



cutting through complexity

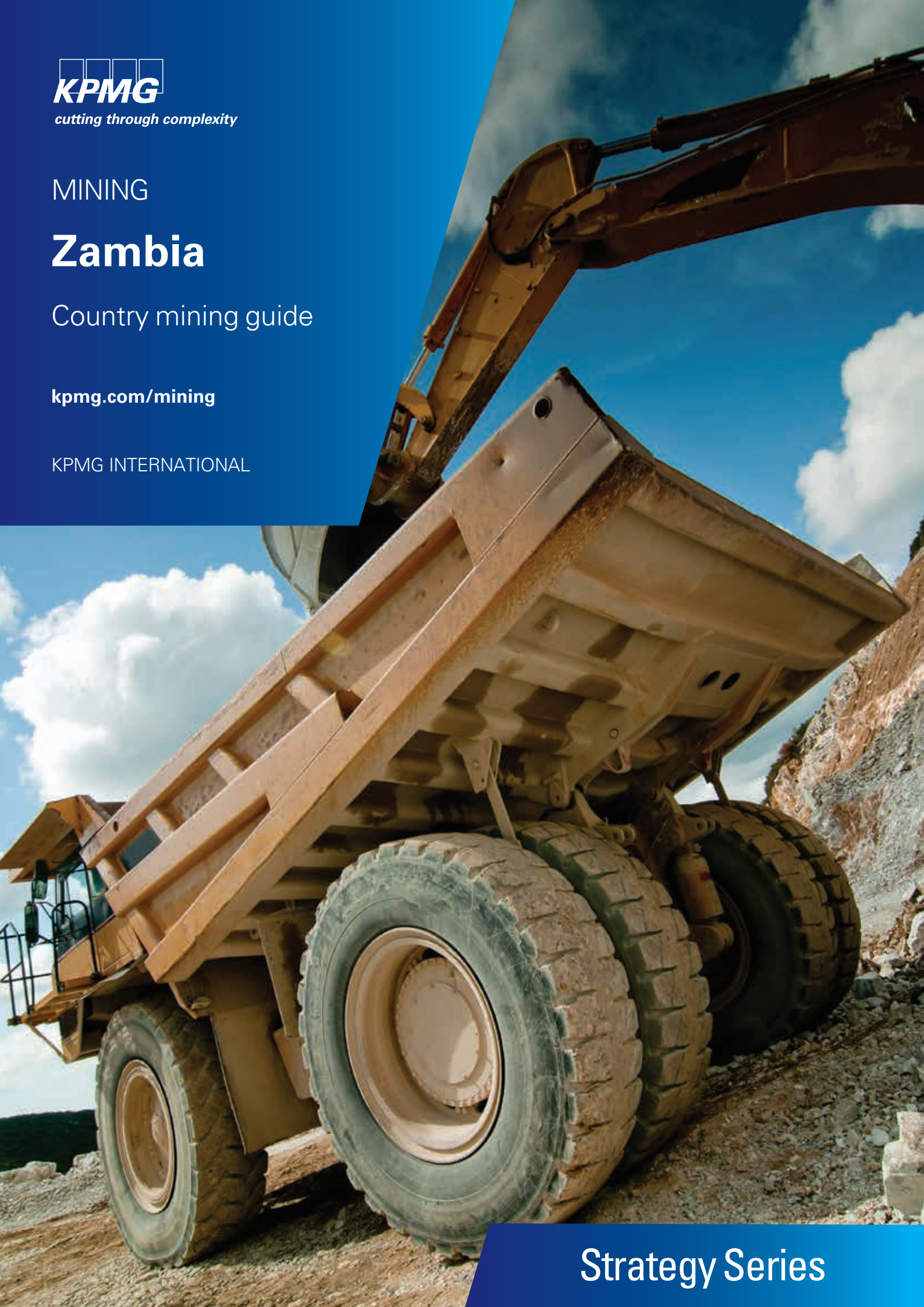
MINING

Zambia

Country mining guide

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Strategy Series





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Executive summary

For 2 decades, Zambia's mining sector has experienced significant foreign interest and investment driven mainly by the privatization of state-owned Zambia Consolidated Copper Mines ("ZCCM"), a low taxation environment and low political interference. Zambia is in possession of some of the world's highest-grade copper deposits. Zambia was the world's sixth largest copper producer in 2011 with 715,000 tonnes equating to 4.4 percent of global output. With several expected expansion plans forthcoming, Zambia is viewed as a key growth area for copper production which is likely to rank the country under the top 5 highest copper producers globally going forward. In addition, Zambia's coal industry is viewed as a key growth sector. Despite currently being one of the smallest coal producers in Southern Africa, Zambian coal output is forecast to experience rapid growth from 281,000 tonnes in 2012 to production in excess of 2 million tonnes by 2017. While this level of coal output growth is not expected to significantly affect global coal production, it could alleviate a large part of Zambia's current electricity deficit as the majority of coal production could be utilized for power plants expected to be constructed in the near future. Being a landlocked country, infrastructure and access to ports remain a key concern, but this also creates substantial opportunities for investment in electricity supplies and transport routes. Over the past 5 years, Zambia has experienced in excess of US\$8.0 billion of investment and, considering forecast growth in copper and coal production, Zambia is set to gain a competitive regional advantage over other African mining destinations.



Largest copper producer in 2011



808,000 tonnes
2013 forecast copper production



2 million tonnes
forecast 2017 coal production



US\$8.0 billion
Investment in mining sector in past 5 years



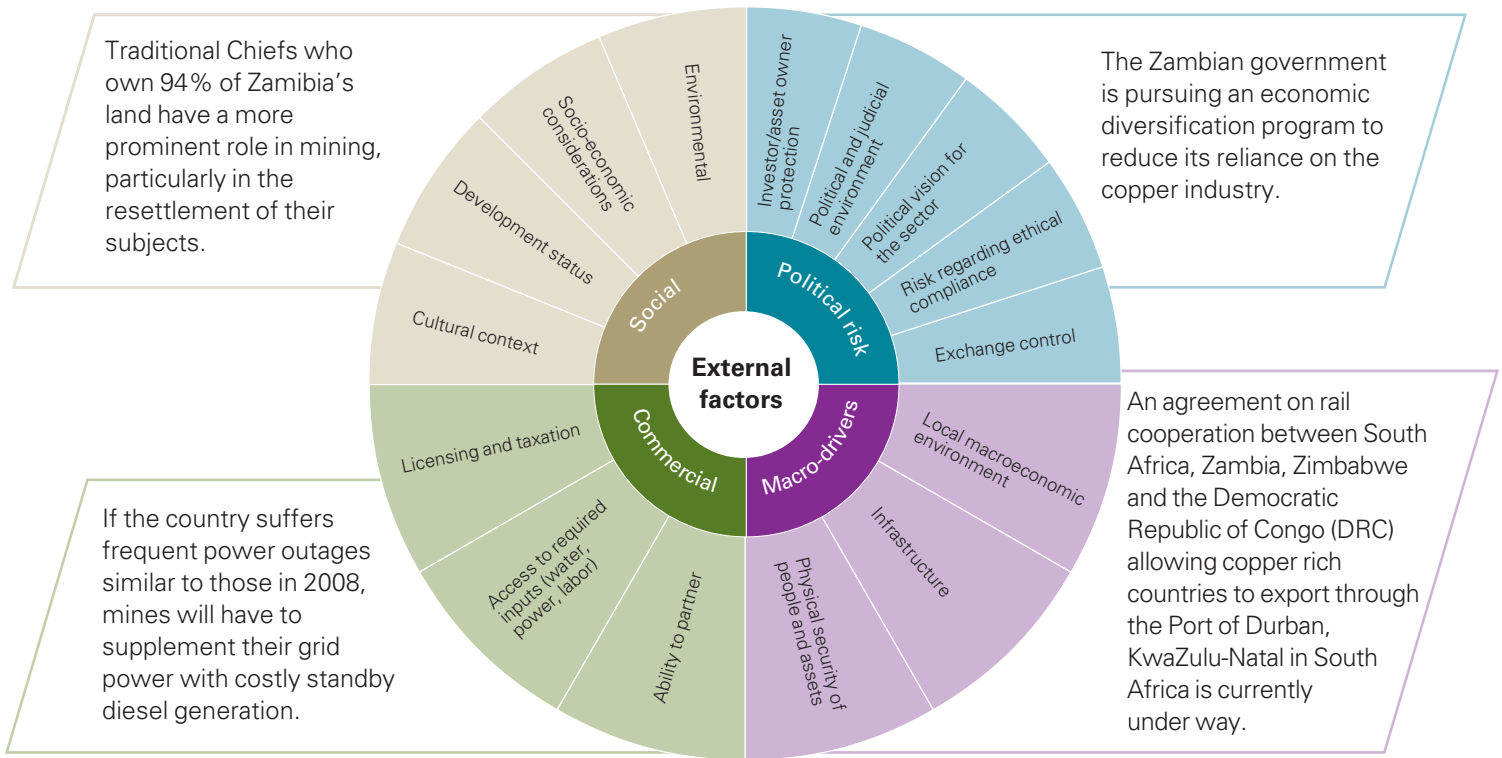
1 million tonnes
Zambia expected to become one of top 5 global copper producers in near future

Sources: BMI Zambia Mining Report Q2 2013; The World Copper Factbook 2012

New geographic expansion risk framework


Risk framework to assess new geographic expansion

KPMG in Zambia's risk framework



Source: KPMG International 2012

Country snapshot

Zambia ¹	
Geography 	<p>The Republic of Zambia, commonly known as Zambia, is a landlocked country in Southern Africa (15°00 S, 30°00 E). It shares borders with eight countries, namely Zimbabwe to the south, Tanzania to the north-east, Namibia to the south-west, Botswana to the south, Angola to the west, Malawi to the east and the DRC to the north-west. The capital city is Lusaka, located in the south-central part of the country. The land size spreads across 752,618 square kilometers and approximately 47,000 square kilometers of this is made up of lakes Bangweulu, Kariba, Mweru and Tanganyika. It is estimated that Zambia holds 40 percent of Southern Africa's fresh water resources. Most of Zambia's land is high plateau. However, there is an estimated 33,500 square kilometers of arable land.</p>
Climate	<p>Zambia's climate is tropical. The country has three seasons — a cool-dry season (April–August), a hot-dry season (August–November) and a warm-wet season, which is the hottest (November–April). Frost occurs in some areas in the cool-dry season. The valleys of the Zambezi and Luangwa are extremely hot, particularly during October, and high humidity is experienced during the wet season. During the warm-wet season, there are frequent heavy rains and thunderstorms, followed by periods of bright sunshine. During the cold-dry season, night frosts may occur in places sheltered from the wind.²</p>
Population	<p>The population of Zambia is approximately 14 million (July 2012), with a median age of 16.5 years and a life expectancy of 52.57 years.³</p>
Currency	<p>The official currency of Zambia is the Kwacha (ZMW).</p> <p>Average exchange rate for 2012 = US\$1 = 5.2042⁴ ZMW</p> <p>In January 2013, the Bank of Zambia (central bank) rebased the Kwacha (ZMK), striking three zeros from the currency (1000 ZMK = 1 ZMW). As of 13 June 2013, ZMK will no longer be legal tender.</p>
Main industries	<p>Copper mining and processing, construction, foodstuffs, beverages, chemicals, textiles, fertilizer, horticulture</p>

¹ CIA: The World Factbook, accessed on 25 May 2012

² Zambia Country Profile, FAO, accessed on 25 May 2012

³ Zambia Profile, World Bank, accessed on 25 May 2012

⁴ Oanda.com, accessed on 6 March 2013

World Bank ranking: Ease of doing business⁵

Zambia ranked 94th among the 185 countries covered under the World Bank Ease of Doing Business 2013 index. It slipped four places from its 2012 position.

Zambia scored better on some parameters, such as getting credit (12th) and paying taxes (47th), while its ranking on parameters such as dealing with construction permits (151st), getting electricity (151st) and trading across borders (156th) was relatively poor.

Table 1: Zambia ranking on various parameters in the World Bank Ease of Doing Business 2013 index

Parameter	Ease of Doing Business 2012 rank
Starting a business	74
Dealing with construction permits	151
Getting electricity	151
Registering property	96
Getting credit	12
Protecting investors	82
Paying taxes	47
Trading across borders	156
Enforcing contracts	89
Resolving insolvency	99

Source: Ease of Doing Business in Zambia, Doing Business, accessed on 29 May 2012 (<http://www.doingbusiness.org/data/exploreeconomies/zambia/>)

Type of government^{6,7}

Zambia is a unitary republic. The President is elected for a term of 5 years, and is the Head of State and the Head of Government. The legislative branch consists of a national assembly comprising of 150 elected members, eight appointed members and the speaker. Both the President and the assembly's elected members are chosen by popular vote using the first-past-the-post system.

Zambia is divided into 10 provinces, each administered by an appointed Deputy Minister, who essentially performs the duties of a governor. The Supreme Court is the highest court and the court of appeal. Below it are high courts, lands tribunals, industrial relations courts, subordinate courts, small claims courts and local courts.

⁵ Ease of Doing Business in Zambia, Doing Business, accessed on 10 December 2012

⁶ CIA: The World Factbook, accessed on 25 May 2012

⁷ Background Note: Zambia, US Department of State, accessed on 22 February 2012

Economy and fiscal policy

Despite being Africa's leading copper producer, investment promotion agreements signed during the early 2000s means that the industry only contributes 3 percent of tax revenues versus up to 70 percent of foreign exchange income. The direct contribution of mining to the economy is low and its impact on the wider economy has not been measured. The Zambian government is pursuing an economic diversification program, to reduce its reliance on the copper industry. The program includes initiatives that promote the use of other components of Zambia's rich resource base, such as gemstone mining, agriculture, hydropower and tourism.⁸

Recently, Zambia's economy has experienced strong growth. From 2005–11, the country's real gross domestic product (GDP) growth was 6 percent per year. In 2011, its GDP stood at US\$18.4 billion in terms of market exchange rates, and US\$21.93 billion in terms of purchasing power parity.⁹

The GDP growth for 2012 is 6.9 percent and 7.3 percent in 2013, while inflation is projected to reach 8.5 percent.¹⁰

Privatization of copper mines in the late 1990s and the implementation of fiscal discipline in 2004 transformed Zambia's economic performance, leading it to sustained economic growth. Mining investment and the copper price boom further supported this growth.

Zambia's dependency on copper makes it vulnerable to depressed commodity prices. However, record-high copper prices, in addition to a bumper maize crop in 2010, helped Zambia rebound quickly from the 2008 world economic slowdown.¹¹

In 2005, Zambia qualified for debt relief under the Highly Indebted Poor Country Initiative of the International Monetary Fund (IMF) and World Bank's International Development Association (IDA) and received approximately US\$6 billion in debt relief.¹²

Fraser Institute rankings

*Economic Freedom of the World 2011 Report*¹³

Among the 141 countries covered in the Fraser Institute's *Economic Freedom of the World 2011 Report*, Zambia ranked 38th, scoring 7.26 on a scale of 10.[#]

The annual report ranks 141 countries around the world, based on their policies that encourage 42 different economic measures in the following areas:

- size of government — expenditures, taxes and enterprises
- legal structure and security of property rights
- access to sound money
- freedom to trade internationally
- regulation of credit, labor and business.

Note: # The rating of 10 is taken as the highest and one as the lowest in the *Economic Freedom of the World 2011 Report*.

⁸ Background Note: Zambia, US Department of State, accessed on 22 February 2012

⁹ CIA: The World Factbook, accessed on 25 May 2012

¹⁰ Zambia Overview: African Economic Outlook, accessed on 29 May 2012

¹¹ CIA: The World Factbook, accessed on 25 May 2012

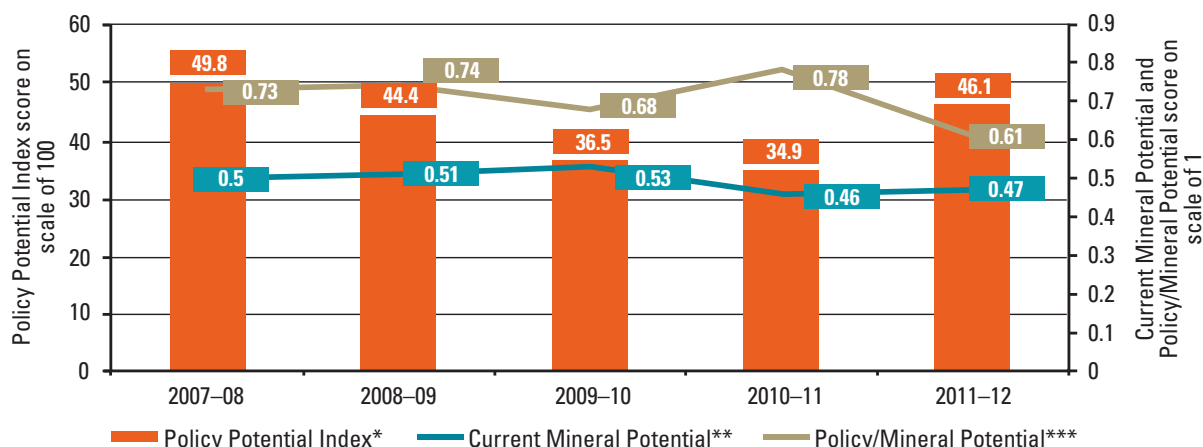
¹² Background Note: Zambia, US Department of State, accessed on 22 February 2012

¹³ Economic Freedom of the World 2011 Annual Report, Free The World, August 2011

Survey of mining companies 2011/2012¹⁴

Zambia ranked 62nd on Policy/Mineral Potential among the 93 jurisdictions covered by the Fraser Institute's Survey of Mining Companies 2011/2012. Figure 1 provides the country's scores on key indices of the survey.

Figure 1: Zambia's scores, Fraser Institute's Survey of Mining Companies, 2007–12



Source: Survey of Mining Companies, 2007–12 Fraser Institute

Note: * The Policy Potential Index is a composite index that measures the effects on exploration of government policies.

Note: ** The Current Mineral Potential Index is based on respondents' feedback to whether a jurisdiction's mineral potential under the current policy environment encourages or discourages exploration. It assumes current regulations and land use restrictions.

Note: *** The Policy/Mineral Potential Index is based on respondents' answers to the question about mineral potential of jurisdictions, assuming their policies are based on 'best practices.' It assumes no land use restrictions and considers the industry 'best practices.'

Regulatory environment^{15,16}

The Ministry of Mines and Minerals Development is responsible for enacting legislations for the mining sector in Zambia. The Mines and Minerals Act (1995) enacted by the Zambian government significantly simplified licensing procedures, placed minimum reasonable constraints on prospecting and mining activities and created a favorable investment environment. At the same time, the act allowed international arbitration to be written into development agreements, if deemed necessary.

However, the 1995 act was repealed in 2008 following widespread criticism of what was perceived to be excessive scope for the grant of tax concessions. This act was replaced by the Mines and Minerals Development Act 2008, which ruled that no special agreements should be entered into by the government for the development of large-scale mining licenses and annulled the development agreements concluded under the previous act.

The government policy does not participate in exploration or other mining activities, or in any shareholding activity other than in a regulatory and promotional role. The right to explore or produce minerals is authorized by a license granted under the Mines and Minerals Act.

¹⁴ Survey of Mining Companies, 2011/2012, Fraser Institute, February 2012

¹⁵ Mining Legislation, Mining in Zambia, accessed on 28 May 2012

¹⁶ Mining in Zambia, Mbendi, accessed on 28 May 2012

The following are the three types of licenses that are available for large-scale operators.

- Prospecting license — This license confers the right to prospect for any mineral over any size of area for a period of 2 years and are renewable.
- Retention license — This license confers the right to retain an area subject to the Minister's agreement, over which feasibility studies have been completed, but market conditions are unfavorable for development of a deposit at that time. Size of area may be that covered by a prospecting license or smaller, as redefined by the license holder.
- Large-scale mining license — This license confers exclusive rights to carry out mining operations and other activities reasonably incidental to that in the area, for a maximum of 25 years. The area to be held should not exceed the area required to carry out the proposed mining operations. Applications need to be accompanied by environmental protection plans and proposals for employment and training of Zambian citizens.

Similar rights are available to smaller operators, but on a reduced scale.

- Prospecting permits — These relate to areas of 10 square kilometers, are valid for 2 years and are non-renewable.
- Small-scale mining license — These relate to areas not exceeding 400 hectares, are valid for 10 years and are renewable.
- Artisans' mining rights — These give local people the right to mine on an artisanal basis in an area not exceeding 5 hectares, are valid for 2 years and are non-renewable.
- Gemstone license — Holders of this license may carry mining operations over an area not exceeding 400 hectares, for a period of not more than 10 years.

The government of the Republic of Zambia has also created a framework for responsible development through publication of the Environmental Protection and Pollution Control (Environmental Impact Assessment) Regulations, 1997. It also has a number of sector-specific laws and regulations related to the environment.

Sustainability and environment

Environmental regulation and challenges

The Zambia Environmental Management Agency (ZEMA), formerly known as the Environmental Council of Zambia (ECZ), is an independent environmental regulator charged with ensuring the sustainable use of the country's natural resources. ZEMA's mandate is outlined in the Environmental Management Act of 2011 that covers "all matters affecting the environment from pollution to waste disposal." The ZEMA was established in 2011 to address concerns around there being multiple regulators for environmental resources and low penalties that did not discourage breaches.

Key statutes that must be considered in relation to environmental sustainability in Zambia include:

- Mines and Minerals Development Act, 2008
- Zambia Wildlife Act, 1998
- Forests Act
- Water Resources Management Act, 2011
- Petroleum (Exploration and Production) Act 2008.

Renewable energy

Of the total installed generation capacity of 1,849MW, 99 percent comes from hydro power stations with the difference provided by diesel generators. Zambia expects its power generation capacity to rise to over 3,000MW by 2016 and plans to export the surplus electricity to its neighbours.¹⁷

Greenhouse gas

Zambia has not submitted Greenhouse Gas (GHG) data to the United Nations Framework on Climate Change (UNFCCC) for 18 years. In 1994, energy and agriculture contributed 86 percent of the GHG emissions at a rate of 38 percent and 48 percent, respectively. The country's total carbon footprint is now estimated to be 663,000 metric tons CO₂e.

Zambia is a party to the Copenhagen Accord but, as a Least Developed Country (LDC), bears no mitigation obligations under the convention, the Kyoto Protocol and the Bali Road Map. However, as an LDC, Zambia may benefit from the ability to sell carbon credits through the Clean Development Mechanism (CDM).

Key risks to climate change

According to the 2009 National Adaptation Programme of Action (NAPA) for Zambia, prepared by the United Nations Development Programme (UNDP) with support from the Ministry of Tourism and Natural Resources, climate related hazards include:

- Droughts
- Floods
- Extreme heat
- Shorter rainy season.

The vulnerabilities and livelihood impacts associated with these risks include:

- Agriculture and food security
- Natural resources, wildlife and forestry
- Human health
- Water and energy.

¹⁷ Reuters.com, accessed on 20 February 2013

The social license to operate

As the major mining activity moves away from the highly urbanized Copperbelt Province to the sparsely populated North-Western and other provinces, traditional Chiefs who 'own' 94 percent of Zambia's land have a more prominent role in mining, particularly in the resettlement of their subjects. The development rights of a large-scale mining license holder are guaranteed by Section 23 of the Mines and Minerals Act of 2008. However, recognized traditional rulers have a strong political lobby and companies intending to develop mines in Zambia would be well-advised to seek guidance on how best to approach them.

Social economic development challenges

According to the *Millennium Development Goals Progress Report* of 2011, prepared by the United Nations Development Programme (UNDP) with support from the Ministry of Finance and National Planning, Zambia is making progress towards the MDGs (Millennium Development Goals). However, its greatest challenges relate to:

MDG 1	Eradicate extreme poverty and hunger
MDG 3	Promote gender equality
MDG 5	Improve maternal health
MDG 7	Ensure environmental sustainability

The government has reported that, in order to achieve the MDGs, significant forms and investment are required in all of these. However, in the 2012 budget speech, the Minister of Finance announced a 45 percent increase in the resource allocation to the Ministry of Health, which suggests that the first three are a greater priority.

Availability of land

According to the 2010 Census of Population and Housing, Zambia is sparsely populated with a density of 17.39 people per square kilometer, similar to that of neighbours Mozambique, Angola and the DRC.

Taxation^{18,19}

In Zambia, mining activities are enforced with a different tax treatment compared to other economic activities. Mining exploration and exploitation operations are subject to their own tax regime, and these are separately tabulated at each annual budget speech. The budget is presented every second week of October by the Minister of Finance and National Planning.

Table 2 below contains the tax rates relevant to mining companies and provides a brief on how each category of tax or tax deduction is to be treated.

Table 2: Company tax (mining)	2012	2011	2010
Corporate tax			
Mining — Base metals/Gemstones/Precious metals	30%	30%	30%
Other mining	30%	30%	30%
Mineral royalty rates			
Base metals	6%	3%	3%
Precious metals	6%	5%	5%
Gemstones	6%	5%	5%
Capital deductions			
Mining equipment and related capital expenditure	100%	100%	100%
Pre-production capital expenditure	100%	100%	100%
Environmental restoration costs	100%	100%	100%
Commercial motor vehicles and other plant and machinery costs	25%	25%	25%
Non-commercial motor vehicles	20%	20%	20%
On mining operations	10%	10%	10%
Konkola Copper Mines Plc	20%	20%	20%
Prospecting and exploration	5%	5%	5%
Other special incentives			
Import duty on certain mining equipment	Rebate	Rebate	Rebate
VAT deferment scheme	No	Yes	Yes

¹⁸ Tax Regime & Incentives, Mining in Zambia, accessed on 28 May 2012

¹⁹ Zambia Country Report, Africa Legal Network, March 2012

Table 2: Company tax (mining) <i>continued</i>	2012	2011	2010
Other rates			
Withholding tax on dividend payouts	0%	0%	0%
Withholding tax on management fees to non-residents	15%	15%	15%
Export duty on copper and cobalt concentrates	10%	15%	15%
Export duty on all other unprocessed or semi-processed mineral ores	10%	0%	0%
Withholding tax on royalties, interest and consulting fees	15%	15%	15%
Thin capitalization threshold	3:1	3:1	3:1
Taxation of hedging income	35%	Mining rate	Mining rate

Corporate tax

Corporate tax for mining companies are generally at a rate of 30 percent. However, there is a distinction drawn between a first tier of mining that includes base metals, precious metals and gemstones, and a second tier described as 'other mining' such as quarrying. The Zambian government recently ruled out the reintroduction of 'windfall tax' on profits of mining companies. This gives Zambia a competitive edge over other large copper producers, such as Chile, Australia and Peru, where additional levies on mining output have either been proposed or already implemented.²⁰

Mineral royalty tax

Three categories of mining royalties cover base metals, precious metals and gemstones. The rate included in Table 2 above is applied to the market value of the minerals extracted, minus the cost of smelting, refining, insurance, handling and transport from the mining area to the point of export to delivery within Zambia. Royalty payments may be deferred if the cash operating margin of the holder of a large scale mining license falls below zero.

Capital deductions

Mining equipment and related capital expenditure, pre-production capital expenditure and environmental restoration costs are all 100 percent deductible from profit before tax (PBT) in arriving at the taxable profit of a mining company. Other deductions from PBT at various rates include:

- 25 percent on commercial motor vehicles and other plant and machinery
- 20 percent on non-commercial motor vehicles

Mining companies are also allowed to carry forward losses arising from prospecting and exploration in prior periods to knock off against future periods to a maximum of 5 years, and losses arising from operations in prior periods to a maximum of 10 years (with the exception of Konkola Copper Mines Plc — 20 years).

Relief from other surcharges

A mining right holder is exempt from customs, excise and value-added tax duties in respect of all machinery and equipment (including specialized motor vehicles) required for exploration or mining activities.

Remission

There are no restrictions relating to the amount of profits, dividends or royalties that may be externalized, although a withholding tax of 15 percent is levied.

²⁰ Source: BMI Zambia Mining Report Q2 2013

Power supply²¹

The Zambia Electricity Supply Corporation (ZESCO) is the country's only electricity producer. Between 1964 and 2005, Zambia had a power surplus with installed power generation capacity of 1,985 megawatts (MW) and a supply cost of US\$0.04–0.06 per kilowatt hour, among the lowest in the world. These two factors pushed energy efficiency down the list of priorities of the mines (that consume as much as 60 percent of Zambia's generated power) and other users.

The development of new mines and the rapid growth of the economy after the year 2000 saw a 36 percent demand increase for power between 2001 and 2005. From 2005 to date, the demand growth has been in line with ZESCO's 2006–16 projection of a further 100MW per annum. The power shortfall means that 26 percent of the country is now affected by load shedding at peak times and, to bridge the shortfall, Zambia relies on imports with 100MW of power coming from the South African grid. By the second week of February 2012, Zambia had already imported 100MW of power from Mozambique to offset the deficit.²²

The long-term solution is to increase capacity. ZESCO has partnered with both local and international firms to invest US\$4.7 billion. This is expected to more than double installed capacity to 4,203MW, within 6 years. Construction on the largest of these projects, the Kafue Gorge Lower Hydro Project, a joint venture between ZESCO and SINOHYDRO of China, expected to generate 750MW of capacity at a cost of US\$2 billion is already under way. It is scheduled for completion in 2018.

According to Hanson Sindowe, Chairman of Copperbelt Energy Corporation (a distributor of power to Zambia's mining industry), the country will require an additional US\$12 billion of electricity investment or 4,400 additional megawatts by 2030.²³ According to ZESCO's estimates, only 30 percent of Zambia's current hydro power potential has been exploited.

Hydropower currently accounts for approximately 95 percent of Zambia's electricity supply creating a persistent supply problem for the mining sector. The rainy season in Zambia, and the height of electricity generation, occurs during the first half of the year, while the mining sector is most productive during the second half of the year when hydropower generation is lower.²⁴

In the interim, reliability of the power supply remains a cause for concern. If the country suffers frequent power outages similar to those in 2008, mines will have to supplement their grid power with costly standby diesel generation (US\$0.32–0.40 per kilowatt hour). Consequently, the cost of power in Zambia will become significantly higher than in countries with reliable supply from the grid.²⁵

²¹ Zambia Mine Power Supply Normalised After Line Repair, Dow Jones, accessed on 1 September 2011

²² ZESCO To Shut Generator For 2 Weeks Crating Power Deficit, Zambia Watchdog, accessed on 13 February 2012

²³ Zambia Needs to Double Power Supply in 7 years, Copperbelt's Sindowe Says, Bloomberg, accessed on 15 June 2011

²⁴ BMI Zambia Mining Report Q2 2013

²⁵ What Would It Take For Zambia's Copper Mining Industry To Achieve Its Potential? The World Bank, July 2011

Infrastructure development^{26,27,28,29}

In Zambia, infrastructure investment and development is integrated into the government's broader economic growth objectives under its 5-year national development plan. Under the country's sixth national development plan (2011–15), infrastructure development will focus on roads, railways, schools, health facilities and public–private partnerships (PPP).

As the country remains at low risk of debt distress, there is scope of nearly US\$600 million annual external borrowing on commercial terms to finance high-priority infrastructure projects by the IMF and the World Bank, according to the debt sustainability analysis (DSA). Nearly 50 percent of new energy and transport infrastructure projects in the country are being supported, either partially or fully, by at least one of the non-OECD or Development Assistance Committee (DAC) donors (Brazil, China, Egypt, India, Russia, Saudi Arabia and Turkey). The country's potential infrastructure growth is expected to take place largely in the private sector, driven particularly by opportunities from PPP investments, according to the African Development Bank. The government is aggressively promoting PPPs in the energy, transport, agriculture and housing sectors.

Zambia has a good network of road infrastructure. Nearly 75 percent of the primary and secondary road network is paved — one of the highest ratios among Africa's low-income countries. In rural areas, however, the road network is significantly poorer. While 70 percent of Zambians depend on agriculture for their livelihood, only 17 percent of this population lives within 2 kilometers of an all-season road — about half the African average.

Rail networks are critical to landlocked Zambia's mineral-exporting economy. Rail transport continues to be the most competitive mode of transport for bulk, time-insensitive commodities, such as copper. Currently, Zambia's railways' low traffic densities are well below the viability threshold of at least 2 million tons per kilometer for railways of this kind, making it difficult to capture the revenues needed to maintain assets.

An agreement on rail co-operation between South Africa, Zambia, Zimbabwe and the Democratic Republic of Congo (DRC) allowing the copper-rich countries to increase exports through the Port of Durban in South Africa, is currently in progress. The so-called 'North-South Corridor' could use the existing network linking the DRC and Zambia through Victoria Falls and joining up with the South African system at Beitbridge. Zambia exports the bulk of its copper through the Port of Durban, but most mining companies transport the metal by road because railway transport has been unreliable. Zambia's Minister of Finance has announced that Zambia will invest US\$120 million to revamp a railway line linking the copper producer with South Africa to move transport from road to rail.

By African standards, Zambia is well-endowed in terms of both water resources and storage capacity. The renewable water resource per capita is estimated at nearly 8,700 cubic meters per year, well above the Sub-Saharan Africa average of 7,000 cubic meters per year. Further, 34 percent of Zambia's population has access to utility water, higher than the average 24 percent in other resource-rich African countries. Also, at 18 percent, the country's population with access to septic tanks is significantly higher than in peer countries.

Recently, Zambia's telecommunications and energy sectors attracted private investment, and there is strong potential for further growth. From 2000–10, infrastructure improvements contributed 0.6 percentage points to the country's annual per capita GDP growth, driven largely by the exponential growth of information and communication technology (ICT) services. In contrast, over the same period, poor performance of the power sector reduced the per capita growth rate by 0.1 percentage point.

²⁶ OECD Investment Policy Review: Zambia 2012, Trademark South Africa, accessed on 2 April 2012

²⁷ Republic of Zambia: 2011–2015 Country Strategy Paper, African Development Bank, November 2010

²⁸ Zambia's Infrastructure: A Continental Perspective, Africa Infrastructure Country Diagnostic (World Bank), March 2010

²⁹ Zambia Decent Work Country Programme, ILO, November 2010

Zambia is also developing manufacturing infrastructure, such as multi-facility economic zones (MFEZ) and industrial parks, in order to generate more employment in urban areas. The National Airports Corporation Limited (NACL) plans to spend approximately US\$4.42 million over 2011–14, to upgrade infrastructure and passenger facilitation at Lusaka, Ndola and Livingstone International Airports. The airport infrastructure upgrade is aimed at making Zambia the region's leading cargo hub.

Copperbelt Energy Corporation (CEC) plans to construct new power stations in the country. One such example is the proposed 300MW Mumbotuta project in Northern Zambia, which will cost an estimated US\$1 billion. A number of independent power projects are also planned, such as the Kabompo Gorge hydro-electric project, a 40MW power station. These power projects will help supply power to MFEZs and industrial parks.³⁰ Table 3 shows the budget allocation for infrastructure development under the sixth national development plan for 2011–15.

Table 3: Budget allocation for infrastructure development under the sixth national development plan, 2011–15 (US\$ million)³¹

Type of infrastructure	2011	2012	2013	2014	2015	Total
Transport infrastructure, including road, rail and air	615.7	982.6	902.9	1,079.4	1,119.6	4,700.2
Water	0.3	2.4	2.8	5.2	6.6	17.3
Energy, including rural electrification	63.8	406.2	38.6	56.2	67.9	632.8
Housing	0.8	4.6	4.8	5.0	5.3	20.4
Other	1.0	376.2	6.7	22.3	21.9	428.1

To match existing infrastructure in the rest of the developing world, Zambia would need to spend an average of US\$1.6 billion per year, over 2006–15. This is equivalent to 20 percent of Zambia's GDP, which is nearly double the country's rate of investment in recent years. The power sector alone accounts for 32 percent of this spending.

³⁰ Transport and Infrastructure, Voices of Zambia, accessed on 29 May 2012

³¹ Sixth National Development Plan, World Bank, January 2011

Labor relations and employment situation

In Zambia, the labor movement and a number of civil society organizations have expressed their concerns around the poor employment rate, asking the government to take measures to ensure that Zambians get preference when companies hire people. Among the labor force of 5–6 million in Zambia, less than 10 percent are in formal employment, while more than 80 percent are engaged in the informal sector as small business owners or workers.³²

Tackling high youth unemployment and poverty are among the top priorities of the Zambian government. Lack of employment opportunities for youth is a key contributing factor to the high level of poverty in the country. Of the urban population, 63 percent in the 15–19 age group and 48 percent in the 20–24 age group are unemployed. In rural areas, these numbers are better, with 16 percent of the 15–19 age group and 7 percent of the 20–24 age group unemployed, though these figures mainly reflect informal agricultural employment.³³

Over the past decade, Zambia achieved significant economic growth, as measured by GDP growth and other macroeconomic indicators, according to Seán Nolan, Deputy Director of the IMF African Department. However, the country's performance in converting output growth into poverty reduction and expansion of formal employment has been mixed. The country needs reforms to initiate pro-poor agricultural sector development, address skills gaps and facilitate employment growth in the formal sector.³⁴

In January 2011, the Government of Zambia enacted the Minimum Wages and Conditions of Employment (Domestic Workers) Order 2011. The legislation addressed various employment issues, such as working conditions of domestic workers, working time, sick leave, maternity leave and severance pay, and established a minimum wage. It established 15 years as the minimum age for admission to domestic work.³⁵

³² Small Business and Employment, Zambia Chamber of Small & Medium Business Associations, accessed on 20 April 2012

³³ Zambia Overview, African Economic Outlook, accessed on 29 May 2012

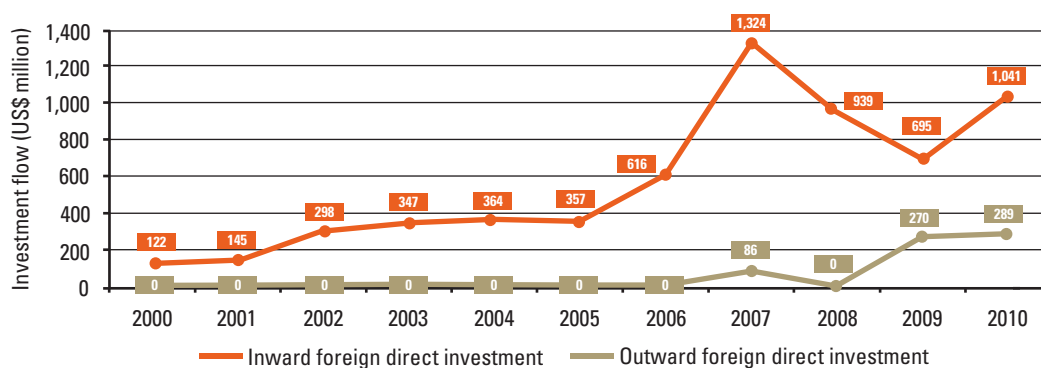
³⁴ IMF-ILO Zambia Conference Calls for Commitment to Growth Strategy for Employment, Decent Work and Development, IMF, accessed on 24 May 2012

³⁵ Zambia Enacts New Domestic Work Legislation, ILO, April 2011

Inbound and outbound investment

In line with economic reforms, Zambia is encouraging private investment in all major productive sectors such as agriculture, mining, manufacturing, tourism and energy. Zambia has introduced new economic policy measures, liberalizing open market trade and investment conditions.³⁶ Figure 8 shows the inward and outward foreign direct investment in Zambia.

Figure 8: Trend for inward and outward foreign direct investment in Zambia



Source: United Nations Conference of Trade and Development

In 2011, Zambia's domestic economy grew 8.4 percent which, in turn, positively influenced investment decisions, according to the Zambia Development Agency (ZDA). The ease of doing business in Zambia, which has been largely considered good, continues to improve with the government's inward investment promotion policies.³⁷ Among the 185 countries covered in the World Bank's 2013 survey on ease of doing business, the country was ranked 94th.³⁸

³⁶ Trade and Investment, Netherland Embassy, accessed on 29 May 2012

³⁷ Zambia Making Positive Economic Strides, Zambia Development Agency, accessed on 1 March 2012

³⁸ Ease of Doing Business in Zambia, Doing Business, accessed on 10 December 2012

Key commodities — Production and reserves

Production level of key commodities in Zambia

Copper and cobalt are the key commodities produced in Zambia. The mining industry engages in the production of lead, zinc, silver and gold. The Zambian Copperbelt and North-Western provinces, that contain the world's highest-grade copper and cobalt deposits, are the main focus of mining and development activity.³⁹

According to the latest available information from *The World Copper Factbook 2012*, Zambia ranked 7th in the world for copper production. The majority of Zambia's copper deposits yield a high grade between 2–3 percent in comparison with the global average yield of roughly 0.8 percent.⁴⁰

Zinc and lead have been next in importance to copper and cobalt production. These minerals are largely produced from the carbonate-hosted deposits of Kabwe. With a total of 11 metric tons of ore containing 40 percent combined zinc and lead, Kabwe is one of the highest-grade zinc and lead deposits in the world.⁴¹

Over 2010–15, the mining sector of Zambia is expected to grow 7.5 percent, to US\$1.35 billion, according to Business Monitor International. By 2015, the copper mining output is estimated to reach 1.2 million tons.⁴²

Figure 2 compares copper production levels in Zambia to other copper-producing countries in 2011, and Figure 3 shows copper production levels in Zambia compared to global levels from 2001–11.

³⁹ Mining in Zambia, Mbendi, accessed on 28 May 2012

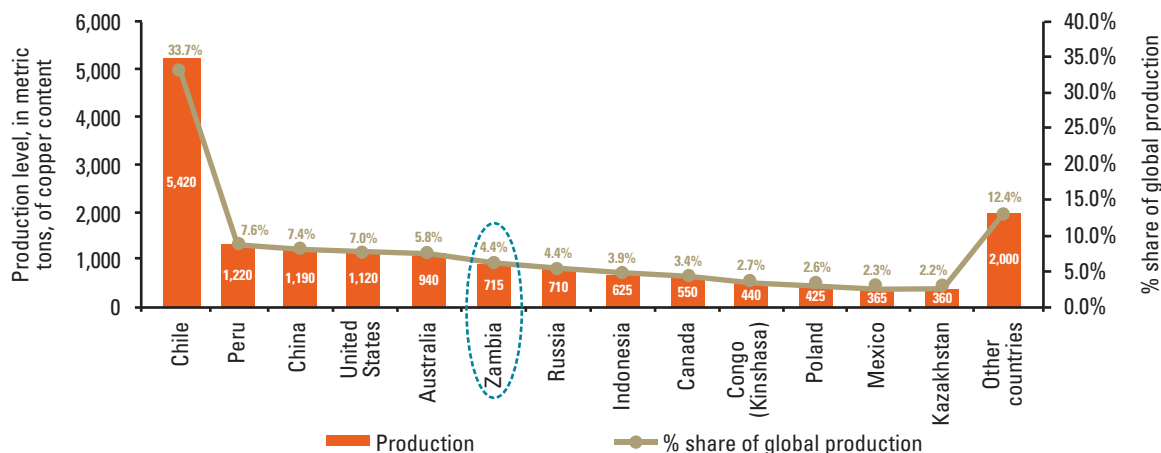
⁴⁰ *World Copper Factbook 2012*; *BMI Zambia Mining Report Q2 2013*

⁴¹ Mining in Zambia, Overview, accessed on 28 May 2012

⁴² *Zambia Mining Report Q1 2012*, *Research and Markets*, January 2012

Figure 2: Production level of copper in Zambia

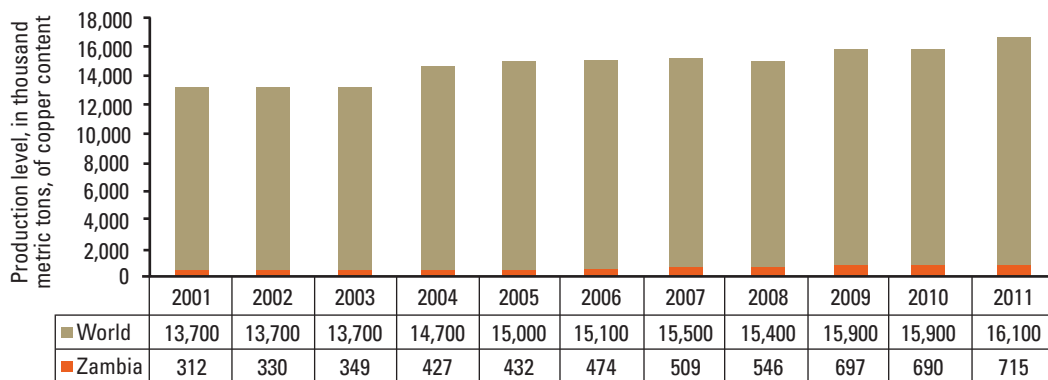
Top copper-producing countries, 2011E



Sources: US Geological Survey, Mineral Commodity Summaries 2012; US Geological Survey Mineral Information — Zambia

Figure 3: Zambia and world copper production levels, 2001–11

US geological survey mineral information — Zambia

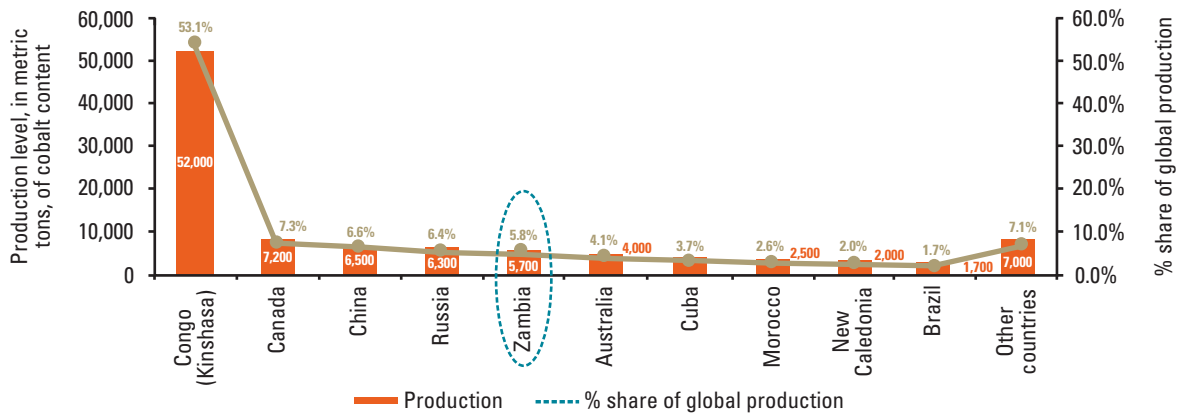


Sources: US Geological Survey, Mineral Commodity Summaries 2012; US Geological Survey Mineral Information — Zambia

Figure 4 compares cobalt production levels in Zambia to other cobalt-producing countries in 2011, and Figure 5 shows cobalt production levels in Zambia compared to global levels from 2001–11

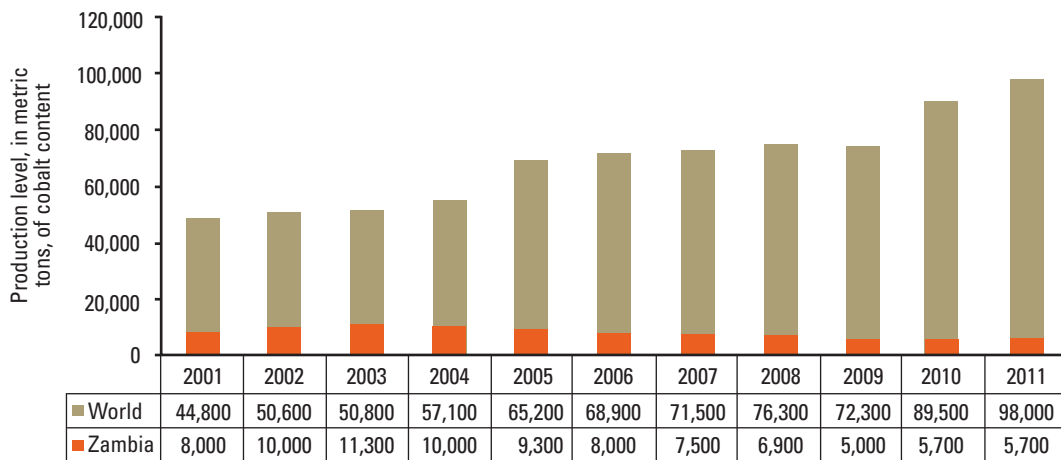
Figure 4: Production level of cobalt in Zambia

Top cobalt-producing countries, 2011E



Sources: US Geological Survey, Mineral Commodity Summaries 2012; US Geological Survey Mineral Information — Zambia

Figure 5: Zambia and world cobalt production levels, 2001–11

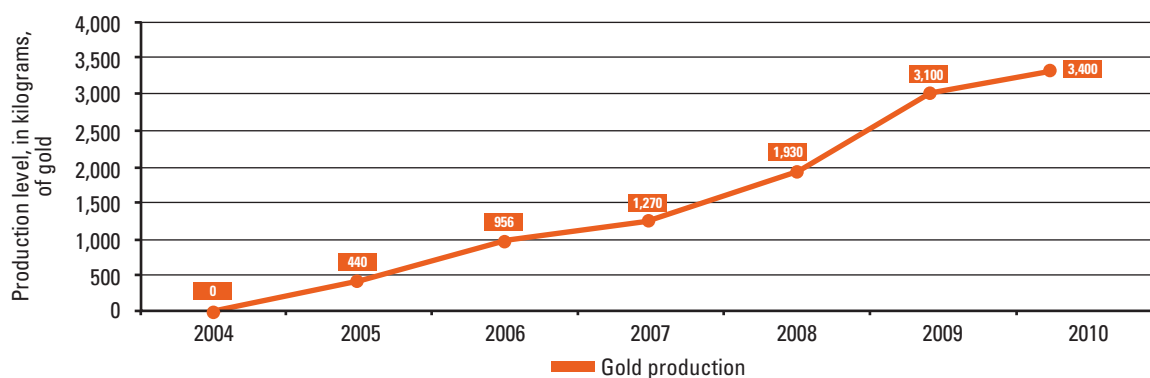


Sources: US Geological Survey, Mineral Commodity Summaries 2012; US Geological Survey Mineral Information — Zambia

US geological survey mineral information — Zambia

In Zambia, gold production started in 2004. From 2005–10, it increased at a compound annual growth rate of 50.5 percent. Figure 6 shows gold production levels in Zambia from 2004–10.

Figure 6: Production levels of gold in Zambia, 2004–10



Sources: US Geological Survey, Mineral Commodity Summaries 2012; US Geological Survey Mineral Information — Zambia

Other key commodities in Zambia

Emerald

- Zambia produces nearly 20 percent of the world's emeralds, sought after for their deep green color.⁴³
- Zambia is among the world's top 3 emerald producers, along with Colombia and Brazil.⁴⁴
- The top producer of emeralds in Zambia is Gemfields. The company has a mining joint venture with the government of Zambia and produces ethical, conflict-free gemstones, with a clear certification of origin. The company accounts for nearly 20 percent of the global emerald supply.⁴⁵
- In Zambia, emeralds are found in the Miku-Kafubu area. Zambia houses the world's largest emerald mine — Kagem mine — and Gemfields holds a 75 percent share in it.^{46,47}

⁴³ Metals in Zambia, Zambia Mining, accessed on 29 May 2012

⁴⁴ About Gemfields, Gemfields, accessed on 1 June 2012

⁴⁵ Zambian Emeralds Sparkle in Indian Jewellery, Economic Times, accessed on 20 July 2011

⁴⁶ Gemstones: Emeralds, Mining in Zambia, accessed on 1 June 2012

⁴⁷ Gemfields Sells Zambia Emeralds for \$26.2 Million in Singapore, Zambian Watchdog, accessed on 27 March 2012

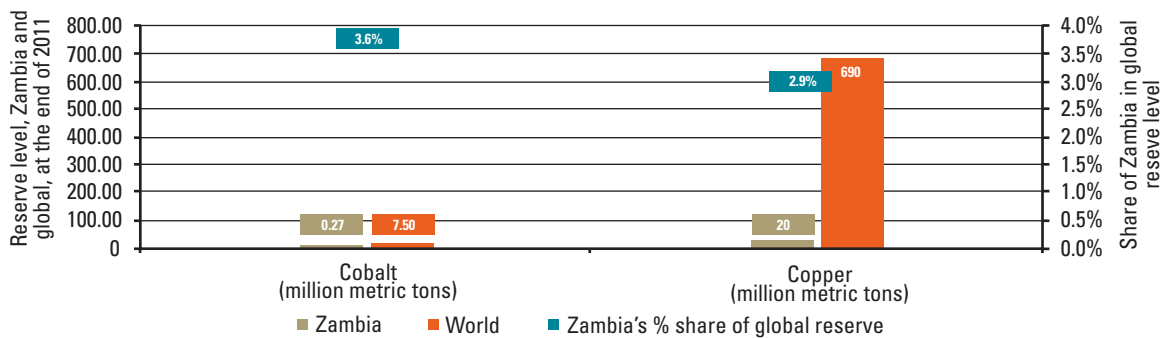
Coal

- Zambia has substantial coal resources and has been producing coal since 1967. The bulk of coal comes from the Maamba coal mine, an open-cast operation in the southern part of the country, near Lake Kariba.⁴⁸
- From 2000–10, primary coal production in Zambia fell from 214,000 short tons to 1,000 short tons.⁴⁹
- Zambia’s Mining Minister expects the country to become a leading coal producer in the region by 2013 on the back of the present rate of development of the mining industry, driven by the strong economic growth and high commodity prices of coal in the international market.⁵⁰
- By mid-2013, the Zambian government expects coal production to reach 200,000 metric tons per month.⁵¹
- Maamba Collieries is the country’s largest coal producer. During the 1980s, Maamba Collieries was a key coal supplier to the country’s copper mines, producing nearly 600,000 metric tons of coal per year, but its production slumped due to years of undercapitalization and operational losses.⁵²

Zambia’s share in global reserves of key commodities

- Zambia has significant reserves of copper (690 million metric tons) and cobalt (270 thousand metric tons).
- Figure 7 provides the reserve level of key commodities in Zambia and the country’s share in the global reserve level, at the end of 2011.

Figure 7: Zambia’s reserve level of cobalt and copper, end of 2011



Source: US Geological Survey, Mineral Commodity Summaries 2012

⁴⁸ Metals in Zambia, Zambia Mining, accessed on 29 May 2012

⁴⁹ International Energy Statistics: Zambia, EIA, accessed on 1 June 2012

⁵⁰ Zambia Poised To Become Leading Regional Coal Producer, Herald Online, accessed on 10 February 2012

⁵¹ Zambia Poised To Become Leading Regional Coal Producer, Herald Online, accessed on 10 February 2012

⁵² Zambia Coal Power Plant Construction To Start In 2011, Reuters Africa, accessed on 2 July 2011



Mining prospects in Zambia

Uranium mining prospects

In Zambia, uranium deposits are available in various geological environments. Uranium oxide (U_3O_8) production in Zambia has been limited to only 120,000 kilograms, produced from the Nkana mine from 1957–59. Since then, many companies have carried out explorations, focusing on potential mineralization in Karoo Age sediments, the Copperbelt and the Domes region of the Northwest Province.⁵³

In 2007, mining companies did not undertake very many uranium exploration activities in Zambia.⁵⁴

Albidon Limited of Australia and African Energy Resources Pty. Ltd. conducted the following exploration activities for uranium:

- The Chirundu joint venture uranium project, including the Gwabe and the Njame deposits
- The Kariba Valley joint venture uranium project, including the Chisebuka, the Munyumbwe and the Namakande prospects
- Luano Valley joint venture uranium project.

In addition:

- Aldershot Resources Ltd. conducted sampling studies on its Kariba uranium project
- OmegaCorp Ltd. drilled and started a pre-feasibility study of its Kariba uranium project
- A joint venture of Zambezi Resources and Lithic Metals and Energy Ltd. (which was formerly known as Zambezi Nickel Ltd.) explored the Mpande, Mulungushi and Oryx uranium prospects.

In 2010, African Energy Resources made a new uranium discovery at the Sitwe North prospect. This uranium prospect occurs within the Northern Luangwa Valley project of the company in northern Zambia. It was identified through an airborne radiometric survey that highlighted anomalous uranium responses interpreted to be associated with Karoo-age sedimentary rocks.^{55,56}

In March 2011, African Energy Resources completed an all-cash transaction to buy Albidon Limited remaining equity stake in the Chirundu and Kariba Valley joint venture uranium projects. The buy-out increased African Energy Resources' attributable uranium inventory to 11.1Mlb U_3O_8 in measured, indicated and inferred resources.⁵⁷

Coal mining prospects

In Zambia, coal is mined at the Maamba mine with a proven reserve of 20 million metric tons. The coal is sub-bituminous durain-fusain with high ash content. Thin coal seams and carbonaceous shales have also been identified in the lower Karoo (Gwembe Formation) of the Luangwa and Luano-Lukusashi Valleys and in the eastern part of the Barotse Basin in western Zambia.⁵⁸

Three projects have provided the prospects of coal production in Zambia in recent years.

Re-commissioning of Maamba mine

In 2009, Singapore's Nava Bharat Pte acquired a 65 percent share in Maamba Collieries — Zambia's largest coal producer. In 2011, Nava Bharat established a plan to start the construction of a 300MW coal-fired power plant in

⁵³ Metals in Zambia, Zambia Mining, accessed on 29 May 2012

⁵⁴ About Gemfields, Gemfields, accessed on 1 June 2012

⁵⁵ Zambian Uranium Projects, Energy Resources, accessed on 1 June 2012

⁵⁶ African Energy Resources Looking For Larger Uranium Footprint In Zambia, Lusaka Times, accessed on 25 March 2010

⁵⁷ Africa Energy Resources Drives Uranium Thrust With Zambian Acquisitions, Proactive Investors Australia, accessed on 8 March 2011

⁵⁸ Known and Potential Occurrences of Industrial Stones, Mining in Zambia, accessed on 1 June 2012

Zambia by the end of that year, to be completed by 2014. The investment for the first phase of the project — a new coal mine and the power plant — was projected to be around US\$750 million. The new mine is expected to produce 360,000 metric tons of coal in its first year of operation, and is expected to reach a maximum output capacity of 2 million metric tons of coal per year. However, due to delays, the power plant project will only be completed in 2015 according to Maamba Chief Operating Officer Gurram Narayana.^{59,60}

Sinazongwe coal project

In 2012, African Energy Resources discovered a new coal mine in Sinazongwe in the Southern Province, close to the two already existing mines — the Maamba Collieries and the Collum Coal Mine. In mid-2011, reconnaissance exploration identified coal-bearing sediments with a strike length of about 10 kilometers.⁶¹

Mulungwa coal project

In 2010, Indongo Mining Limited announced plans to open a new coal mine in Mulungwa Basin, Maamba, in the Sinazongwe District, Southern Zambia. The company estimated an initial capital investment of US\$10 million for the operation of the mine. The project involved coal mining in which the essential element was an open pit and a coal washing plant with the associated ancillary equipment. At full operating capacity, the pit will produce 840,000 million tons of coal per annum with a mine life of 9 years.^{62,63}

Coal set for rapid growth

While Zambia is likely to remain one of the smallest coal producers in Southern Africa, coal output is expected to grow rapidly driven by increased output from the Maamba and Collum coal mines. This, in turn, is expected to have a significant positive impact on the domestic economy as increased coal production will help soften Zambia's power shortage with a large proportion of coal output set for power plants which are to be commissioned in the near future.⁶⁴

Copper mining prospects

Sentinel Deposit project

First Quantum Limited acquired the Sentinel copper deposit project in February 2010. The project is located west of Solwezi in the North-Western Province of Zambia. It is part of the Trident project, which comprises five prospecting licenses totaling 2,300 square kilometers containing a number of attractive base metal prospects. In April 2011, First Quantum received large-scale mining licenses for the development of the Trident project. The licenses give the company the exclusive rights to carry out mining operations on the full area of interest at Trident for a period of 25 years.

The Environmental Impact Assessment was approved and a land use agreement was established in July 2011 for the development of the Sentinel deposit. The project is expected to produce 150,000 tonnes of copper in concentrate annually initially, rising to 300,000 tonnes of copper in concentrate. Once the resource drilling is complete, the production target may be increased further. The project is currently in construction with commercial production to be achieved in 2014. The capex is estimated at US\$1.725 million.^{65,66}

Zambia a key growth area for copper

Zambia is expected to become one of the world's major copper producers in the near future, driven by high-grade reserves and several expansion plans by the likes of First Quantum at its Sentinel and Kansanshi mines. The projected increase in copper output is expected to rank Zambia as one of the five highest copper producers in the world.⁶⁷

⁵⁹ Zambia Coal Power Plant Construction to Start in 2011, Reuters in Africa, accessed on 2 July 2011

⁶⁰ Zambia Coal-Fired Plant Delayed, Business Report, accessed on 8 March 2012

⁶¹ Zambia: Another Coal Mine Unearthed in Sinazongwe, All Africa, accessed on 14 May 2012

⁶² New Coal Mine to Open in Sinazongwe, Lusaka Times, accessed on 14 August 2010

⁶³ New Mine on the Cards, African Review, accessed on 1 June 2012

⁶⁴ BMI Zambia Mining Report Q2 2013

⁶⁵ First Quantum Ltd website, accessed on 16 February 2013

⁶⁶ KPMG Copper Q3 2012 Mining Bulletin

⁶⁷ BMI Zambia Mining Report Q2 2013

Recent M&A activity

Deal completion date	Target company	Commodity/ activity	Target country of HQ	Bidder company	Bidder country of HQ	Deal value (US\$ million)
22/09/2011	Sable Zinc Kabwe Limited	Copper and cobalt	Zambia	Glencore Xstrata plc	Switzerland	28
14/06/2010	AfNat Resources Limited	Exploration and development	Zambia	AXMIN Inc	Canada	14
11/05/2010	Chambishi Metals Plc (90% stake); Comit Resources FZE	Copper and cobalt	United Arab Emirates	Eurasian Natural Resources Corporation Plc	United Kingdom	300
29/01/2010	Kiwara Plc	Base metals	United Kingdom	First Quantum Minerals Limited	Canada	260
24/03/2009	TEAL Exploration & Mining Inc. (50% stake)	Base and precious metal development projects and exploration prospects	Canada	Vale S.A.	Brazil	66
24/03/2009	TEAL Exploration & Mining Inc. (35% stake)	Base and precious metal development projects and exploration prospects	Canada	African Rainbow Minerals Limited	South Africa	45
09/04/2008	Konkola Copper Mines Plc (28.4% stake)	Copper and cobalt	Zambia	Vedanta Resources Plc	United Kingdom	213

Source: Mergermarket

Major mining companies in Zambia⁶⁸

Details of all operational mines in Zambia as at 20 May 2013

Mine name	Location	Ownership	Commodities mined
Baluba center copper mine	Luanshya	China Non-ferrous Mining Corp Ltd (80%); ZCCM Investments Holdings PLC (20%)	Copper, cobalt
Chambishi copper operation	Chingola	China Non-ferrous Mining Corp Ltd (85%); ZCCM Investments Holdings PLC (15%)	Copper, cobalt
Chibuluma copper/cobalt mine	Kitwe	Metorex Pty Ltd (85%); ZCCM Investments Holdings PLC (15%)	Copper, cobalt
Collum colliery	Lusaka	Government of Zambia (100%)	Coal
Kagem Emerald mine	Luanshya	Gemfields PLC (75%); Government of Zambia (25%)	Gemstones
Kansanshi copper/gold mine	Solwezi	First Quantum Minerals Ltd (80%); ZCCM Investments Holdings PLC (20%)	Copper, gold
Kariba (Mapatizya) amethyst mine	Livingstone	Gemfields PLC (50%); Government of Zambia (50%)	Amethyst
Kasempa copper mine	Solwezi	H and S Mining Ltd (100%)	Copper
Konkola copper/cobalt operation	Chingola	Vedanta Resources PLC (79%); ZCCM Investment Holdings PLC (21%)	Copper, cobalt
Lilayi talc mine	Lusaka	Unspecified (100%)	Talc
Lubambe copper mine	Chililabombwe	Vale S.A. (40%); African Rainbow Minerals (40%); Zambia Consolidated Copper Mines Investment Holdings (20%)	Copper, cobalt
Lumwana copper mine	Lubumbashi	Barrick Gold Corporation (100%)	Copper, cobalt, gold
Maamba colliery	Chroma	Nava Bharat Pte Ltd (65%); ZCCM Investments Holdings PLC (35%)	Coal
Mopani copper/cobalt operation	Kitwe	Glencore Xstrata PLC (73%); First Quantum Minerals Ltd (17%); ZCCM Investments Holdings PLC (10%)	Copper, cobalt
Muliashi copper operation	Luanshya	China Non-ferrous Mining Corp Ltd (80%); ZCCM Investments Holdings PLC (20%)	Copper, cobalt

⁶⁸ Intierra database, accessed 20 May 2013

Foreign companies with operations in Zambia

- Kaboko Mining Limited (African Asian Mining Development Ltd., Impondo Zambia Mining Limited)
- Albidon Limited (Albidon Zambia Limited)
- Prospect Resources Limited (Allegra Mining Zambia Ltd., Kafwa Manganese Project, Kampumba Project)
- China Non-ferrous Mining Corp Ltd and ZCCM Investments Holdings PLC (Baluba Mines)
- Eurasian Natural Resources Corp Plc (BSG Resources Limited, Assets in Zambia, Chambishi Metals Plc)
- Jinchuan Group Co., Ltd. (Chibuluma Mines Plc, Munali Nickel Project)
- China Nonferrous Metal Mining (Group) Co Ltd. (China Nonferrous Mining Corporation Limited; Luanshya Copper Mines PLC, NFC Africa Mining Plc)
- First Quantum Minerals Ltd. (Cyprus Amax Zambia Ltd, First Quantum Mining And Operations Ltd., Kalumbila Minerals Limited, Kansanshi Mining plc, Kiwara Resources Zambia Limited)
- Berkeley Mineral Resources plc. (Dumps 21 and 22 at Kabwe Mine; Mining Rights to Dump 57 at Kabwe Mine, Silverlining Ventures Limited)
- Pallinghurst Resources Limited (Kagem Mining Limited; Rox Limited, Kagem emerald mine)
- African Energy Resources Limited (Kariba Valley Project)
- Vedanta Resources plc (KCM Plc; Zambia Consolidated Copper Mines Ltd., Certain Mining Assets)
- Axmin Inc. (Lithic Metals and Energy Limited, AfNat Resources Limited)
- Barrick Gold Corporation (Lumwana Mining Co., Ltd.)
- Nava Bharat Ventures Limited (Maamba Collieries Ltd.)
- Mayfair Mining & Minerals Inc. (Mayfair Mining & Minerals (Zambia) Ltd.)
- African Eagle Resources plc (Mokambo Copper Project)
- Glencore International plc (Mopani Copper Mines Plc, Sable Zinc Kabwe Limited, Zambia Consolidated Copper Mines Ltd., Nkana & Mufulira Assets)
- Blackthorn Resources Limited (Mumbwa Iron Oxide Copper Gold Project)
- Weatherly International PLC (Puku Minerals Limited)
- Zamanco Minerals Limited (Zamanco Holdings Limited)
- Chrysalis Resources Ltd (Zambian Copper Pty Ltd.)
- Boart Longyear Ltd. (BLI Zambia Ltd)
- Caledonia Mining Corporation (Caledonia Mining (Zambia) Limited)
- Capital Drilling Ltd. (Capital Drilling Zambia Limited)
- Collum colliery (Lusaka, Government of Zambia (100%), Coal)
- Kasempa copper mine (Solwezi, H and S Mining Ltd (100%), Copper)
- Konkola copper/cobalt operation (Chingola, Vedanta Resources PLC (79%); ZCCM Investment Holdings PLC (21%), Copper, Cobalt)
- Lilayi talc mine (Lusaka, Unspecified (100%), Talc)
- Lubambe copper mine (Chililabombwe, Vale S.A. (40%); African Rainbow Minerals (40%); Zambia Consolidated Copper Mines Investment Holdings (20%), Copper, Cobalt)
- Muliashi copper operation (Luanshya, China Non-ferrous Mining Corp Ltd (80%); ZCCM Investments Holdings PLC (20%), Copper, Cobalt)

Note: Methodology used for identification of mining companies:

- For the identification of mining sector companies in Zambia, we accessed Capital IQ to generate the list of companies operating in Zambia in the following industry sectors: aluminum, coal and consumable fuels, diversified, metals and mining, gold and steel. The list was then filtered to exclude domestic Zambian corporations.
- The list of foreign companies with operations in Zambia includes companies whose ultimate parent company was headquartered outside Zambia.

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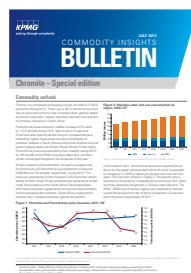
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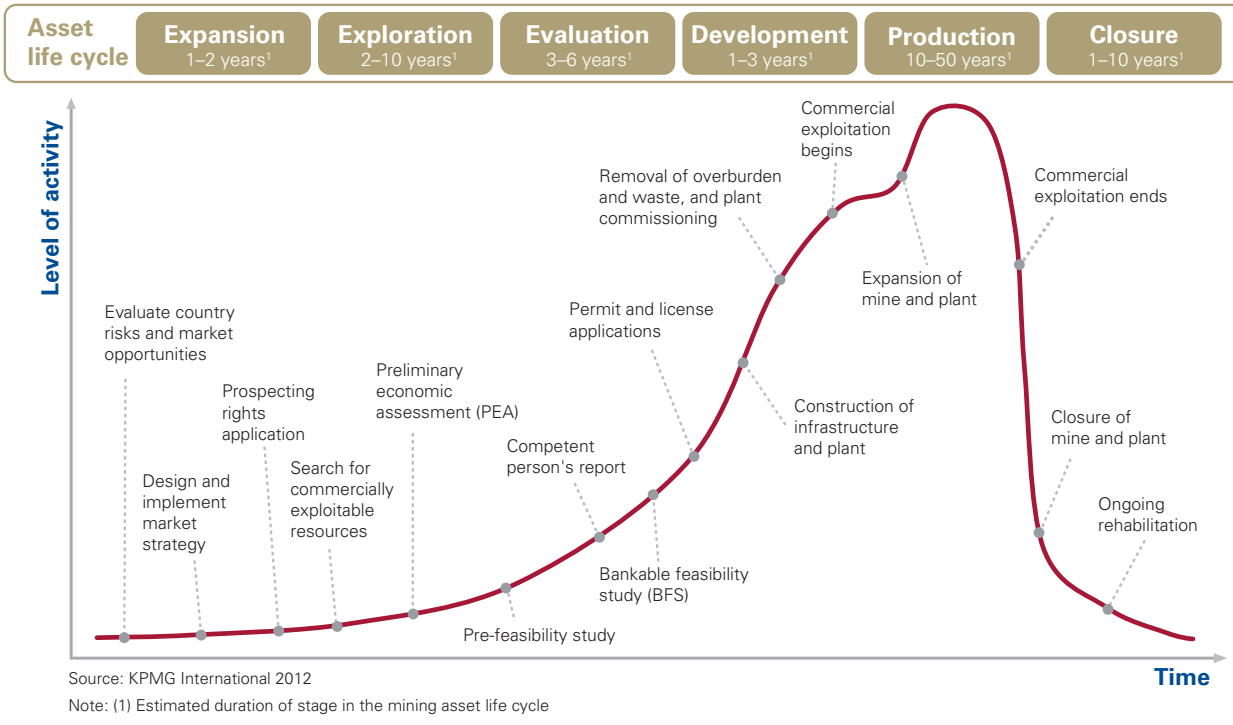


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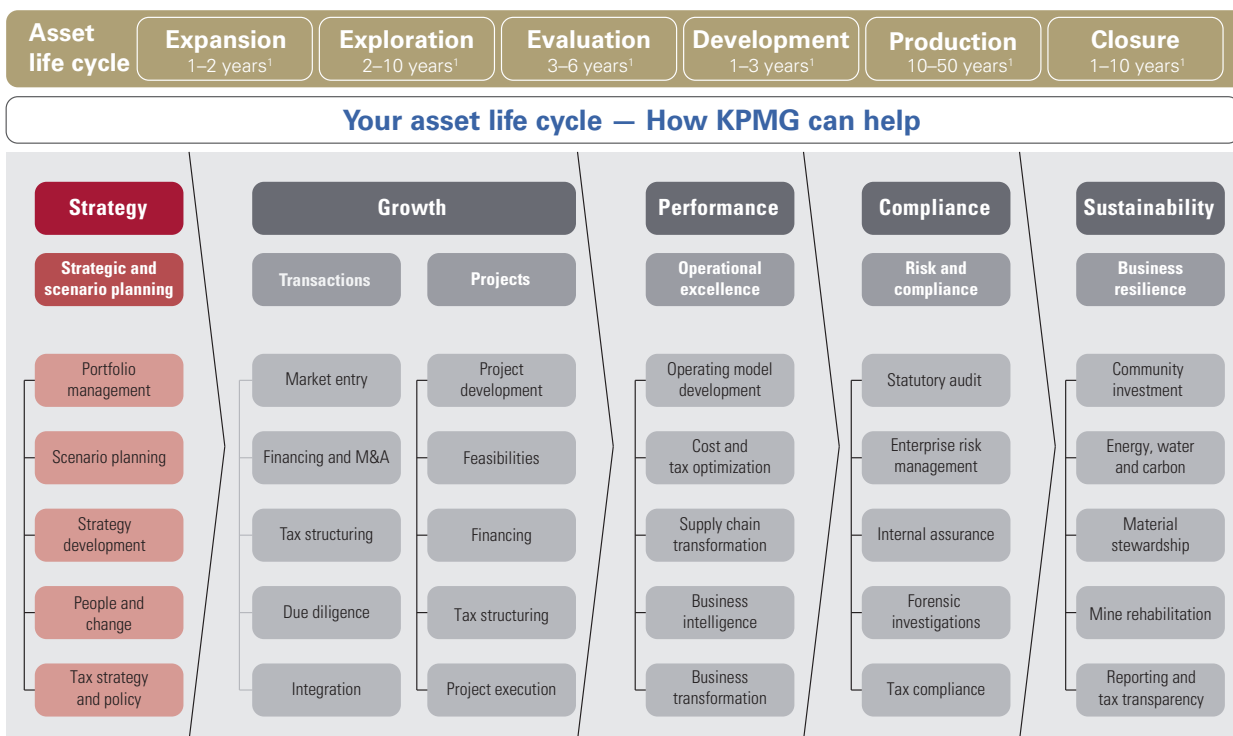
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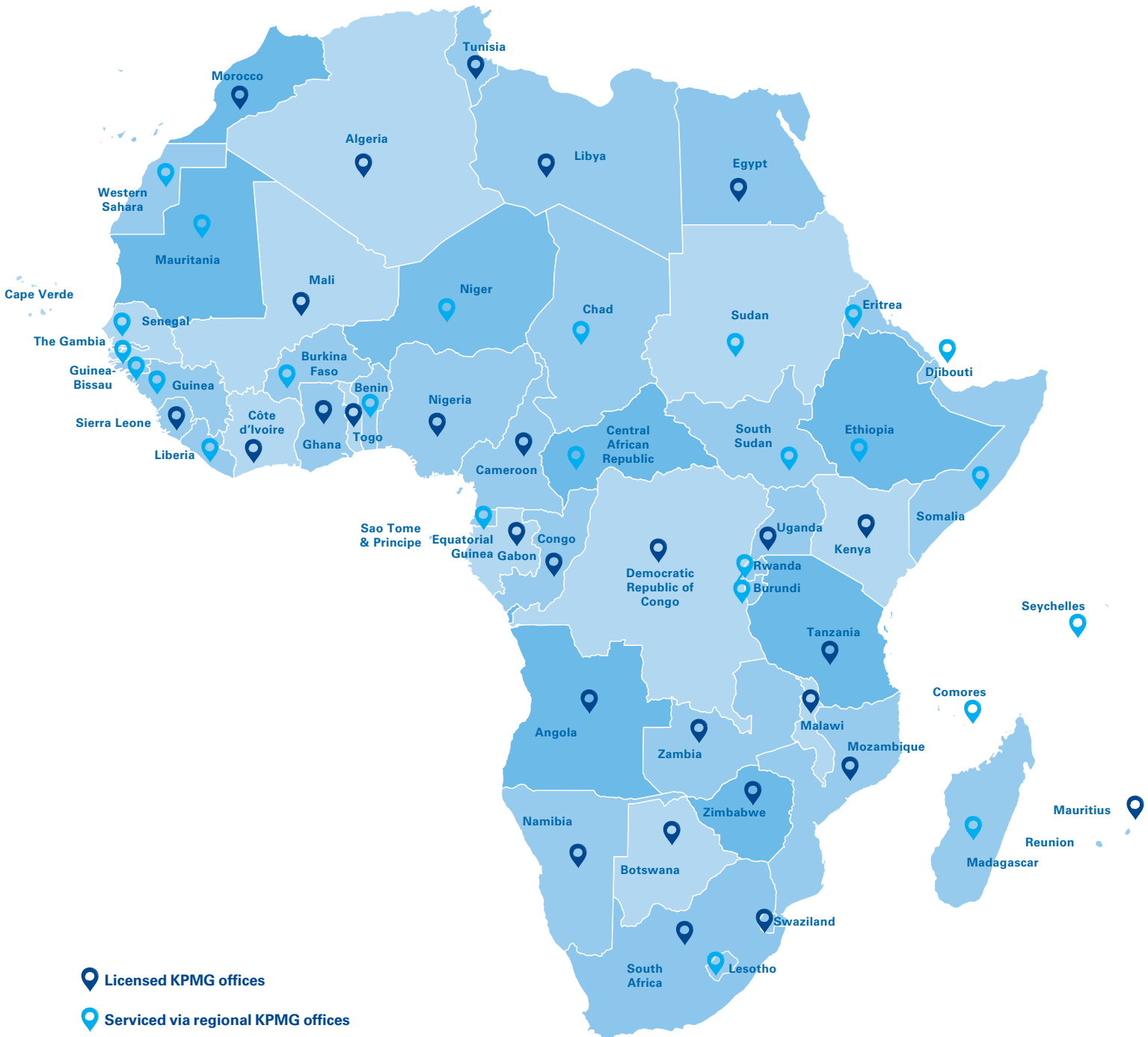
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As of July 2013

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