

## INTRODUCTION

The Philippines is situated along a well-defined belt of volcanoes called the Circum-Pacific Rim of Fire where the processes of volcanism and plate convergence resulted in the formation of abundant and important metallic mineral deposits.

It is considered one of the countries that are richly endowed with metallic resources and it has the potential to be among the top ten largest mining powers in the world. In terms of occurrence per unit area, it ranks third in gold, fourth in copper, fifth in nickel and sixth in chromite.

The presence of major foreign mining companies such as Anglo American, BHP Billiton, Sumitomo Mining and Xstrata attests to the attractiveness of mining in the Philippines.

- Exports of common metallic minerals extracted in the Philippines (2010):

Category	Mineral	FOB (in million USD)	% of Total Value
Precious Metals	Gold	16.62	5.35
	Silver	2.55	0.82
Base Metals	Copper	7.41	2.39
Iron & Ferro-Alloy Metals	Nickel	276.42	89.06
	Chromite	7.39	2.38

*Source: BETP*

## MARKET OPPORTUNITY

- surging mineral demand from rapidly industrializing economies like China and India
- continuous importation of mineral ores of Australia, Japan and other trading partners in Asia

## PHILIPPINE ADVANTAGE

### Rich mineral resources

- only 2.85% the 30 million hectare land area is covered by mining permits
- an estimated 9 million hectares is regarded as geologically prospective for metallic minerals and this is expected to increase further with continuing explorations and geological mappings
- ore reserves:

Ore	Reserves Million MT (2005)
Gold	3,056
Copper	2,968
Nickel	953
Chromite	18
Iron	410
Aluminum	292

- discovery of new sites with potentially world-class deposits differentiated from previous discoveries that were of low grade and shallow-seated:
  - Tampakan (copper) which represents one of the largest undeveloped copper-gold deposits in the South East Asia-Western Pacific region
  - Far Southeast (copper-gold) and Boyongan (copper)

### **A long history and experience in mining**

- mining in the Philippines predates the Spanish era which started in the 16<sup>th</sup> century.

### **New technology**

- new technologies adapted for further processing and for increasing the value of mineral products:
  - **High Pressure Acid Leaching (HPAL)** – involves the dissolution of the ores in strong acid under high pressure and temperature to liberate the nickel and other metals and produce an intermediate nickel product with higher concentration. It is used with great success by Sumitomo and Asia Nickel on their Philippine Coral Bay operation.
  - **Heap Leaching** – for nickel laterites as a low-cost and environmentally friendly alternative to HPAL, which involves irrigation of leach pads with 5% acid solution to produce a mixed hydroxide nickel product

### **Presence of support infrastructure**

- sea ports: 1,607 public ports and 423 private ports
- airports: 10 international airports, 34 domestic airports, 41 community airports, 4 unclassified domestic airports
- power plants: 75 run by the National Power Corp. and by independent power producers (IPPs)

### **Identified locations**

- copper and gold mineralization are mostly found in the Central Cordilleras and in many areas in Mindanao
- major nickel mineralization are in Palawan and Surigao
- specific areas with deposits identified by the Mines and Geosciences Bureau are found in each of the country's major island groups: Luzon, Visayas and Mindanao

#### **Luzon**

1. Luzon Central Cordillera – Au, Cu, Fe, Mn
2. Northern Sierra Madre - Cr, Ni, Cu
3. Zambales – Cr, Ni, Co, Pt, Cu, Au
4. Vizcaya-Aurora – Cu, Au
5. Bicol – Au, Fe, Cu
6. Southern Tagalog – Cu, Au, Ni, Co

#### **Visayas**

7. Central Visayas – Cu, Au, Mn
8. Samar-Eastern Mindanao – Au, Cu, Fe, Cr, Ni, Pt, Mn
9. Palawan – Cr, Ni, Co, Pt, Au

#### **Mindanao**

10. North Central Mindanao – Cr, Cu, Au
11. Zamboanga Peninsula – Au, Cu, Cr, Fe
12. Southern Mindanao – Cu, Au

### **Geographical advantage**

- many mines are located near the sea or ocean and have the advantage of proximity to ports as transshipment points
- proximity to China, Japan, Korea and other Asian markets

### **Skilled human resources**

- abundant labor force that is highly educated, English proficient and has strong and good work ethics
- availability of mining engineers and geologists with extensive experience in mineral exploration and mining operations

- a number of graduates in mining, geological and metallurgical engineering every year and a continuing scholarship and training program to address increasing demand for skilled workers
- available laborers with extensive experience in mining related jobs
- presence of professional organizations accredited by the Professional Regulations Commission:
  - the Philippine Society of Mining Engineers (PSME),
  - Geological Society of the Philippines (GSP),
  - Society of Metallurgical Engineers of the Philippines (SMEP)

### INDUSTRY POTENTIALS

	2006	2007	2008	2009	2010
Gross Production Value (US\$ Million)	\$ 1,510	\$ 2,129	\$ 1,852	\$ 2,227	\$ 2,463*
Exports (US\$ Million)	\$ 2,103	\$ 2,605	\$ 2,482	\$ 1,469	\$ 1,310
% of Total Phil Exports	(4.5 %)	(5.2 %)	(5.2%)	(3.9%)	(3.5%)
Employment	141,000	149,000	158,000	166,000	197,000
Taxes, Fees and Royalties (US\$ Million)	\$ 133	\$ 218	\$ 150	\$ 97	\$ 29**
<i>Note: *production data from non-metallic mining not yet included</i> <i>**excise tax collected by BIR not yet included</i> <i>Source: Mines and Geosciences Bureau</i>					

#### Industry outlook for 2011

- demand for gold, copper, iron ore, chromite and coal remain strong
- commodity prices, especially gold, remain high
- investors from Korea, Japan, Australia, and China continue to come and look for joint venture projects
- interest of several new markets (i.e. Russia) in exploring mining opportunities in the Philippines
- banks are liquid and project proponents are upbeat in accessing from them their financial requirements
- several projects are being pushed into operation although some are being re-scheduled
- several projects in the pipeline are expected to be onstream within the next 3-5 years: Tampakan, Silangan (formerly Boyongan), Kingking, Far South East

### GOVERNMENT SUPPORT

- passage of the Philippine Mining Act of 1995
- revitalization of the Philippine minerals industry through streamlining of mining tenements application process, cleansing of non-active or dormant mining applications, contracts and permits and strengthening of compliance requirements, among others
- support and promotion of the Philippine government of sixty mineral development, mineral processing and exploration projects
- implementation of the Philippine Mineral Reporting Code (PMRC) patterned after Australia's JORC to reduce risk and gain investor trust and confidence
- government support on transparency and continuous effort to enlist the country in the Extractive Industry Transparency Initiative (EITI) to ensure good governance and prevent corruption

### INCENTIVES

- **Financial or Technical Assistance Agreement (FTAA):** contractors are entitled to the recovery of capital investments for a period of five years
  - national taxes are waived but local government taxes are payable

- after the recovery period, the benefits are shared 50% - 50% based on the net mining revenue, inclusive of taxes
- application for ecozone status under the Special Economic Zone Act of 1994 for entitlement to exemptions from certain national and local taxes provided investor will engage in downstream processing

#### Under the Mining Act

- income tax carry forward of losses
- income tax accelerated depreciation of fixed assets
- exemption from payment of real property taxes on pollution control devices
- investment guarantees, repatriation of capital, freedom of expropriation, remittance of earnings and interest on foreign loans, freedom from requisition of properties and the confidentiality of information with regards to endeavors and transactions

#### Under the Omnibus Investment Code

- income tax holiday for 4-8 years
- exemption from wharfage dues and export tax, duty, impost and fees
- tax credit on raw materials and supplies
- additional deduction for labor expense (ADLE)
- additional deduction for major infrastructure works
- non-fiscal incentives

#### Under PEZA (for mineral processing)

- income tax holiday for 4 to 8 years
- special 5% tax rate on gross income after the lapse of ITH
- tax and duty exemption on imported capital equipment
- exemption from 12% input VAT on allowable local purchase of goods and services
- unrestricted use of consigned equipment
- employment of foreign nationals

### MINERAL AGREEMENTS AND FISCAL REGIME

Type of Mining Rights/Permits	Maximum Area (has.)	Term	Qualified Person/Company
Exploration Permit (EP)	32,400 onshore 81,000 offshore	2 years; renewable to a maximum of 6 years	individuals or Filipinos or foreign corporations
Mineral Production Sharing Agreement (MPSA)	16,200 onshore 40,500 offshore	25 years; renewable for a like period	individuals or Filipino corporations
Financial or Technical Assistance Agreement (FTAA)	81,000 onshore 324,000 offshore	25 years; renewable for a like period	Filipino or foreign corporations
Mineral Processing Permit (MPP)	NA	5 years; renewable for a maximum of 25 years	Filipino or foreign corporations

100% foreign participation is allowed under EP and FTAA as well as in Mineral Processing. For MPSA it requires at least 60% Filipino ownership.

#### Fiscal regime under FTAA

- allows recovery of Pre-Operating Expenses
  - set at a maximum of five (5) years
  - may be extended for projects incurring very large investments with high production rate and extensive mine life

- 50% - 50% sharing of the Net Mining Revenue (after recovery of pre-operating expenses)
- The government share of 50% comprise the following:
  - Basic Government Share:
    - national taxes, i.e., Excise Tax, Corporate Income Tax, Customs Duties and Fees, etc.
    - local taxes, i.e., Business Tax, Real Property Tax, etc.,
    - payment to Filipinos, i.e., Special Allowance, Royalty to indigenous people, land owners or claim owners
  - Additional Government Share – amount collected to achieve the 50% of the Net Mining Revenue

**Other laws affecting mining**

- People's Small Scale Mining Act
- Indigenous Peoples Rights Act
- Local Government Code
- National Integrated Protected Areas System Act
- Environment Laws

**PRIORITY MINERAL DEVELOPMENT, MINERAL PROCESSING AND EXPLORATION PROJECTS**

Mining Company	Mine Project (Location)	Annual Capacity	Mine Life
<b>Operating/Completed Expansion</b>			
Lepanto Mining and Consolidated Corp.	Teresa Gold Project (Lepanto, Mankayan, Benguet)	800,000 MT	9 years
Philex Mining Corp.	Sto. Tomas II Copper Expansion Project (Padcal, Tuba, Benguet)	9,125,000 MT	7 years
Benguet Corporation	Sta. Cruz Nickel Project (Sitio Binagbag, Brgy. Guisguis, Sta. Cruz, Zambales)		2.2 years
Crau Mineral Resources Corp.	Sta. Cruz-Candelaria Mining Project (Zambales)		
Rapu-Rapu Polymetallic Project	Rapu-Rapu Polymetallic Project (Brgys. Malobago, Pagcolbon, Binawasan, island municipality of Rapu-Rapu in Albay province)	36,000 MT of Cu concentrates (containing 25% Cu, 7% Zn, 30 g per tonne gold and 350 g per tonne silver); 26,000 MT Zn concentrates (containing 50% Zn and 5% Cu)	6 years
Filminera Resources Corp./PGPRC	Masbate Gold Project (Brgy. Puro, Aroroy, Masbate)	200,000 oz. Au/year	New 9.5 years
Berong Nickel Corp.	Berong Nickel Project (Brgy. Berong, Quezon, Palawan)	1,470,000 MT/yr of beneficiated Ni Ore	11 years
Coral Bay Mining Corp.	Palawan Nickel Project - Line 1 & 2 (Rio Tuba, Bataraza, Palawan)	10,000 MT of Ni & 7,050 MT of Co	20 years
Atlas Consolidated Mining and Development Corp./CCC	Carmen, Toledo Copper Project (Brgy. Biga, Toledo, Cebu City)	Ore resource: 874 million MT at 0.41% Cu plus gold, silver, magnetite and pyrite. 42,000 tonnes per day throughput in 2009	New 12.5 years
Cagdianao Mining Corp. (Nickel Asia Corp.)	Nickel Project (Dinagat Province, Surigao del Norte)		
Minahang Bayan ng Dinagat Is., Inc.	Oriental Mountain Top Nickel Project		

Taganito Mining Corp. (^5% Fil, 35% Japanese (Nickel Asia Corp.))	Nickel Project (Taganito, Claver, Surigao del Norte)	Coverage area: 4,863.7 hectares	
Hinatuan Mining Corp. (Nickel Asia Corp.)	Tagana-an Nickel Project (Hinatuan Island, Surigao del Norte)		
Oriental Synergy	Urbiztondo South Nickel Project		
TVI Resource Development Philippines, Inc.	Canatuan Silver-Gold & Base Metal Project (Sitio Canatuan, Brgy, Tabayo, Siocon, Zamboanga Del Norte)	2,100,000 DMT (ore and waste)	25 years (now in 13 <sup>th</sup> year)
Apex Mining Corp.	Maco Gold Project (Brgys. Teresa & Maco, Compostela Valley)	2,400 tons per day	
CNC/CTP	Carrascal Nickel Project		New
Philsaga Mining Corp.	Banahaw Gold Project		
CTP Construction and Mining Corp. & Platinum Group Metals Corp.	SIRC Nickel Project		
SR Metals Inc.	Tubay Nickel Project (Sitio Bugnam, Brgy. La Fraternidad, Tubay)	1,500,000 tonnes of Benefitiated Ni silicate ore	
Century Peak	Casiguran Nickel Project		
<b>Construction and Development</b>			
OceanaGold Philippines, Inc.	Didipio Copper-Gold Project (Brgy. Didipio, Kasibu, Nueva Vizcaya)	150,000 oz of Au and 15,000 MT of Cu	14 years
Platinum Group Metals Corp.	Manticao Ferronickel Smelter Project (Brgys. Poblacion & Patag, Manticao, Misamis Oriental)	36 tons per day of Ferronickel ingots Calcination and smelting, containing 20% Nickel	
	Iligan FerroNickel Smelter Project (Assumption Heights, Buru-un, Iligan City, Mindanao)	130 MT/day of Ferronickel	
	Isabela Nickel Project (Brgys. Ayod, Dimalwadi & Bukal Note, Dinapigue, Isabela)	900,000 DMT	30 years
Oriental Synergy	Surigao Nickel Project		
Eagle Cement Corp.	Akle Cement Project (Brgy. Akle, San Ildefonso, Bulacan)	3,300 tons/day	
Greenstone Resources Corp.	Siana Gold Project (Cawilan, Tubod, Surigao del Nort) & (Siana, Mainit, Surigao del Norte)	1.1 million oz. of indicated and inferred gold resource	
Taganito Mining/Sumitomo Metals	Surigao HPAL Project		
<b>Feasibility/Financing Stage</b>			
Benguet Corporation	Sta. Cruz Nickel Project		
Crau/Rusina/Euro	Nickel Heap Leach Project		
Intex Resources, Phils., Inc.	Mindoro Nickel Project	Measured and indicative resources as of 2009: 161.7 million MT with 0.92% Ni. at a 0.7% cut-off-grade (cog)	
Benguet Corporation	Kingking Copper-Gold Project (Sitio Gumayan, Brgy. Kingking, Pantukan, Compostella Valley)		

Sagittarius Mines, Inc./Xstrata FTAA March 1995	Tampakan Copper Project (Davao del Sur, Sultan Kudarat & South Cotabato)	2.4 billion MT deposit at a grade of 0.6% copper and 0.2 grams per ton gold	
Philnico Processing Corp.	Nonoc Nickel Project (Nonoc Island, Surigao del Norte)		
Itoyon Suyoc Resources, Inc.	Itoyon Gold Project (Sangilo, Itoyon, Benguet)	3,000 MT/day	10 years
Lepanto Consolidated Mining Co.	Far Southeast Gold Project (Lepanto, Mankayan, Benguet)		
Metals Exploration/FCF Minerals	Run-Runo Gold Project (Runruno, Quezon, Nueva Vizcaya)		
Silangan Mindanao Mining Co./Philex Mining	Silangan (formerly Boyongan) Copper Project (Surigao del Norte & Agusan del Norte)	100,000 MT	10 years
Eramen	Sta. Cruz Nickel Project		
Benguet Corporation	Balatoc Tailings Project		
<b>Advanced Exploration</b>			
Colet Mining & Development Corp.	Colet Copper-Gold Project (Brgy. Nabulao & Manlucahoc, Sipalay City & Brgy. Gatuslao, Candoni, Negros Occidental)	15 MT	15 years
MRL Gold Phils., Inc./Mindoro Resources Limited	Agata Copper/Gold/Nickel Project (Tubay, Jabonga, Santiago, Agusan del Norte)		
Hallmark Mining/BHP Billiton	Pujada Nickel Project (Brgy. Kabuayan, Mati City, Davao Oriental)		
TVI Resource Development Philippines, Inc.	Balabag Gold and Silver Project (Balabag, Bayog, Zamboanga del Sur) & (Siay, Zamboanga Sibugay)	Exploration on-going to determine reserves	
<i>Source: Mines and Geosciences Bureau and BOI database</i>			

### Mining companies with substantial foreign equities

1. Benguet Corporation – 40% American
2. Eldore Mining Corporation – 40% Australian
3. Gold Fields Philippines Corporation – 40% Australian
4. Philippine Gold Processing & Refining Corporation – 99.99% British
5. TVI Resource Development Philippines, Inc.- 40% Hongkong
6. Carrascal Nickel Corporation – 40% Chinese
7. Coral Bay Nickel Corporation – 100% Japanese
8. Platinum Group Metals Corporation – 85.72% Malaysian
9. Rio Tuba Nickel Mining Corp. – 40% Japanese
10. Oriental Synergy Mining Corp. – 31.3% Chinese

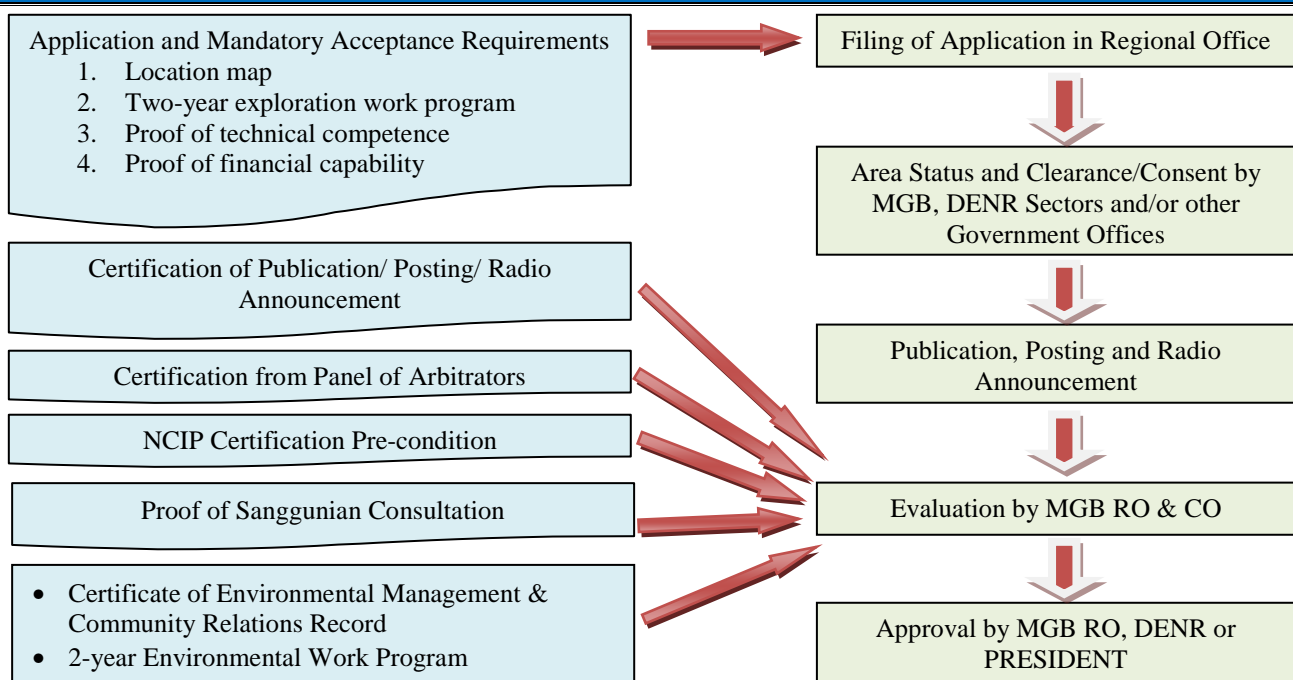
## COST OF DOING BUSINESS

**Administrative fees and charges**

*Based on DAO 2005-08*

- Filing/Renewal Fee of Mining Permits (*Based on DAO 2005-08*)
  - a. Application for EP and MA – P 60.00/ha
  - b. Application for FTAA - P 60.00/ha
- Clearance Fee – P 5,000.00/application
- Registration Fee
  - a. For EP – P 5,000.00/permit
  - b. For MA – 20,000.00/contract
  - c. For FTAA – 50,000.00/contract
- Occupation Fee (for EP, MA, FTAA)
  - For mineral reservation areas – P 100.00/ha
- Evaluation of Feasibility Study Report/ Environmental Protection and Enhancement Program (EPEP) – P 20,000.00/study report/EPEP
- Application for Certificate of Environmental Management and Community Relations Record – P 5,000.00/application
- Filing for Application of Mineral Processing Permit
  - a. Projects with investments above P 500 million – P 50,000.00/application
  - b. Projects with investments of P 250 million to P 500 million – P20,000.00/application
  - c. Projects with investments below P 250 million – P 10,000.00/application
- Application of Environmental Clearance Certificate – EMB Processing Fee - P 6,000.00

**APPROVAL OF MINING PERMITS AND CONTRACTS**



*Notes:*

**Certification from Panel of Arbitrators** – issued upon resolution of any adverse claim, protest or opposition; or to certify that there are no adverse claim, protest or opposition

**NCIP Certification Precondition** – issued to certify the grant of a free & prior informed consent by major stakeholders particularly the IPs

**Certificate of Environmental Management & Community Relations Record** – proof of satisfactory environmental management and community relations in the company's past or present mineral resource use or mining-related ventures

**Environmental Work Program** – identifies mining-related activities that would affect the environment (i.e. construction of roads)

**CONTACT DETAILS**

**Board of Investments**

*Evariste Cagatan*

Director, International Marketing Department

Industry & Investments Building

385 Sen. Gil Puyat Avenue, Makati City 1200

Tel. No.: (632) 890-1332 or (632) 895-3641

Website: <http://www.boi.gov.ph>

**Mines and Geosciences Bureau**

*Leo L. Jasareno*

Acting Director

MGB Compound, North Avenue

Diliman, Quezon City

Telephone: (632) 928-8642 or (632) 920-9120

Website: <http://www.minesandgeosciencesbureau.com.ph>

**Chamber of Mines of the Philippines**

*Phillip Romualdez*

President

Room 204 Ortigas Building

Ortigas Avenue, Pasig City 1600

Tel. No.: (632) 635-4123 or (632) 635-4159

Fax: (632) 635-4160

E-mail: [comp@vaisa.com](mailto:comp@vaisa.com)

Website: <http://chamberofmines.com.ph>