and
- ▶ Provision of on-going technical support (access to business incubators, managing budgets and related financial management; mining development aspects including geological, processing, research and development, marketing, etc. through relevant government institutions).

Competitive and Enabling Governance Climate to Attract Investment

Issue/Context:

Most developing jurisdictions that possess mineral resources require different types of investors. Generally, the domestic investor has relatively small scale capacity and develops minerals that are required to support a local manufacturing or construction industry. When large, technically challenging deposits of high value minerals are discovered, foreign owned companies are usually required to invest in the operations, especially in jurisdictions where local financing and experience may not be available to develop the scale of the deposit.

Research supports the assertion that Foreign Direct Investment (FDI) helps expand trade. It can also boost labour productivity by providing access to new technology, business and manufacturing processes, and management know-how, as well as by fostering a competitive and innovative business environment.²⁰ According to a study on FDI in Canada, the attraction of foreign investment depends on three main qualities: **markets**, **resources**, and **efficiency**. In this scenario, international companies look for markets for their products, the presence of attractive resources (including mineral) and efficiency, related to labour productivity. Government can support the attraction of FDI through the presence of necessary infrastructure, a skilled workforce and an enabling investment climate. These objectives should form part of the country's growth and development strategies.

Mining activity in Punjab Province has been focused mostly on smaller scale activities in the industrial, construction and energy minerals sub-sectors. These minerals feed domestic production of a range of secondary products such as cement, marble products, other manufactured goods, and road construction from sand and gravel. High value minerals such as iron ore have been identified, but the attraction of foreign investors with requisite financing, technology and expertise has been challenging to achieve.

There are a number of reasons for the lack of international investor interest, including perception of security issues and institutional weaknesses. These include: an insufficiently modernised mining institution and regulatory regime based on international standards; lack of adequately developed and available geological information, and the paper based system of mining lease allocation. Attention to these issues and the addition of an attractive incentive package should result in

²⁰ Inward Foreign Direct Investment Attraction - "The Conference Board of Canada
<http://www.conferenceboard.ca/hcp/hot-topics/inwardfdi.aspx>

higher international investor interest to the mineral sector in Pakistan, and in the Punjab Province.

Policy Statement: GoPb, in concert with the Federal Government, aims to attract foreign and local investment into the mineral sector in the Punjab with an increased focus on the enhancement, modernization and digitization of its systems, functions and processes.

The GoPb is committed to realising this policy by:

- ▶ Coordinating with other governmental agencies and private sector to collect, collate and make publically accessible high quality geological data using available technology platforms;
- ▶ Developing an online mining cadaster that is publically accessible in line with international practices;
- ▶ Promoting research, technology transfer and innovation that create growth and competitiveness;
- ▶ Providing impetus for growth and development through investing in development of strategic and high value reserves;
- ▶ Promoting use of international standards in resource estimation (such as NI - 43-101) and exploration;
- ▶ Increasing visibility at international levels as a secure, active and attractive mining industry that attracts international interest and investment;
- ▶ Create linkages with the investor markets and forums;
- ▶ Focus on attracting junior mining companies (exploration companies) and sourcing venture capital fund into the exploration activity in Punjab;
- ▶ Promote investment on international investor forums in an attractive and competitive manner;
- ▶ Utilize the Public Private Partnership (PPP) regime for PPPs between the public and private sector entities in order to collectively undertake the exploration and exploitation of mineral resources in Punjab;
- ▶ Consider equity participation in PPP in order to ensure the maximum utilization of the PPP regime;
- ▶ Attracting bigger players to the mineral sector who can bring innovation, modernization and optimal beneficiation (mineral value addition), by offering economically viable mineral blocks and availing benefits available under Special Economic Zones regime²¹; and

²¹ Refer to Appendix-3

- ▶ Explore opportunities to work with international organizations (World Bank, IFC etc.) to leverage opportunities for donor support to address weaknesses deterring investment.

Infrastructure Development for the Mineral sector

Issue/Context: The mining industry requires different types of supporting infrastructure to enable the mining operation to function efficiently (energy, water, and electricity) and to facilitate the marketing of mineral products to a range of customers. For domestic supply, mining companies usually rely on the country's network of roads. However, for large export markets, mining companies usually require more sophisticated infrastructure that includes efficient railways and ports. The lack of either type of infrastructure (domestic or export driven) can deter an investor, particularly one where both on-site infrastructure and transportation and handling infrastructure are not readily available. The costs of companies providing their own electricity, for example, when grid electricity is not available, can be prohibitive.

Many developing countries are developing mineral resource based “spatial resource corridors”²² that concentrate mining related infrastructure in areas of the highest mineral potential and link this infrastructure with transportation networks that will allow the transport of products to the export market.

The “spatial development corridor” concept is a transport corridor financed by the high cargo volume and high cash flow of a mineral project that enables the development of other types of infrastructure. Some of these include power lines, optic fibre cables, water distribution infrastructure, etc. Other less profitable sectors of the economy such as agriculture and forestry should also benefit from these facilities. Such an approach should result in greater levels of industrialisation, better regional integration and catalyse the growth and development of secondary industries that are required for this construction.

Experience of countries that have implemented Development Corridors (DC) have been documented by the University of Dundee's internationally recognised EI Sourcebook. This experience demonstrates that the following characteristics must be present for success:

- ▶ DCs should be initiated and pursued based on inherent economic and infrastructure potential;
- ▶ The development of a corridor requires the participation of all economic and infrastructure ministries;
- ▶ The success of a DC depends upon the effectiveness of the project manager;

²² Resource Corridors / Diversification - “Extractive Industries Source Book”
http://www.eisourcebook.org/cms/files/resource_corridors_and_diversification.pdf

- ▶ The initiation of a successful DC requires, from the SDI methodology, the carrying out of sector scans along the potential corridor to expose latent investment potential;
- ▶ Investment projects need to be properly packaged for investors;
- ▶ Promotion and marketing of the corridor is an important component which will depend upon the attractiveness of the packaged projects;
- ▶ Most of the DC anchor projects would be large-scale, which would require deliberate action to create opportunities for Small Micro and Medium Sized Entrepreneurs (SMMEs); and
- ▶ Cross-border DCs are initiated based on bilateral (or multilateral) agreements.



Figure 9 - Spatial Development Corridor (levels of implementation): El Source Book

In Punjab Province, the local mining industry relies primarily on road networks for transport of minerals that supply local industries. However, for the attraction of larger-scale mining investors, the province requires a more sophisticated range of infrastructure as noted above.

Policy Statement: The GoPb will pursue a policy of “spatial resource corridors” and help to seek private sector investors to accelerate the progress of these so that the lack of sufficient infrastructure will not impede foreign direct investment into the mineral sector.

The GoPb is committed to realising this policy by:

- ▶ Helping to ensure that the infrastructure needs of the mineral sector are incorporated into local, provincial and federal infrastructure development plans;
- ▶ Promoting the concept of “spatial resource corridors” at the federal level, and with neighbouring provinces that require the construction of mining related infrastructure across provincial boundaries;
- ▶ Assisting in the private sector marketing of mining related infrastructure as part of mineral investment promotion initiatives;
- ▶ Encouraging the federal government to consider financial incentives to attract private investors to create mining related infrastructure; and
- ▶ Working with appropriate levels and portfolios of government to seek donor funding support for infrastructure development.

Human Resource Development

Issue/Context: One of the key features of the mineral sector is its reliance on a skilled workforce that must adapt to continuous productivity improvement measures based on new technology, mining methods, and changing conditions.

In the Canadian province of Ontario where the mining industry is mature, robust and contributes significantly to the economy, there are still discussions around the need for skilled workers in mining. The Ontario Ministry of Labour is concerned about the continuous need to replace workers due to attrition, retirement, and illness. The Ministry notes that "In the future, the mineral sector will be relying on a significant number of relatively inexperienced miners who will be working in more complex environments (i.e. deeper mines, more remote mines) with a growing number of new mining technologies and approaches. Both new and existing workers, including outside contractors, tradespeople and others, will need to be able to rapidly attain the necessary skills and training -- which is a critical part of a world-class health and safety system." This situation is not unlike that of Punjab Province where large-scale mining that will require technologically sophisticated mining skills will be needed in future.

The Canadian system has developed Common Core Modules of different aspects of training that are regularly delivered to the miners. The Ministry of Training, Colleges and Universities has developed mandatory training program standards for underground mining, which form the basis for the mining Common Core training modules. The Ministry includes an evaluation process to determine whether the content of these training programs and the way they are delivered will meet growing and changing workplace needs. This systematic training ensures that miners are kept informed about new technology, in ever-advancing health and safety standards and mine methodology, among others.²³

There has been a global skills shortage in the mineral sector for most of the first part of this century. This has been due to the rapid expansion of mining in the early to mid-2000's as commodity prices rose increasingly throughout the decade until the global financial collapse of 2008/2009 resulted in a worldwide economic slowdown. This collapse brought mineral commodity prices down.

The subsequent contraction of the global mineral sector due to this economic situation resulted in a surplus of skilled workers in many developed mining regimes. However, as the Canadian report noted, there is a continuous need for new generations of trained workers for all levels of employment in the mineral sector.

²³ Training, Skills and Labor Supply Issues - "Ministry of Labor, Ontario, Canada"
<https://www.labour.gov.on.ca/english/hs/pubs/miningfinal/training.php>

In jurisdictions where the domestic sector mainly is supported, such as Punjab Province, there has been relatively less impact of these expansions and contractions of the mineral industry, and the attendant effect on the workforce.

The various types of mines comprising the Punjab Province mineral sector operating in are primarily owned by local businessmen but the majority of mineworkers in these mines originate from other provinces and migrate to Punjab, according to seasonal requirements. There appears to be low interest on the part of the local populations in Punjab Province to consider mining as a viable career. There are a number of reasons for this including the public perception of mining as a dangerous, unpleasant type of activity as well as the availability of other employment opportunities.

However, the future mineral sector in the Punjab Province is anticipated to grow significantly to include more large-scale mining operations. These operations will showcase mining workplaces very differently than the current type of smaller scale mine or plant. Large-scale mining is usually foreign investor-driven and is subjected to an amplified regulatory scrutiny. Such workplaces should be modern, safe and more appealing to employment seekers. It is critical that young people entering tertiary institutions today are aware of these potential employment options and enrol in the mining sciences to prepare for these opportunities.

Policy Statement:

The GoPb, with the support from MMD, will develop a human resource development strategy to ensure that future mineral sector skill needs are provided by Pakistan graduates so that the benefits of mining impact the greatest number of citizens without undue reliance on foreign professionals.

To realize this policy, the MMD will pursue the stakeholder institutions and departments to develop a mining-related human resource strategy that will:

- ▶ Ensure that mining contracts with foreign-owned mine investors include a sliding scale of international professional staff numbers to gradually be replaced with Pakistani professional staff;
- ▶ Ensure that contracts awarded for technical support to geological operations include a requirement for technology transfer and training to local institutions;
- ▶ Develop or improve mining science related curriculums in secondary schools and in colleges and universities;
- ▶ Promote mining as a career through outreach speaker programmes to secondary schools; visits to international large-scale mines; exchanges with international mining schools; bursaries and scholarships for mining studies;

- ▶ Access international models of mining study curriculums such as the Prospectors and Developers' Association of Canada's²⁴ mine study programme;
- ▶ Implement a broad-ranging Human Resource Development (HRD) strategy that seeks to encourage Pakistan citizens to technical trade schools, universities and other educational institutions to prepare for careers in mining; and
- ▶ Facilitate and /or enable sector players to build capacity, educate and train human resource in order to provide primary, secondary and tertiary skills and services to support the natural resource sector.

²⁴ The Business Case For Sustainability - "International Finance Corporation"
http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Business-Case/

4.6. Environment Protection, Health and Safety and Social Development

Socio-economic benefits, Sustainable and Equitable Development

Issue/Context: Globally, there has been an increasing trend for mining projects to share benefits of revenue from mineral extraction, particularly where these operations are located in developing countries. The pressure has grown for communities located close to the mine²⁵ to consider that the mine is a “good neighbor.” There are practical considerations for this, including the mining company’s need to reduce opportunities for civil disobedience that may arise from mining protests that may cause road blockages or other actions that delay mining operations. Additionally, more jurisdictions are accepting the principles of sustainable development as the basis for responsible mineral development.

There have been a number of studies looking at the relation between companies’ Environmental, Social, and Corporate Governance practices (ESG) and their financial performance. The vast majority of them find a direct link: companies that do well by the environment, their labor force, and communities, do well financially.²⁶

As sustainability goals in mining have become the focus of most international mining debates, a number of excellent guidelines to concretize these discussions have emerged in the last decade or so. Chief among these are the International Finance Corporation (IFC) Environmental and Social Performance Standards that are driven by the IFC’s statement: “Sustainability is critical to companies’ business success. It’s critical, too, for their customers, surrounding communities, broader stakeholders, and the environment”. IFC’s Environmental and Social Performance Standards define IFC clients’ responsibilities for managing their environmental and social risks.

There are eight E&S standards that cover: Risk Management, Labour, Community, Resource Efficiency, Biodiversity, Land Resettlement, Indigenous Peoples, and Cultural Heritage.

²⁵ Mining-affected communities are defined differently according to the jurisdiction in question. Some countries use a distance-based formula where communities located within a certain radius from the mine (for example 30-50 kilometers) are defined as “mining-affected”. Some jurisdictions take their lead from the Environmental Social Impact Assessment (ESIA), and include the communities negatively affected by mining as formally “mining-affected” for benefit sharing purposes

²⁶ The Business Case for Sustainability - “International Finance Corporation”
http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Business-Case/

One of the key tenets of Sustainable Development is to ensure that social safeguards are in place to protect communities from harm due to mining operations; and to ensure that mining-affected communities achieve a higher standard of living due to the presence of a mine in their vicinity.

In Punjab, there has not been a formal mechanism established in the policy or legal framework for communities to share benefits from mining. Communities have experienced negative impacts of mining, however, including reduction in availability of water, air quality pollution and reduced access to land.

Communities that are not located close to a mine site that are suffering from a low standard of living, poor prospects of employment and a lack of development, generally, also deserve to benefit from mineral revenue. The province pursues a policy of equitable sustainable development with respect to distribution of mineral wealth.

Policy Statement:

The GoPb will ensure that communities benefit from mining activity through appropriate development projects, particularly in those areas with high or concentrated levels of extraction and where communities have suffered significant negative impacts. Further, the MMD will encourage the principle of equitable sustainable development so that communities not considered to be “mining affected” will also benefit from fair distribution of mineral wealth.

The GoPb is committed to:

- ▶ Developing a mineral revenue distribution formula based on levels of mining activity, value of mineral product, and degree of negative impacts experienced;
- ▶ Provide financial assistance for the mining-affected communities through local government channels, in keeping with government's development priorities for the affected area, and with participation of affected communities in project determination;
- ▶ Requiring large-scale mines or mining operations that include processing plants or factories from value-added activities to contribute a portion of annual revenue toward community development activities; and
- ▶ Entrenching the requirement for community development contributions from certain types of mining operations in mineral policy or law.

Protected Environment

Issue/Context: Mining inevitably produces negative impacts. These impacts can affect human health, the physical environment, or both. However, some impacts are more significant than others; for example, waste from gold mining can result in acid mine drainage that can damage soil and water resources; riverbed sand and gravel mining can harm aquatic resources and cause silting and soil erosion; and emissions from cement plants and from coal mining can cause serious air pollution.

There are a number of excellent international standards available on environmental management for governments to adopt – the International Standards Organization (ISO) 14001 is one of the most commonly used and covers a range of environmental impact assessment and management issues from “cradle-to-grave”²⁷ that are applicable to any type of development. Additionally, and of interest to Punjab Province, the ISO has created a specific environmental management tool directed to environmental management in smaller scale operations. The standard aims to help small businesses understand the requirements of an environmental management system and to help them implement ISO 14001 successfully.

As noted in the previous section, the IFC's Environmental and Performance Standards are also highly applicable to the mineral sector's specific challenges regarding mitigation of negative impacts and control of pollution on air, water and earth resources.

Communities and the physical environment in Punjab have experienced negative impacts from many of these types of mining. The problems are worsened when there is a concentration of mining activities clustered in a relatively small area. Additionally, the cumulative environmental impact of the smaller sand and gravel operations can be substantial, even when the individual operations are relatively small.

Currently, the legislative and institutional responsibility for protecting the environment rests with the Environmental Protection Department. However, the MMD includes an environmental division which needs to provide a strong interface between the two government bodies in view of serious environmental management requirements of the sector. Given the joint responsibility for environmental management, it is important to strengthen the institutional

²⁷ Cradle-to-Grave is a term that is applied to mitigation of environmental impacts from the conception of a mining project to closure

relationship between the two government bodies and ensure that the impacts of mining are mitigated to the extent possible.

Policy Statement:

The GoPb will ensure that the physical environment (soil, water and air) and human health is protected to the extent possible from mining operations by:

- ▶ Strengthening the institutional relationship between the Environmental Protection Department, Irrigation, Forest and other relevant government bodies, and the MMD by scheduling regular meetings to review environmental problems arising from mining activity in any area of Punjab;
- ▶ Committing sufficient training, funding and physical equipment to the environment division of the MMD to facilitate their participation in environmental management of mining related impacts;
- ▶ Ensuring that exploration and mining license/lease renewal applications are evaluated based on environmental performance, reporting and compliance;
- ▶ Working with communities, the labor workforce, other government departments and the operator to ensure an efficient mine closure process that is based on international standards; and
- ▶ Conducting joint inspections of mining operations to ensure that the Environmental Management Plan is being implemented throughout the lifecycle of the mine.

Healthy and Safe Workforce

Issue/Context: Mining is considered to be a dangerous activity generally, but there are many factors at play that determine the relative risk of injury, illness or fatality. Large, global mining companies that are listed on international stock exchanges are mechanized, modern and usually have good Occupational Health and Safety (OHS) records. On the end of the spectrum, artisanal mining that relies on fragile, poorly constructed infrastructure and small tunnels for mining, often results in worker injury or death.

The International Labor Organization (ILO) established the Safety and Health in Mines Convention (C176, 1995)²⁸ that remains the international benchmark standard for mine health and safety. The Convention makes governments responsible for creating the implementation framework, and employers responsible for ensuring mine safety. But the most important aspect of C176 is the right of workers to participate in workplace safety via independent safety representation, and the right to refuse unsafe work. However, to date, Pakistan has not ratified this Convention.

In Punjab Province, most mining activity is formalized and subject to the occupational health and safety regulatory regime under the responsibility of MMD. However, the OHS inspection function for the mineral sector has been delegated to the Chief Inspector under the Mines and Minerals Department. The Chief Inspector's mandate is to ensure that the employer provides a safe and healthy workforce and that the rights of workers in this regard are respected.

Policy Statement:

The GoPb will ensure that the mineral sector will be regulated to provide a safe and healthy workplace to the extent possible. In order to achieve this aspiration, the GoPb intends to pursue the ratification of ILO Convention 176 on Safety and Health in Mines with Government of the Pakistan.

The GoPb is committed to:

- ▶ Ensuring that MMD is sufficiently trained and resourced to carry out regular and efficient inspections of mining operations;
- ▶ Prohibiting mine inspectors from receiving facilities from mining operators to facilitate inspections (such as provision of vehicles, petrol, accommodation or meals);

²⁸ C176 - Safety and Health in Mines Convention, 1995 - "International Labor Organization"
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C176

- ▶ Enforcing requirements for employer responsibilities regarding OHS such as: provision of protective equipment, provision of health services, recognition of hazardous workplaces, technical training for workers in emergencies, and creating a culture of H&S in the workplace;
- ▶ Gathering OHS related statistics to monitor progress and evaluate effectiveness of current policies and laws governing OHS;
- ▶ Encouraging implementation of international safety standards (particularly ILO Convention C176);
- ▶ Ensuring first aid services at mining zones and provisions regarding emergency rescue services in case of mine accidents; and
- ▶ Reviewing and Developing robust health and safety related legislation and detrimental penalty regime to ensure effective implementation of OHS frameworks.

Protected Mining Related Labour Rights

Issue/Context:

The MMD has a key role in protecting the rights of labour in the mineral sector in Punjab.

In 2003, Mines Labor Welfare Organization, responsible for the welfare of mines workers, was transferred to MMD under the operational control of Chief Inspector of Mines. The Mines Labor Welfare Commissioner was also delegated implementation of three other laws as they relate to mineworkers, i.e. the Industrial and Commercial Employment (Standing Orders) Ordinance, 1968, the Payment of Wages Act, 1936 and The Minimum Wages Ordinance, 1961.

The governing act of Mines Labor Welfare Organization is federal and the funds collected through excise duty before the transfer of MLWO to MMD, still rest with the federal government. Further, even the funds collected after the devolution rested with the central treasury of Punjab. However, recently, a Personal Ledger Account (PLA) has been created and approx. 50% of the collected funds in the provincial treasury have been transferred to MLWO. Moreover, half of the collection in the provincial treasury still remains with the provincial central treasury and federal collection in the federal reserves. Such hindrance has impeded the progression in the welfare of the mines labour due to the lack of capital.

Some of the most urgent issues for upgrading the labour welfare component of the MMD's responsibility include attention to housing and other forms of social infrastructure including water & sanitation, transportation, education and health facilities required by the mineworkers and their families.

Policy Statement:

The rights of mineworkers will be enhanced and protected through an appropriate legal framework, improved administration and inspection; social infrastructure such as housing, schools and hospitals will be upgraded to ensure that mineworkers and their families are supported adequately.

The GoPb is committed to:

- Changing the rate of excise tax to add to the pool of funding available for labour welfare;

The governing act is federal and it has been capped the maximum of PKR 5/tonne for every mineral. A change in rate should be enacted through provincial government with the consultation of federal government, which

shall rebut regressive excise duty rate regime without the correlation to the value of minerals and repercussion of extraction to the health of labor.

- ▶ Mandating the registration of all mineworkers by the employer.

The fundamental principle of providing welfare facilitation is based on the requirements of the mineworkers. The formal registration of all mineworkers would ensure that sufficient resources would be allocated for social infrastructure and other socio-economic benefits

5. Implementation of the Punjab Mineral Policy

Government of the Punjab is committed towards the successful and time-bound implementation of the Punjab Mineral Policy 2017 and to ensure that all key strategic objectives are successfully implemented, Mines and Minerals Department shall constitute an implementation plan along with identifying the major initiatives that will be required to achieve these objectives.

Mines and Minerals Department shall hold the prime responsibility for the implementation of the mineral policy whereas the multi-stakeholder Policy Advisory Council shall have the oversight responsibility for the policy implementation.

Special Economic Zone**Annexure - A**

Under the SEZ Regime, the Federal Government has offered inter alia the following incentives:-

- ▶ Exemption from custom duties and taxes on import of plant and machinery into SEZ except items listed under Chapter 87 of the Pakistan Customs Tariff.
- ▶ Exemption from all taxes on income for enterprises commencing commercial production by 30 June, 2020 in the SEZs for the next ten years.