

# MINES & MINERALS SECTOR PROFILE



**GOVERNMENT OF NEPAL  
OFFICE OF THE INVESTMENT BOARD**



**GOVERNMENT OF NEPAL  
MINISTRY OF INDUSTRY**

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# FOREWORD

The promulgation of the constitution last year has punctuated Nepal's long political transition to a Federal Republic. The conclusion of this process marks the beginning of another process, that of economic transformation. The Government of Nepal has realized that its sources of funds, alone, will not meet the capital required to transform Nepal. Private investments, both domestic and foreign, will be key to Nepal's growth agenda.

In the recent years, Nepal has made great strides towards attracting private sector investments. The Investment Board, chaired by the Right Honourable Prime Minister, was established in order to fast-track large investments and act as a one-window facilitation agency. Similarly, Nepal is in the process of amending various laws and regulations to make them more investment friendly.

In an effort to attract investment, Investment Board Nepal, with the support from Ministry of Industry, has produced "Nepal Investment Guide". Building on to this initiative, the Investment Board has again taken lead to come up with this publication. This document highlights sector-specific opportunities for investment, policy environment, incentive structures, and licensing processes. This sector profile

has been produced at a very opportune time as Nepal embarks on the path of economic transformation.

I am confident that this document contains sector-specific information you would want to know in your search for potential investment destinations. Similarly, I believe that this document will give you a basic understanding of the issues and concerns you, as a potential investor, may have.

I would like to thank the Department for International Development (DFID) and Japan International Cooperation Agency (JICA) for providing financial support for this publication. Similarly, I would like to thank the staff at the Office of the Investment Board, Mr. Rob Taylor, Chief of Party, NHDP (peer reviewer), and others who have, directly or indirectly, contributed to the production of the document.

**MAHA PRASAD ADHIKARI**  
CEO, Investment Board Nepal

# ACRONYMS

<b>BIPPA</b>	Bilateral Investment Protection and Promotion Agreement
<b>DMG</b>	Department of Mines and Geology
<b>DTAA</b>	Double Taxation Avoidance Agreement
<b>FDI</b>	Foreign Direct Investment
<b>FY</b>	Fiscal Year
<b>GDP</b>	Gross Domestic Product
<b>GoN</b>	Government of Nepal
<b>IBN</b>	Investment Board of Nepal
<b>LDC</b>	Least Developed Country
<b>MCT</b>	Main Central Trust
<b>PEPP</b>	Petroleum Exploration Promotion Project
<b>VAT</b>	Value Added Tax

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# COUNTRY PROFILE

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# COUNTRY OVERVIEW

## Country profile

**Table 1. Country Profile**

Country name	Nepal (Federal Democratic Republic of Nepal)
Region	South Asia
Capital	Kathmandu, located in central Nepal
Population	28.5 million <sup>1</sup>
Area	147,181 square km
Altitude	59–8,848 m (Mt Everest)
Standard time	GMT + 5:45 hours
Governing system	Republic: multi-party parliamentary democracy with elected prime minister accountable to the parliament as executive head; constitution promulgated in 2015
Language	Nepali, written in Devanagari script; English is widely used in business
Religion	Secular state; Hinduism 81.3%, Buddhism 9.0%, Islam 4.4%, Kirat 3.1%, Christianity 1.4% <sup>1</sup>
Geography (south to north)	Terai region: Altitude 59–700 m <sup>1</sup> Hilly region: Altitude 700–3,000 m Mountain region: Altitude 3,000–8,848 m
Currency	Nepali rupee (NPR), 1 USD = 108 NPR (as of 1 January 2017), 1 INR = 1.6 NPR (fixed rate)
ISD code	+ 977
Climate	Terai region: tropical/sub-tropical, hilly region: moderate, mountain region: sub-alpine/alpine

## Economic indicators

**Table 2. Economic indicators of Nepal**

PARTICULARS	2011	2012	2013	2014	2015
Population (million)	27.2	27.5	27.8	28.2	28.5
GDP (USD billion)	18.9	19.2	19.4	19.8	21.2
GDP growth rate (%)	3.4	4.8	4.1	5.9	2.7
GNI per capita (USD)	610	690	730	740	730
GNI PPP per capita (USD)	2,050	2,170	2,270	2,440	2,500
Agriculture value added (% GDP)	38.3	36.5	35.0	33.8	33.0
Industry value added (% GDP)	15.4	15.5	15.7	15.4	15.4
Service value added (% GDP)	46.3	48.0	49.2	50.7	51.6
Workers' remittances (USD billion)	4.2	4.8	5.6	5.9	6.7
Inflation consumer prices (%)	9.3	9.5	9.0	8.4	7.9

Source: World Development Indicators, 2016

<sup>1</sup> Estimated population in 2015

# ECONOMIC OVERVIEW

Nepal is strategically located between India and China, two of the largest economies in the world. In 2015, the country adopted a new constitution that embraces multiparty democracy, federalism and private sector-led liberal economics. The government is committed to the promotion of foreign investment, providing a unique opportunity for foreign direct investment (FDI) in Nepal.

Although Nepal is classified as a least developed country (LDC) by the United Nations, its goal is to graduate from this status by 2022 and transition to a middle income country by 2030. To achieve these targets, an economic growth rate of 7–8% and investment in infrastructure of USD 13–18 billion by 2020 will be required. The Ease of Doing Business Index 2017 by the International Finance Corporation (IFC), World Bank Group places Nepal second only to Bhutan among all South Asian countries. Nepal's investment potential, combined with these features, have led to an increase in interest in FDI in recent years.

Nepal has also put in place fiscal incentives and other arrangements to facilitate global trade. As a member of the World Trade Organization (WTO), Nepal offers one of the lowest import duties in the region. Nepal has also signed Double Taxation Avoidance Agreements with 10 countries and concluded Bilateral Investment Protection and Promotion Agreements (BIPPAs) with 6 countries. Fol-

lowing the entry into force of the Nepal-India Trade and Transit Treaty, Nepal enjoys duty and quota-free access to India's massive and growing market. China's rapidly growing economy also provides duty free access to approximately 8,000 products.

As a result of its prolonged political transition and inadequate infrastructure, Nepal's economic growth rate has remained at 3.8%, on average, for the past 10 years, which is below the South Asian average. Remittances continue to play a critical role in GDP growth for consumption. In FY 2015/16, remittances comprised approximately 29.6% of GDP. Remittances help to increase aggregate demand in the local market, despite low economic growth.<sup>3</sup> Over the last decade, disposable income has increased by 14.4% per year on average, which has led to a comparable increase in consumption.

At present, with foreign currency reserves of USD 9.8 billion (as of July 2016), Nepal is in a good position to receive finance imports. However, the trade deficit, which reached 31.3% of GDP in FY 2015/16, continues to be of concern. It is expected that FDI will stimulate domestic production and gradually close this gap. Despite the catastrophic earthquake of 25 April 2015 and the transport blockade of the border that followed, Nepal has begun to rebuild and continues to be a highly attractive destination for FDI in various sectors.

<sup>2</sup> World Bank (2017) *Doing Business 2017: Equal Opportunity for All*. World Bank Publications

<sup>3</sup> Rastra Bank Nepal (2016) *Current Macro economic and Financial Situation of Nepal 2015/16*. Available at: <https://nrb.org.np.ofig/current-macroeconomic>



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# THE MINES & MINERALS SECTOR

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# OVERVIEW

Nepal lies in the center of the 2,500 km Himalayan belt, which has favorable geography for various mines and minerals. With almost 83% of its territory in mountainous regions, Nepal is a developing country with vast natural resources including water, minerals, forests, and a myriad of agricultural products and medicinal and aromatic plants. Nepal has an abundance of minerals required for industry and construction, including the most abundant, limestone, coal, talc, red clay, granite, marble, coal, gold, and precious and semi-precious stones (tourmaline, aquamarine, ruby and sapphire). Similarly, Nepal is also endowed with other construction minerals including construction aggregates, sand, gravel, dimension stone, decorative stones, paving stones and roofing slates.

To date, 63 minerals have been identified in Nepal.<sup>4</sup> In 2015/16, 85 mines and quarries for 15 different minerals were in operation. Of these, 31 are limestone quarries and 7 are gem mines.<sup>5</sup> Currently, over 250 private investors have shown interest and acquired 400 prospecting licenses to explore 24 mineral commodities and 222 mining licenses to exploit 15 mineral commodities (except river gravel and sand mines). There are over 31 limestone quarries from which limestone is supplied to some cement industries.

The GoN has explored the feasibility of mining (metal and non-metal) minerals in Nepal. It has also solicited the interest of national and international companies and investors to invest in mining opportunities. The GoN opened up the mining sec-

tor to foreign direct investment in 1999, upon the promulgation that year of the Mines and Minerals Act. As a result, private investment, both domestic and foreign, has been authorized for the exploration and exploitation of iron ore, copper, manganese, lead, chrome ore, zinc, sulphur, molybdenum, gold, tungsten ore, diamond and other precious stones, nickel, and metals in the platinum group. The GoN's policies related to FDI in the mining sector has been liberalized in recent years and as a result, several foreign companies have begun to invest in Nepal. The majority of investors come from India and China, the USA, Canada, Australia, the UK and South Africa. Most interest has been shown in base metals, diamonds, mineral sands and gold.

## Recent Updates

- A large deposit of uranium has been discovered in Upper Mustang region of Nepal. Preliminary research suggests that the deposit is spread over an area 10 km long and 3 km wide could be of highest grade. These findings have also been confirmed by the International Atomic Energy Agency.
- In recent times, the western part of Nepal has experienced the seepage of gas and oil, confirming the presence of oil and natural gas in Nepal. Approximately 10 petroleum and natural gas exploration sites have been identified in Mustang and Kathmandu regions (Tokha, Teku, Imadol).

<sup>4</sup> Department of Mines and Geology, 2015

<sup>5</sup> International Atomic Energy Agency, 2015

<sup>6</sup> Department of Mines and Geology, 2015

- The GoN has granted Dangote Cement from Nigeria, Hongshi and Huaxin from China and Reliance Cement from India approvals to invest in Nepal. Combined, their FDI amounts to US\$1.45 bn and their proposed output stands at 22,000t/day.<sup>7</sup>

## Institutional Arrangement

### Policy Level

- Ministry of Industry
- Ministry of Commerce and Supplies
- Ministry of Forest and Soil Conservation
- Ministry of Science, Technology and Environment

### Regulatory and Implementation Level

- Department of Mines and Minerals
- Department of Forest

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<sup>7</sup> Investment Board of Nepal, 2015

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# INVESTMENT OPPORTUNITIES

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# OVERVIEW

## Mines and Minerals Sector Divisions

Department of Mines and Geology is engaged in the exploration, excavation and evaluation of mineral resources in Nepal. Department of Mines and Geology has divided the industry into six sub-sectors as follows:

**Figure 1. Mines and Minerals sector division**

Metallic Minerals	Non-Metallic Minerals	Fuels Minerals	Gemstones	Decorative and Dimension stones	Construction Minerals
<ul style="list-style-type: none"> <li>• Iron</li> <li>• Copper</li> <li>• Zinc and Lead</li> <li>• Cobalt</li> <li>• Nickel</li> <li>• Gold</li> <li>• Silver</li> <li>• Tin</li> </ul>	<ul style="list-style-type: none"> <li>• Limestone</li> <li>• Phosphorite</li> <li>• Magnesite</li> </ul>	<ul style="list-style-type: none"> <li>• Coal</li> <li>• Petroleum</li> <li>• Natural Gas</li> <li>• Methane Gas</li> <li>• Hot Springs</li> </ul>	<ul style="list-style-type: none"> <li>• Tourmaline</li> <li>• Beryl/ Aquamarine</li> <li>• Garnets</li> <li>• Kyanites</li> <li>• Rock crystals</li> </ul>	<ul style="list-style-type: none"> <li>• Marbles</li> <li>• Granites</li> <li>• Quartzite's</li> <li>• Slate</li> </ul>	<ul style="list-style-type: none"> <li>• Rocks</li> <li>• Basalt</li> <li>• Colored sandstone</li> <li>• Phyllite, Slates, Flaggy quartzite and schist</li> </ul>

Source: Department of Mines and Geology, 2015

**Metallic minerals**, including iron, copper, zinc, lead, gold, platinum, silver and tin, are generally extracted from ore minerals. A numbers of metallic ore minerals are known to be found in various regions of Nepal.

**Non-metallic minerals** such as magnesite, phosphorite, talc, limestone, dolomite, quartz, mica, clay, silica sand, gemstones, decorative and dimension stones, construction materials etc. are found throughout the country.

**Fuel minerals** are naturally occurring carbon or hydrocarbon fuels such as petroleum, peat and natural gas formed by decomposition of organisms.

**Gemstones** are pieces of minerals (or other rock or organic material) that can be converted to jewellery or other accessories. Certain gemstones such as tourmaline, Beryl/Aquamarine, Garnets, Kyanites and Rock crystals are available in Nepal.

**Decorative and dimensions stones** are a variety of indigenous, metamorphic, and sedimentary rocks including Marbles, Granites and Quartzite that are available in Nepal.

**Construction minerals** refers to Rocks, basalt, colored sandstone, phyllite, slates, flaggy quartzite and schist are used for roofing, paving and flooring.

NB: The extraction period for all of the above mentioned minerals and mines is given as: Area between 0.25 sq.km and 25 sq.km for a period of 5, 10, 20 or 30 years according to the size of mining operations categorized as very small, small, large and very large respectively.

# METALLIC MINERALS

Metallic minerals are the source of metals including iron, aluminum, copper, zinc, manganese, lead, chrome, platinum and others. Demand for new metals derived from ore deposits is increasing, largely due to reconstruction works. Some of metallic ore found in Nepal are discussed below:

## Iron

Nepal is known to have 100.5 million tons of iron ore

**Table 1. Iron ores**

S.N.	Headings	Information
1.	Main Iron Ore Deposits	Phulchoki (Lalitpur), Thoshe (Ramechhap), Labdi Khola (Tanahun), Jirbang (Chitwan), Phalam Khani (Parbat)
2.	Prospects availability	Baitadi, Bajhang, Jajarkot, Rolpa, Surkhet, Myagdi, Baglung, Parbat, Chitwan, Ramechhap, Taplejung
3.	Licensing Details	13 prospecting licenses and 3 mining licenses for iron to the private/ public companies in FY 2015/16.

## Copper

The demand for copper has increased greatly in recent years. Common copper ores found in Nepal include chalcopyrite, malachite, azurite, covellite, cuprite, bornite, and chalcocite. Copper ore occurrences/ prospects/ deposits are known from more than 107 localities in the country.

**Table 2. Copper ores**

S.N.	Headings	Information
1.	Main Copper Ore Deposits	Darchula, Bajhang, Bajura, Parbat, Baglung, Myagdi, Gulmi, Tanahun, Gorkha, Makwanpur, Kavre, Ramechhap, Okhaldhunga, Dhankuta, Solukhumbu, Ilam, Taplejung, Gyazi (Gorkha), Okharbot (Myagdi), Wapsa (Solukhumbu)
2.	Prospects availability	Kalitar (Makwanpur), Dhusa (Dhadhing), Wapsa (Solukhumbu), Bamangaon (Dadeldhura), Khandeshori/ Marma (Darchula), Kurule (Udayapur), Bhut Khola (Tanahun), Pandav Khani (Baglung), Baise Khani (Myagdi), Chhirling Khola (Bhojpur), Janter Khani (Okhaldhunga)
3.	Quantity and quality	Mines in Gyazi (Gorkha), Okharbot (Myagdi) and Wapsa (Solukhumbu), are able to produce 20 to 50 mt finished copper every year <sup>13</sup>
4.	Licensing Details	14 prospecting licenses for copper exploration have been issued by DMG until 2015/16 <sup>14</sup>

<sup>8</sup>Department of Mines and Geology, 2015



## Zinc and Lead

Zinc and Lead deposits are found in more than 54 localities throughout Nepal. Ganesh Himal Zinc - Lead deposit (Lari and Suple) has proved to be an economic resource, and extraction works are currently under way.

**Table 3. Zinc and Lead ores**

S.N.	Headings	Information
1.	Main Zinc and Lead ore Deposits	Ganesh Himal area (Rasuwa), Phakuwa (Sankhuwasabha), Labang-Khairang (Makwanpur), Pangum (Solukhumbu), Salimar valley (Mugu/Humla), Daha Gulzar (Darchula), Phuichoki (Lalitpur), Sisha Khani and Kandebas (Baglung), Dhuwakot (Parbat), Barghare (Makwanpur) and Khola Khani (Taplejung).
2.	Quantity and quality	2.3 million tons of zinc and lead combined of commercial quality deposits are recorded (Chakrabarti 2003).
3.	Licensing Details	4 exploration licenses for lead and zinc have been issued by DMG <sup>9</sup>

## Uranium

Recently a large deposit of uranium has been found in the Upper Mustang region of Nepal. The demand for Uranium is growing for abundant source of concentrated energy. Since extracting uranium and assessing its quality is extremely costly and technically challenging, Nepal will require external support and technical know-how for uranium extraction and proper use.

**Table 4. Uranium**

S.N.	Headings	Information
1.	Main uranium Deposits	Thumki, Jagat, Panchmane, Gagalphedi and Chunikhel in Shivapuri area in Kathmandu, Tinbhangale, Chandi Khola and Chiruwa Khola (Makwanpur); Buka Khola (Sindhuli); Mardar Khola and Panpa Khola (Chitwan); Jamari Gad, Bangabagar, Baggoth, Gorang (Baitadi); and traces in different section of Chamliya River (Darchula) and Mustang
2.	Quantity and quality	Uranium deposits about 10 km in length and 3 km in width in Lomanthang of very high quality. <sup>10</sup>
3.	Licensing Details	No any Licenses issued yet by DMG

<sup>9</sup>Department of Industry, 2016

<sup>10</sup>Department of Mines and Geology, 2015

## Other Metallic Minerals

**Table 5. Metallic Ores**

S.N.	Headings	Information
1.	Cobalt	Cobalt ores are located in Netadarling & Tamghas (Gulmi), Samarbhamar (Arghakhanchi), Lamadanda (Dhadhing), Nangre (Kavre), Bhorle (Ramechhap) and Bauli Gad (Bajhang).
2.	Nickel	Nickel deposits are found in Bamangaon (Dadeldhura), Bering Khola (Ilam), Bauligad (Bajhang), Khopre Khani (Sindhuli) and old workings from Nangre, Nigre and Bhorle (Ramechhap) area.
3.	Gold	Gold can be found in river gravel/ sediments deposited by the rivers including Mahakali, Chameliya, Jamari Gad, Seti, Karnali, Bheri, Rapti, Lungri Khola & Phagum Khola (Rolpa), Kaligandaki, Myagdi Khola, Modi, Madi, Marsyangdi, Trishuli, Budhigandaki, and Sunkoshi. DMG has issued 45 prospecting licenses for gold till date . <sup>11</sup>
4.	Silver	Silver availability is recorded in Ganesh Himal (Rasuwa), Baraghare (Makwanpur), and Bering Khola (Ilam). It is mainly used to make ornaments, jewelry, coins, handicrafts, utensils, dental appliances, and in many other purposes.
5.	Tin	Tin is found in Meddi and Ganera (Dadeldhura) and Mandu Khola area (Makwanpur). It is used in making brass and bronze alloys, coating, lining, plating the food containers, in chemicals etc.

In addition to the above described metallic mines, several other metallic ores including Tungsten, Bismuth, Arsenic, Cadmium, Chromium, Mercury, and Titanium are also found in various parts of Nepal. Further investigations will be required in order to know their exact status and economic potential.

<sup>11</sup> Department of Industry, 2016

# NON-METALLIC MINERALS

A number of non-metallic minerals like magnesite, phosphorite, talc, limestone, dolomite, quartz, mica, clay, silica sand, gemstones, decorative and dimension stones, construction materials etc. are known to exist in their natural forms in Nepal. Some of the explored non-metallic ores are discussed below:

## Limestone

Due to Nepal's vast quantities of limestone, a number of cement companies employ Nepali as inputs. Other cement plants are under construction and yet others are in the pipeline. The demand for cement, driven by infrastructure development works and reconstruction is ever increasing in Nepal.

**Table 6. Limestone ores**

S.N.	Headings	Information
1.	Main Limestone Ore Deposits:	Udaypur, Dhankuta, Sindhuli, Makwanpur, Lalitpur, Dhading, Syangja, Arghakhanchi, Surkhet, Dang, Salyan, Baitadi and Palpa.
2.	Quantity and quality	1.25 billion metric tons of best cement grade limestone deposits. 540 million tons of limestone deposits has been proven, while that of 110 million tons has been semi-proven, and there are possibilities of having an additional 420 million tons <sup>12</sup>
3.	Licensing Details:	According to DMG record (FY 2015/16) 44 mining licenses and 172 prospecting licenses of limestone have been issued to the private sector. <sup>13</sup>

<sup>12</sup> Department of Mines and Geology, 2015

<sup>13</sup> Department of Industry, 2016

## Other Non-Metallic Ores

**Table 7. Non-Metallic Ores**

S.N.	Headings	Information
1.	Dolomite	From geological mapping over 5 billion tons (possible) of dolomite occur mainly in Dhankuta, Khotang, Udayapur, Sindhuli, Dolakha, Kavre, Kathmandu, Makwanpur, Dhadhing, Syangja, Palpa, Baglung, Gulmi, Arghakhanchi, Dang, Pyuthan, Salyan, Rolpa, Rukum, Jajarkot, Surkhet, Dailekh, Jumla, Achham, Doti, Bajhang, Bajura, Baitadi and Darchula districts . It is yet to be explored in detail thus their grade and quality are still unknown. DMG has issued 10 prospecting licenses for dolomite <sup>14</sup>
2.	Phosphorite	Its availability mainly recorded in Dhik Gad, Junkuna, Morgaon, Sanagaon and Dhaubisaune areas in Baitadi while also in Tarugad, Juilgad, Goichan - Kandeaur area in Bajhang and further east to Bajura.
3.	Magnesite	180 million tons (66 million tons of high grade, MgO content 88 to 96% loss free basis) of magnesite deposit in Kharidhunga (one of the biggest and best quality magnesite in south Asia), Dolakha; 20 million tons of mediums to low-grade magnesite deposit in Kampughat in Udayapur district; and few small size magnesite occurrences from Palpa, Baitadi and Dolakha have been identified. <sup>15</sup> DMG has issued 1 mining licenses for magnesite. <sup>16</sup>

Occurrences of other non-metallic ores such as Talc, Mica, Ceramic clay/ Red clay, Silica sand, Salt: Brine water, Barites, Calcite and Diatomite have also been reported from different parts of Nepal.

<sup>14</sup> Department of Industry, 2012

<sup>15</sup> Department of Mines and Geology, 2015

<sup>16</sup> Department of Industry, 2016

# FUEL MINERALS

A number of fuel minerals are believed to exist in different parts of Nepal, only the important ones are briefly described.

## Petroleum and Natural Gas

The GoN has identified exploration for petroleum products as a priority. Western Nepal has witnessed gas and oil seepage, confirming the presence of oil and natural gas in Nepal. DMG/ Petroleum Exploration Promotion Project (PEPP) has identified 10 prospective blocks in the southern parts of the country.<sup>17</sup>

**Table 8. Petroleum and Gas ores**

S.N.	Headings	Information
1.	Main Petroleum and Gas Deposits	In a stretch of 14km in Padukasthan, Sirsathan and Navisthan area in Dailekh and Muktinath (Mustang).
2.	Quantity and quality	Not available
3.	Extraction Period	35 years
4.	Licensing Details	Global tender
5.	Exploration Period	4 years

## Methane Gas

For many years the Kathmandu valley has been known to have methane gas deposits. DMG has invited potential investors to develop gas wells. Feasibility studies have confirmed that the gas can be used for industrial and household purpose and the reserve is sufficient to supply gas to 21,000 families for about 30 years.

**Table 9. Methane gas ores**

S.N.	Headings	Information
1.	Main Methane Gas Deposits	26 km <sup>2</sup> area in Kathmandu valley by exploration drilling of over 14 drill holes up to 570 m depth
2.	Quantity and quality	316 million cubic meter methane gas deposit. Its average calorific value is 7200 kcal/m <sup>3</sup>
3.	Licensing Details	Not available
4.	Licensing Details	Global tender
5.	Exploration Period	4 years

<sup>17</sup> Department of Mines and Geology, 2015

Other fuels minerals including coal, hot springs and radioactive minerals have also reported in many parts of Nepal. The major findings of coal have been reported in Dang, Salyan, Rolpa and Palpa districts. Hot springs are confined to the Main Central Thrust (MCT) zone in Mahakali, Karnali, Tila, Kaligandaki, Myagdi Khola, Marsyangdi, Trishuli, Bhotekoshi Rivers, Kodari and Surai Khola.

## Hot Springs

Although studies are extremely limited, there are number of natural hot water springs scattered throughout Nepal's mountain region. According to the mineralogists' estimates, 50 hot water springs in the land belt stretching between the Himalayan and mountain regions. A list of natural hot springs is located in various parts of Nepal specifically, Sankhuwasabha, Rasuwa, Myagdi, Mustang, Manang, Tanahu, Bajhang, Jumla, and Darchula. Hot springs of Nepal often have very high mineral content. These are often popular tourist destinations and locations for rehabilitation clinics.

# GEM STONES

Semiprecious stones including tourmaline, aquamarine/ beryl, garnet, kyanite, amethyst, citrine, smoky quartz (quartz crystals); and precious stones like ruby, sapphire etc. are believed to exist in various regions of Nepal. There are a half dozen large gem stone firms in Nepal dealing with gem dealing with local stones, some of which are described below.

## Tourmaline

Tourmaline is a semi-precious mineral stone that is well known for its ability to detoxify the human body. It is one of only a handful of minerals that have the ability to emit negative ions and far-infrared rays. Five distinct types of tourmaline are available in Hyakule and Phakuwa (Sankhuwasabha). Small-scale mines of aquamarine, beryl, tourmalines are in operation in those places. Two tourmaline mines are in operation in Daha area in Jajarkot and six mines are under development. 15 prospecting licenses and 13 mining licenses for tourmaline have been issued by DMG .<sup>18</sup>

## Beryl/ Aquamarine

Aquamarine is the most popular light-blue gemstone, and is extensively used in jewelry. Hambergite, danburite, and ijolite are important gemstone varieties found in Nepal. In Taplejung beryl and aquamarine mines are in operation. Beryl is also found in Jajarkot; Kathmandu; and Sindhupalchok

## Garnet

Garnet, which falls into the group of rock-forming minerals, shares a common crystal structure. Gar-

nets are recorded from strongly tectonized lenses and pods of chlorite-biotitic-garnet schist within high-grade metamorphic rock sequence mainly in the Higher Himalayan region. Deep red or red colored almandine, hessonite and pyrite garnet are mined mainly in Sankhuwasabha and Taplejung districts. More than six small-scale garnet mines were in operation since last few decades. 3 prospecting licenses have been issued by DMG and all the mines are still in their initial phases of operation.

## Kyanite

Kyanite is a typically blue silicate mineral, commonly found in aluminum- rich metamorphic pegmatites and sedimentary rock. It is mainly available in Dolakha, Sankhuwasabha, Taplejung, Rasuwa, Dhading Jajarkot and Achham districts. Four small-scale Kyanites mines are in operation in Daha and Suneri in Jajarkot and Barah of Achham districts and 4 mines are under development stage. DMG has issued 15 prospecting licenses and 4 mining licenses for Kyanites .<sup>19</sup>

## Quartz Crystal (Rock Crystal)

Quartz is one of the most common stones available in Nepal. It is the component of variety of rocks and comes in an extensive range of colors and varieties. Two small-scale quartz crystals mines are in operation from pegmatites in Khejemi/ Sirku (Taplejung) and Raluka (Nuwakot). Quartz crystals are also known from different parts of Jajarkot, Dailekh, Dhading, Rasuwa, Nuwakot, Sankhuwasabha, Ilam and Taplejung districts. Two mining licenses and 15 prospecting licenses have been issued by DMG.

<sup>18</sup> Department of Industry, 2012

<sup>19</sup> Department of Mines and Geology, 2015

# DECORATIVE AND DIMENSION STONES

A number of decorative and dimension stones including marble, granite, quartzite's and slate are known to exist in various parts of the country. Some of the important ones which have already been explored described below.

**Table 10. Decorative and Dimension Stones**

S.N.	Headings	Information
1	Marble	Its availability has been recorded in Lalitpur, Dhadhing, and Makwanpur. To date, three mining licenses and three prospecting licenses have been issued by DMG for marble. Godavari Marbles, one of the major marble industries whose annual production capacity is approximately 80,000m <sup>2</sup> produces polished marble slabs and aggregate as bi-products . <sup>19</sup>
2	Granite	Various types of granite exist in Makwanpur (Palung and Ipa), Sindhuli, Udaypur, Dadeldhura in the Lesser Himalaya. DMG has done some evaluation work of Palung granite. Only 2 prospecting licenses for granite have been issued by DMG . <sup>20</sup>
3	Quartzite	Quartzite is found in Taplejung, Ilam, Dhankuta, Ramechhap, Sindhupalchok, Makwanpur, Dhadhing, Tanahun, Kaski, some other districts. It is mainly used for dimension stones, flagstones for paving purposes, and in construction. 34 prospecting licenses and 7 mining license have issued by DMG to date . <sup>21</sup>
4	Slate	Slate is extensively mined in different parts of Dhankuta, Sindhupalchok, Ramechhap, Nuwakot, Sindhupalchok, Dhadhing, Tanahun, Baglung, Syangja, Palpa, Parbat, Jajarkot, Achham, Doti, Dadeldhura, Baitadi, Bajhang, Bajura and many other districts. It is mainly used as roofing and pavement material.
5.	Exploration Period	4 years

<sup>20</sup> Department of Industry, 2012

<sup>21</sup> Department of Mines and Geology, 2015



# CONSTRUCTION MINERALS

Stones in the form of river boulders, gravel, roofing slate, paving stones, and building block stone, marble and sand are the largest visible resources which can be found throughout the country. Construction minerals occur in two forms.

## River boulders and Gravel

These are important resources in Nepal and are found in the rivers of Siwalik and Terai Belts. Preliminary evaluation of these resources has been completed. In many rivers, boulders are minable and can be exported.

## Natural bedrock deposits

Natural bedrock deposits in the form of limestone, dolomite, granite, augen gneiss, slate, quartzite, etc. occur quite extensively in various rock groups of Lesser Himalaya. There are several quarries operating in the Kathmandu valley and Pokhara in which these deposits are the primary source of building materials for houses and other constructions.

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# LAWS AND REGULATIONS

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# LAWS AND REGULATIONS

The following legislation governs mineral exploration and mining:

1. Mines and Minerals Act, 1985
2. Mines and Minerals Rules, 1999
3. Nepal Petroleum Act, 1983
4. Petroleum Exploration Regulation, 1984
5. Environment Protection Act, 1997
6. Forest Act, 1993

No mining activities can lawfully occur in the absence of a grant of a mining license and environmental clearance from the relevant GoN agency. The government issues two types of licenses related to mining activities, and they are described below.

## Prospecting License

A prospecting license is required for all exploration activities in Nepal. A prospecting license allows the license holder to conduct exploration in an area not less than 0.25 km<sup>2</sup> and not more than 250 km<sup>2</sup> for an initial exploration period of 2 to 4 years and can be extended for up to 2 years. Exploration activities should be completed within 2 years for ordinary nonmetallic minerals and 4 years for metallic and valuable nonmetallic minerals. This type of license is categorized by the value of mineral that is being explored. Based on their market values, minerals are classified into 3 categories.

**Table 11. Category of Minerals**

Very Precious Minerals
Gold, Uranium, Lyatinum, Thorium, Diamond, Ruby, Sapphire, Emerland, Corundum
Precious and Valuable Minerals
Zinc, Silver, Lead, Cobalt, Tin, Tungsten, Niobium, Tantalum, Chromium, Titanium, Topaz ,Tourmaline ,Beryl, Magnetite, Talc, Limestone, Phosphate, Crystal Quartz, Dolomite, Graphite, Gypsum, Copper, Molybdenum, Vyanadium, Aquamarine, Garnet, Feldspar, Shaligram (Ammonite), Nickel, Beryllium, Bismut, Kainite, Natural (Biogenic) Gas, Calcite, Other fossils
General Minerals
Aluminum, Iron, Salt, Industrial Soil, Ordinary Soil, Fire Clay, Kaolin, Coal, Peat, Granite, Snide, Amphibolites, Abharkh, General Construction Stone, Sand, gravel and slate, Decorative stone, Orche, Silica Sand, Marble, Quartzite, Other minerals which are not classified as Very precious and Precious and Valuable minerals

## Mining License

A mining license, issued by the DMG, is required to conduct any excavation activities in the county. This license allows the license holder to conduct mineral exploitation works in an area not less than 0.25 km<sup>2</sup> and not more than 25 km<sup>2</sup> for an initial period of 10 to 30 years depending on the level of mineral work and can be extended by up to 10 years. A mining license can also be issued to any eligible person for those mineral deposits identified by the exploration activity of DMG. In that case, the present value of the direct expenses incurred by the department in the exploration of the project can be valued and converted into the share or they can be recovered from the qualified applicant as the Government desires to do so. This type of license comprises of four categories, related to the scale of the operation. The fees and deposit amount for the

acquisition of a license depends upon the category on which the license falls

In the case of cement grade limestone, the initial period for a very small scale and small scale is fifteen years and twenty years, respectively, and can be extended by the DMG.

**Table 12. Category of Licenses issued**

S.N	Category	Years of Operation
1.	Very Small Scale	10 Years
2.	Small Scale	15 Years
3.	Medium Scale	20 Years
4.	Large Scale	30 Years

Source: Department of Mines and Geology

# ANNEX 1: INVESTMENT INCENTIVES

Incentive Category	Incentives and Subsidy Provision
Income Tax	<ul style="list-style-type: none"> <li>• Applicable tax rate of 20%</li> <li>• In case of special industry if provides direct employment to at least 100 Nepalese national during a whole year, the effective tax rate shall be 70% of applicable tax rate.</li> <li>• There shall be exemption of dividend tax in case of special industry, industry based in agriculture and tourism sector capitalizes its profit (issues bonus shares) for the purpose of expansion of capacity of industry</li> <li>• Special industry with capital of NRs. 1billion and providing direct employment to more than 500 persons can enjoy 100% exemption for first five years from the date of operation of business and 50% concession for next 3 years</li> <li>• Special industries established in least developed, underdeveloped and un-developed regions applicable tax rate shall be 10%, 20% and 30% of normal tax rate for first 10 years respectively.</li> <li>• Industries related to survey and extraction of petroleum and natural gases commencing commercial operation from Chaitra 2075 (April 2018) shall be provided with tax holiday for 1st 7 years and 50% exemption for the next 3 years.</li> <li>• Losses can be carried forward up to 12 years instead of 7 years for petroleum extracting industries.</li> <li>• 15% exemption for special industries listed in stock exchange.</li> <li>• Export income tax rate: 20%</li> </ul>

# ANNEX 2: RELEVANT AGENCIES AND ORGANIZATIONS

## OFFICE OF THE PRIME MINISTER AND COUNCIL OF MINISTERS

Singh Durbar, Kathmandu, Nepal  
Tel: +977-1-4211000, 4211025  
P.O. Box: 23312  
Email: [info@nepal.gov.np](mailto:info@nepal.gov.np)  
Website [www.opmcm.gov.np](http://www.opmcm.gov.np)

## MINISTRY OF INDUSTRY

Singh Durbar, Kathmandu, Nepal  
Tel: +977-1-4211889, 4211991  
Fax: +977-1-4211877  
Email: [info@mole.gov.np](mailto:info@mole.gov.np)  
Website: [www.mole.gov.np](http://www.mole.gov.np)

## MINISTRY OF LAND REFORM AND MANAGEMENT

Singh Durbar, Kathmandu, Nepal  
Tel: +977-1-4211666  
Fax: +977-1-4211708  
Email: [info@molrm.gov.np](mailto:info@molrm.gov.np)  
Website: [www.molrm.gov.np](http://www.molrm.gov.np)

## MINISTRY OF POPULATION AND ENVIRONMENT

Singh Durbar, Kathmandu, Nepal  
Tel: +977-1-4211661, 4211641  
Fax: +977-1-4211954  
Email: [info@moste.gov.np](mailto:info@moste.gov.np)  
Website: [www.moste.gov.np](http://www.moste.gov.np)

## MINISTRY OF SCIENCE, TECHNOLOGY AND ENVIRONMENT

Singh durbar, Kathmandu, Nepal  
Tel: +977-1-4211661, 4211641  
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Email: [info@moste.gov.np](mailto:info@moste.gov.np)  
Website: [www.moste.gov.np](http://www.moste.gov.np)

## MINISTRY OF PHYSICAL INFRASTRUCTURE & TRANSPORT

Singh durbar, Kathmandu, Nepal  
Tel: +977-1-4211782, 4211931  
Fax: +977-1-4211720  
Email: [info@moppw.gov.np](mailto:info@moppw.gov.np)  
Website: [www.mopit.gov.np](http://www.mopit.gov.np)

## INVESTMENT BOARD NEPAL

Office of the Investment Board,  
ICC Complex, New Baneshwor, Kathmandu, Nepal  
Tel: +977-1-4475277, 4475278  
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Email: [info@ibn.gov.np](mailto:info@ibn.gov.np)  
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## NATIONAL PLANNING COMMISSION

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## NEPAL RASTRA BANK

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Website: <https://nrb.org.np>

## DEPARTMENT OF INDUSTRY

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Website: [www.doind.gov.np](http://www.doind.gov.np)

## DEPARTMENT OF IMMIGRATION

Kalikaasthan, Dillibazar, Kathmandu.  
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## INLAND REVENUE DEPARTMENT

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**DEPARTMENT OF LABOUR**

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**FEDERATION OF NEPALESE CHAMBERS OF COMMERCE AND INDUSTRY (FNCCI)**

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**CONFEDERATION OF NEPALESE INDUSTRIES (CNI)**

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**INVESTMENT BOARD NEPAL**

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