

KPMG GLOBAL MINING INSTITUTE

**Chile** Country mining guide

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KPMG INTERNATIONAL

**Strategy Series** 



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## **Executive summary**

With its distinctive ribbon-like shape on the Pacific coast of South America, Chile is the 38<sup>th</sup> largest country in the world. The country has abundant metals and minerals, especially in its northern desert region. None of these is more important than copper, for which Chile is widely known as the world's number one producer. Reserves of fine copper are estimated to be in excess of 100 million tons. Copper has made mining a key sector of Chile's economy, although the country is also the world's second largest producer of gold and contributes over half the global production of lithium.

Chile also has a reputation as one of the most attractive business destinations in South America, with a well-functioning market economy and sophisticated financial markets. Nearly 90 percent of Chile's trade is conducted within free trade agreements. The country's mining and environmental regulations are well defined, and the government is working in the direction of sustainable development. The tax regime is currently stable, but the Chilean government is under pressure to increase company tax rates. Chile currently has more than US\$60B of infrastructure projects in its pipeline, including transportation and power transmission. With its strong set of attributes, the EIU expects Chile to attract US\$28B of foreign direct investment by 2017.

## CHILE



LARGEST PRODUCER OF FINE COPPER IN THE WORLD 100 A MILLION TONS

RESERVES OF FINE COPPER IS ESTIMATED TO BE IN EXCESS OF 100 MILLION TONS IN CHILE



THE EIU EXPECTS THAT CHILE TO ATTRACT US\$28B OF FOREIGN DIRECT INVESTMENT BY 2017.

90% OF CHILE'S TRADE IS CONDUCTED WITHIN FREE TRADE AGREEMENTS



\$60<sub>B</sub>

MORETHAN US \$ 60B OF INFRASTRUCTURE PROJECTS IS IN PIPELINE, INCLUDING TRANSPORTATION AND POWERTRANSMISSION.

## **Country snapshot**

Chile <sup>1,2,3</sup>	
Geography	The Republic of Chile, commonly known as Chile, is the 38th largest country in the world.
	<ul> <li>Located in Southern South America (30000S, 71000W) and spread over 756,102 square kilometers, Chile is located between Argentina and Peru and bordered by the South Pacific Ocean.</li> </ul>
	<ul> <li>For administrative and political purpose, the country is divided into15 regions.</li> <li>It is less than one-tenth the size of the US.<sup>3</sup></li> </ul>
Climate	Owing to its distinctive ribbon-like shape, the climate in Chile varies throughout the country. In general, Chile's climate is temperate. It ranges from a desert climate in the north to a Mediterranean climate in the central region, and to a snow-prone cool and damp climate in the south. <sup>4</sup>
Population	With an estimated population of 17.07 million (July 2012), Chile is the world's 62nd most populated country, with median age of 32.8 years.
Currency	Chile's currency is the Chilean peso (CLP). Although the peso has been Chile's national currency since 1851, the current peso has been in circulation only since 1975. Since September 1999, The Chilean Peso has floated freely against the U.S. dollar.
	The average exchange rate in 2013 was:
	• CLP552 : US\$1
	• CLP752 : EUR1 <sup>5</sup>

Source: CIA Factbook and Economic Intelligence Unit (EIU)

<sup>1</sup>CIA: The World Factbook, Accessed on December 27, 2012

<sup>2</sup>Chile Country Profile, EIU, Accessed on December 27, 2012

<sup>3</sup>South America Land statistics, World Atlas, accessed on January 3, 2013 <sup>4</sup>Chile country profile, BBC, August 6, 2011 <sup>5</sup>Oanda.com, Accessed on February 3, 2013

# EIU rankings: ease of doing business

Chile ranked 14th among the 82 countries covered under the EIU's business environment ranking for 2007–11. In the same period, Chile was the most attractive business destination in South America (ranking first in regional ranking, amongst 12 countries from the South American region.)

Chile has a long-standing and well-functioning market economy, with healthy fiscal balances, sophisticated financial markets and a robust institutional environment. Chile has an extensive network of free trade agreements with its trade partners (trade conducted on preferential basis), which account for nearly 90 percent of its trade.

Over 2012–16, Chile will retain its position as the most attractive business destination in the South American region, according to EIU forecasts.<sup>6</sup>

Value of index <sup>a</sup>		Globa	l rank⁵	Regional rank <sup>°</sup>			
2007–11	2012–16	2007–11	2012–16	2007–11	2012–16		
7.81	7.92	14	14	1	1		

Note a. Out of 10 Note b. Out of 82 countries

Note c. Out of 12 countries: Argentina, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Mexico, Peru and Venezuela.





## **Type of government**

Chile has a republican system of government, comprising three separate and independent branches — the executive branch, the legislative branch and the judicial branch.

The executive branch is headed by the president, elected by a popular vote for a single four-year term and is the head of state and the government. The president appoints the cabinet and is advised by the cabinet ministers. Monetary policies are independently handled by the country's autonomous central bank, Banco Central de Chile (BCC). The legislative powers are vested with the government and the National Congress of Chile.

The legislative branch comprises the senate (the upper house includes 38 senators) and the chamber of deputies (the lower house includes 120 deputies).

The judicial branch of Chile functions independently and is headed by the supreme court and supported by 16 regional courts of appeal. The president appoints supreme court judges.<sup>78</sup>

## **Economy and fiscal policy**

Chile has a liberal, open-market economy with strong macroeconomic stability. The country is the fifth largest economy in South America and has the second highest GDP per capita in the region. The Chilean economy is characterized by a high level of foreign trade, in addition to strong financial institutions and fiscal policy. It has one of the highest numbers of bilateral or regional trade agreements (59 agreements, however not all are free trade agreements) with the European Union, Mercosur, China, India, South Korea and Mexico. In 2011, Chile's gross domestic product (GDP) stood at US\$244.54 billion in terms of market exchange terms, and US\$299.5 billion in terms of purchasing power parity (PPP). Exports account for over one-third of the country's GDP, with commodity exports accounting for nearly three quarters of its total exports.

Chile has a mature and well-diversified financial system. Its regulatory framework is well established and the economy has the capability of recovering in the events of crisis. The countries financial machinery is further strengthened by the floating exchange rate, which it has adopted, coupled with an establishment of inflation targets and strict fiscal discipline.

Since the 1990s, Chile has been one of Latin America's fastest growing economies. In 2010, it became the first Latin American country to join the Organization for Economic Cooperation and Development (OECD). Between 1990 and 2010, Chile experienced a per capita growth of 3.8 percent. In real terms, per capita income has almost doubled. EIU forecast Chile's average annual GDP growth to be 4.5 percent over 2012–20, which is expected to moderate to 3.5 percent in 2021–30.<sup>9,10,11,12</sup>

<sup>7</sup>CIA: The World Factbook, Accessed on January 2, 2013
 <sup>8</sup>Chile Country Profile, EIU, Accessed on January 2, 2013
 <sup>9</sup>Chile Overview, World Bank, accessed on January 9, 2013
 <sup>10</sup>CIA: The World Factbook, accessed on January 9, 2013
 <sup>11</sup>Chile Country Profile, EIU, Accessed on January 2,2013
 <sup>12</sup>Chilean economic overview, UK in Chile, October 19, 2012

## **Fraser institute rankings**

#### Economic Freedom of the World 2013 Report<sup>13</sup>

Among the 144 countries covered in the Fraser Institute's Economic Freedom of the World 2013 Report, Chile ranked 11th, with a score of 7.87 on a scale of 10. Chile was the highest ranked Latin American country, followed by Peru (rank 22) and Panama (rank 67). Brazil and Argentina, the two other major South American economies, ranked much lower, at 102 and 137, respectively.

The annual peer-reviewed report ranks 144 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.

#### Survey of Mining Companies 2012/2013<sup>14</sup>

Chile ranked 8th on Policy/Mineral Potential among the 96 jurisdictions covered by the Fraser Institute's Survey of Mining Companies 2012/2013. It ranks 23rd on the policy potential index and 11th on the mineral potential index. Figure 1 provides the country's scores on key indices of the survey.



#### Figure 1: Chile's scores, Fraser Institute's Survey of Mining Companies 2012/2013

Note \*: The Policy Potential Index is a composite index that measures the effects on exploration of government policies. Note \*\*: The Cur rent Mineral Potential index, is based on respondents' answers to the question about whether or not 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 in place and the industry "best practices."

Source: http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/mining-survey-2012-2013.pdf

<sup>&</sup>lt;sup>13</sup>Economic Freedom of the World 2013 Annual Report, Fraser Institute

<sup>&</sup>lt;sup>14</sup>Survey of Mining Companies: 2012/2013, Fraser Institute

## **Regulatory environment**

Chile has well defined mining and environmental regulations governing the mining sector in the country. The country's mining sector is primarily regulated by the mining code, based on a legal protection to mining property and mining industry. The mining ministry administers the concession to mining companies under the code. In addition, the government has put in place specific progressive foreign investment regulations to attract foreign investments in the mining sector. The foreign investment is governed by The Foreign Investment Statute and Chapter XIV of the Central Bank's Compendium of Foreign Exchange Regulations. These rules have not only brought in mining investment, but also encouraged the leading providers of business services and equipments to start operations in the country.

The framework of Chile's more than 150-year-old mining industry has evolved rapidly over the past two decades. With favorable foreign direct investment (FDI) policies, and a well-established and well-tested operational framework, Chile scores well with regard to the major investment requirements typically demanded by investors. Chile's free market economy, stable macroeconomic fundamentals and excellent business environment make it an attractive destination for major mining investments.<sup>15,16,17,18</sup>

## **Sustainability and environment**

Historically, Chile has introduced various regulations to tackle environmental issues in the mining sector; however, environment protection only became a government priority in the 1990s. To this effect, the National Commission on the Environment – Comisión Nacional del Medio Ambiente (CONAMA) – was established in 1990 and in March 1994, the General Environmental Law -Ley de Bases Generales del Medio Ambiente came into effect. In addition, a specific Ministry for the Environment was established by the Pinera government in 2010.

Currently, the government is working in the direction of sustainable development. On January 8, 2013, government representatives from the US and Chile signed a memorandum of understanding (MoU) according to which both countries will work to protect Chile's environment and promote sustainable development. Previously, both countries signed the Environmental Cooperation Agreement (ECA) in June 2003 with an aim to promote sustainable development and expand trade and investment. Since then, the US has dedicated more than US\$4 million to support environmental projects.

In the mining sector, Chile has taken initiatives to promote sustainable and environment friendly practices. In 2008, the country signed a MoU on Cooperation for the Sustainable Development of Minerals and Metals with Canada to encourage the use of green and sustainable technologies and practices in the mining sector. Since the signing of the MoU, both countries have collaborated for the exchange of knowledge in areas such as corporate social responsibility, community involvement and natural-resource governance.<sup>19,20,21</sup>

Mining companies will spend \$11.9 billion on water infrastructure in 2013, up from the \$3.4 billion spent in 2009, says consultancy group Global Water Intelligence.

Nowhere is the need for water more apparent than in Chile's 600-mile-long Atacama region, the world's driest desert. The Zaldivar copper mine was built nearly two decades ago when securing water rights was both easier and cheaper than today.

"In Northern Chile, there is no underground water for new projects, so any new project will require seawater, desalinated or not," said Diego Hernandez, CEO of Antofagasta Plc, which uses raw seawater to process copper at its Esperanza mine.

Desalination is an alternative that does not come cheap. BHP Billiton estimates that using desalinated sea water triples water costs.<sup>22</sup>

- <sup>16</sup>Outlook For 2011 In Chile's Mining Sector, Trans Asia Lawyers, April 2011
- <sup>17</sup>Mining in Chile, Engineering and Mining Journal Global Business Report, March 19, 2012

<sup>19</sup>Canada-Chile Cooperation for the Sustainable Development of Minerals and Metals, Website of Government of Canada accessed on January 9, 2013

<sup>21</sup>Chile and U.S. plan to expand environmental conservation, The Santiago Times, January 8, 2013
<sup>22</sup>http://www.reuters.com/article/2013/05/30/us-mining-water-idUSBRE94T04Q20130530

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<sup>&</sup>lt;sup>15</sup>Chile mining industry note : South America research, Nova Capital, June 2011

<sup>&</sup>lt;sup>18</sup>Report Information: Chile Mining Report Q3 2012 by Business Monitor International, Market Research.com, June 2012

<sup>&</sup>lt;sup>20</sup>Ecology and Environment, Website of the Embassy of Chile, Washington DC accessed on January 9, 2013

## Taxation

Chile has a two-stage corporate income tax structure. Declared profit is subject to first-stage income tax (FCIT), which stands at 20 percent. Second-stage corporate income tax is levied on profit distributed to resident individuals or non-resident shareholders or partners. For distribution to non-Chilean resident shareholders, the second stage tax applies at a rate of 35 percent with an imputation credit for the FCIT paid.

Interests, royalties and fees paid to non-Chilean residents are subject to withholding tax at rates as high as 35 percent.

In addition to the corporate income tax, mining companies also pay a specific income tax on mining activities to the government. This tax is levied on operational income obtained by the mineral exploiter from mining activities. The tax is charged at a progressive rate and varies from 5 percent to 34.5 percent, resulting in a 14 percent effective rate, if the mining company's annual sales exceed over 50000 tons of fine copper. The rate was increased in October 2010, replacing the previous rate. Mines whose annual sales have an equivalent value between 12,000 and 50,000 metric of fine copper, are charged a progressive tax rate between 0.5 percent and 4.5 percent, while those with annual sales less than 12,000 metric tons of fine copper do not pay the tax.

Large mining companies currently pay a flat 4 or 5 percent rate under tax stability agreements. Once they expire they will be subject to the mining tax at the rates previously discussed.

## **Power supply**

The Chilean power sector is well regulated. Regulations for the sector are defined in a manner that promote investment in energy infrastructure and reduce regulatory risks for an electric company. Recently, the Chilean government announced a long-term energy plan with the focus to improve the energy sector, including increased energy efficiency, development of renewable energies and the acceleration of permits for new projects.

However, Chile's power sector, especially generation and transmission, have not developed at par with the country's economy, leading to a lack of power supply in the country. The country has a potential risk of facing large energy deficits from 2014, which may drag the Chilean economic growth. In addition, droughts, unreliable gas imports, and protests against proposed projects have hampered the Chilean power sector. Over the past few years, frequent draughts have forced the country to shift its focus from hydroelectric power to natural gas.

Further, the government recently dropped the 2020 target of powering nearly 20 percent of the Chile's domestic power demand through renewable sources, which was announced by Chilean President, Pinera in 2010. It is now focusing on a less ambitious target of 10 percent by 2024.

The state of the power sector has also affected the chief economic engine of the country – mining and especially the copper mining industry. The mining industry ranks first in consumption of electricity in the country. The sector uses 85 percent of the Northern Grid's power capacity of which 58 percent is supplied by natural gas. However, the mining sector faces two primary issues: high-energy prices and the energy efficiency of other operations. The electricity prices in the country are US\$250 per MWh, which is US\$50 more than Argentina, Colombia and Peru. The increased cost of power could make the Chilean miners uncompetitive to their Latin American counterparts.

To address these issues, Chilean mining companies are taking initiatives to ensure a more reliable source of power, to avoid blackouts and disruptions. Mining companies, like Antofagasta Minerals, are developing their own power supply infrastructures. Companies that are connected to traditional power generators are now seeking to be connected to alternative renewable energy sources.<sup>23,24,25,26,27,28</sup>

<sup>&</sup>lt;sup>23</sup>Chile with 50 percent hydro power by 2034, but serious energy shortages in 2015, MercoPress, January 16, 2012
<sup>24</sup>Mining in Chile, GBReports, March 19, 2012

 $<sup>^{\</sup>rm 25}\mbox{Chile's}$  Power Challenge: Reliable Energy Supplies, PowerMag, September 1, 2012

<sup>&</sup>lt;sup>26</sup>Fitch on Chilean electricity sector, Reuters, March 30, 2012

<sup>&</sup>lt;sup>27</sup>Oil and Gas Security – Emergency Response of IEA Countries, IEA, April 24, 2012

<sup>&</sup>lt;sup>28</sup>Chile: Renewable EnergyTargets – October 2012, UKTrade & Investment, October 4, 2012

## Infrastructure development

Chile has made some significant strides in economic development following its return to democratic rule in 1990. Its infrastructure has undergone reforms, and has become a hotbed for private investment, which has helped it keep pace with the economic growth. This success is due to various causes, including macroeconomic and political stability, existence of clear rules, strong institutions, well-founded regulations and the highest number of Free Trade Agreements by any country in the world.

Chile has also witnessed a substantial improvement in the physical infrastructure after the adoption of the build, operate and transfer (BOT) concession model in the mid-1990s. The program has attracted private investment in its public infrastructure, offering favorable conditions and incentives to investors. Under this model, the country built over 2700 km of new roads, including urban and interurban highways, in the last decade. Further, Chile's infrastructure has seen a major inflow of investment owing to a strong business environment. Combined with government stimulus measures, investment will help the construction industry to grow 7 percent year-over-year (y-o-y) in 2012. In the long term, the value of construction sector is expected to grow by US\$36.8 billion in 2021, up from US\$20 billion in 2012.

Currently, the country has over US\$60 billion infrastructure projects in the pipeline, with investment opportunities in power and transportation infrastructure including bridges, ports, roads, airports, jails and railways. Chile has plans to invest US\$83 million in upgrading road across Route G-21, also known as the Camino a Farellones. Recently, the Chilean Foreign Investment Committee under the Ministry of Economy, Development and Tourism announced projects with foreign investments totaling US\$14 billion. Chile is also seeking more investments in the power infrastructure, owing to an increased demand due to growing population and increased consumption the mining industry. A number of projects are under the government's pipeline including the construction of power plants, transmission lines, storage, etc.<sup>29,30,31,32,33</sup>

# Labor relations and employment situation

Chile's rapid economic progress in recent years has been partly due to the increased focus on the training and productivity of its workforce and a significant emphasis on labor rights. Recently, the Inter-American Development Bank approved a loan of US\$7.5 million to support improvements in Chile's labor market. In the country, around 18 percent of the labor force is unionized, and 96 percent of the population is affiliated to United Workers Federation.

Since the return of democracy, Chile has put forth labor rights as a priority area for improvement. Anti-discriminatory laws are now reinforced, ensuring equal opportunities for all. Chile has ratified 48 International Labor Organization (ILO) conventions. The relationship between the Chilean labor class, the business sector and the government dramatically improved since 1990. Labor unions have been given a voice and have grown stronger ever since. They have negotiated a series of national agreements, regarding issues such as the annual adjustment of minimum wage, training and the promotion of workers' rights.

In 2011, Chile witnessed a rise in employment levels over the past few years. Unemployment rate in 2011 was 7.2 percent, the lowest rate in 13 years, with a further declining trend of the unemployment rate witnessed in 2012. For the period August–October 2012, unemployment rate was 6.6 percent.

In the mining sector, Chile has a shortage of skilled labor, primarily due to a large number of projects in the pipeline and shortage of workforce. Mineworkers are generally backed by labor unions, when they negotiate demands regarding higher wages, benefits, etc. In the past most mining companies have generally paid up to the demands of the unions, in order to avoid strikes.<sup>34,35,36,3738,39</sup>

- <sup>32</sup>Experts Panels in Regulation of Infrastructure in Chile, PPIAF, April 30, 2007
- <sup>33</sup>Chile, EDC.ca, October 2012 <sup>34</sup>Calling all Minore, Rusiness Chile, April 1
- <sup>34</sup>Calling all Miners, Business Chile, April 18, 2012
- <sup>35</sup>Antofagasta plc : Chile's Mining Industry Faces Rising Costs Over Labor-Antofagasta, 4-trades, March 15, 2012
- <sup>36</sup>Website of Embassy of Chile, Washington DC, accessed on January 8, 2013

<sup>&</sup>lt;sup>29</sup>Chile – Road Infrastructure Project Portfolio, UK Trade and Investment, December 3, 2012

<sup>&</sup>lt;sup>30</sup>Chile Infrastructure Report Q1 2013, Business Monitor International, December 12, 2012

<sup>&</sup>lt;sup>31</sup>Chile Announces US\$14 billion in infrastructure investment opportunities, CAPA Center for Aviation, July 12, 2012

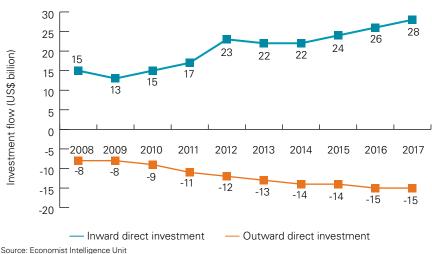
 <sup>&</sup>lt;sup>37</sup>IDB will support improvements in Chile's labor market, Inter-American Development Bank, October 10, 2012
 <sup>38</sup>UPDATE 2-Chile jobless rate ticks up to 6.6 pct in Aug-Oct period, Reuters, November 30, 2012
 <sup>39</sup>Employment Outlook: Chile, Going Global, January 4, 2013



## Inbound and outbound investment

In recent years, Chile has witnessed record investment activities. As per the data provided by Chile's Ministry of Finance, foreign investment peaked at US\$12 billion in the first half of 2012, an increase of 80 percent over 2011<sup>40</sup>. In 2011, Chile's FDI grew by 16.1 percent to reach US\$17.5 billion, the third highest in Latin America. EIU forecasts that inward direct investment into Chile will reach US\$28 billion by 2017. As shown in Figure 2, outward direct investment from Chile is likely to recover in 2014–17, after declining over 2012–14.<sup>41</sup>

Chile is one of the favorable destinations for investors seeking to invest in South America's mining sector. Mining sector received a major chunk of this FDI especially focusing on the copper mining.<sup>42,43</sup> Along with Brazil and Argentina, Chile has seen a rapid surge in mining-related investment, making Latin America the world's primary mineral investment target.<sup>44</sup>



#### Figure 2: Trend for inward and outward direct investment in Chile

<sup>&</sup>lt;sup>40</sup>Chile set to register record FDI in 2012, despite criticisms, Sanitago Times, August 30, 2012

<sup>&</sup>lt;sup>41</sup>Chile Country Profile, EIU, Accessed on January 3, 2013

<sup>&</sup>lt;sup>42</sup>Mining in Chile – Overview, Mbendi Information Services, Accessed on January 3, 2011

<sup>&</sup>lt;sup>43</sup>FDI in Chile reaches US\$17,536 million in 2011, Foreign Investment Committee, March 29, 2012
<sup>44</sup>Mining in Chile – Overview, Mbendi Information Services, Accessed on January 3, 2011



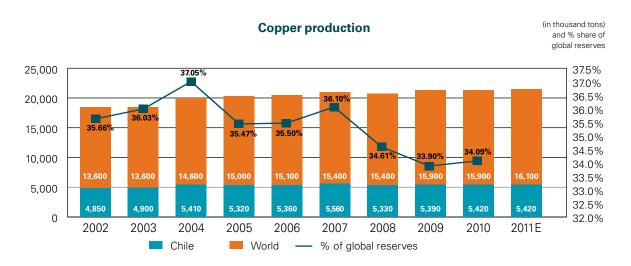
# Key commodities – production and reserves

#### Production level of key commodities in Chile<sup>45,46</sup>

Mining is a key sector of Chile's economy. The country has abundant metals and minerals such as copper, gold, silver, zinc, iron, lead and manganese, especially in its northern region.

Copper is the most critical metal in Chile's mining industry. Chile produces about 34 percent of global copper production, ahead of the other leading countries such as US, China and Peru, which produce only 7 percent. According to latest estimates, Chile has more than 100 million tons of fine copper reserves. Chile's mining sector is expected to continue a strong growth path as the demand for precious metals (especially from the emerging economies) is expected to increase in future.

Gold and molybdenum, by-products from copper mining, are also significant minerals in the mining industry. Chile ranks second and fifth, respectively in the production of these metals globally. Along with these precious metals, lithium is another important mineral mined in Chile. According to the US Geological Survey, Chile contains 27 percent of the global reserves of lithium, and contributes to more than 50 percent of the global production.

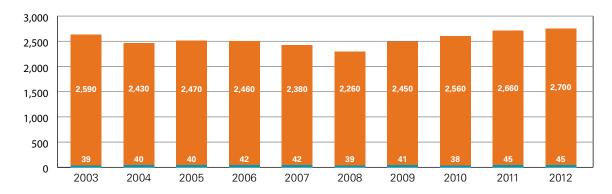


#### Figure 3: Production level of key commodities and % share of global reserves in Chile

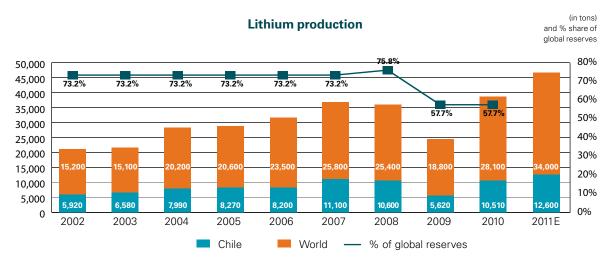
Source: US Geological Survey, Mineral Commodity Summaries

**Gold production level in Chile** 

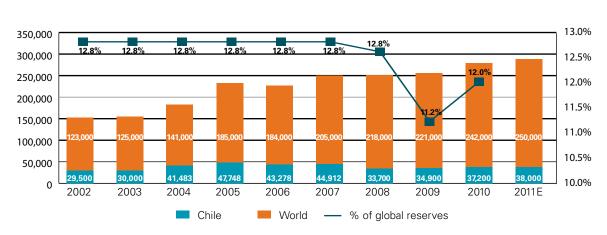
(in metric tons)



Source: US Geological Survey, Chile Minerals Yearbook



Source: US Geological Survey, Mineral Commodity Summaries



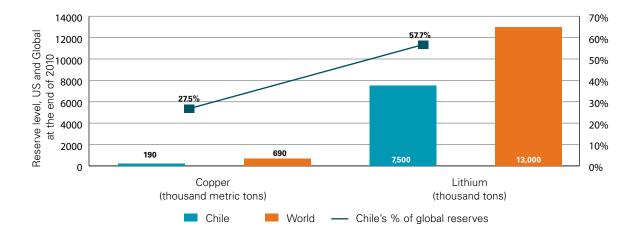
#### Molybdenum production

(in tons) and % share of global reserves

Source: US Geological Survey, Mineral Commodity Summaries

#### Chile's share in global reserves of key commodities<sup>47,48</sup>

Chile has vast reserves of copper and lithium. The region has some of the largest open pit mines in the world along the cordillera. In addition, the Atacama Desert in the north contains vast mineral reserves, mainly copper and nitrates. Chile contains 27 percent of the lithium's global reserves, and contributes more than 50 percent of the global production.



<sup>47</sup>Copper Mining in Chile, March 16, 2012 <sup>48</sup>Mining in Chile, Engineering and Mining Journal, March 19, 2012

## Major mining companies in Chile<sup>49</sup>

- Amerigo Resources Ltd.
- Anglo American plc
- Antofagasta Minerals plc
- Apogee Silver Ltd.
- Atacama Minerals Corp
- Atacama Pacific Gold Corporation
- Barrick Gold Corporation
- BHP Billiton
- CAP S.A.
- Capstone Mining Corp
- Compania Contractual Minera Candelaria
- Corp Nacional del Cobre de Chile
- Endeavour Silver Corp
- Freeport-McMoran Copper & Gold Inc.
- Glencore Xstrata

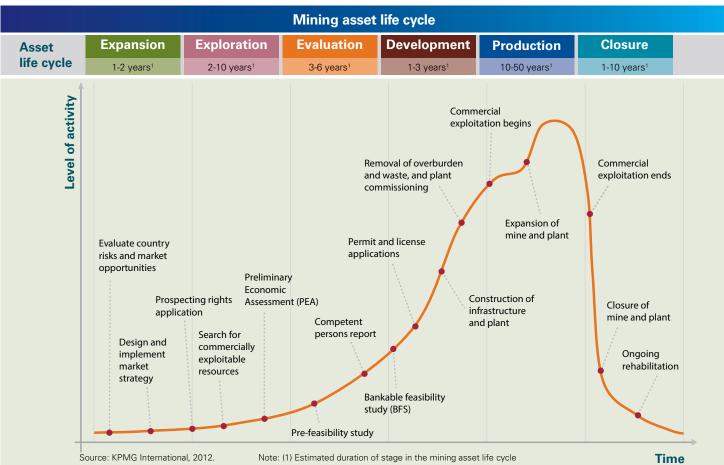
- Goldcorp Inc.
- Kinross Gold Corporation
- Lachlan Star Limited
- Minera El Tesoro
- Minera Michilla S.A.
- Molibdenos y Metales S.A.
- New Gold Inc.
- Polar Star Mining Corporation
- RioTinto
- Sierra Gorda SCM
- SQM Industrial S.A.
- Sociedad Punta del Cobre S.A.
- Southern Copper Corporation
- Teck Resources Limited
- Yamana Gold Inc.

#### As at December 31, 2012:

Exploration Stage: YTD Activity > \$10 million

Development or Production Stage: PPE & Mining Assets > \$50 million

<sup>49</sup>Canadian & American Mines Handbook, 80<sup>th</sup> Edition



(2) Reflects key activities only at each stage of the mining asset life cycle

KPMG's mining strategy service offerings											
Asset Expansion		on E	Exploration		uation	Development		Production	Closure		
life cycle	life cycle 1-2 years <sup>1</sup>		2-10 years <sup>1</sup>	3-6	years <sup>1</sup>	1-3 years <sup>1</sup>		10-50 years <sup>1</sup>		1-10 years <sup>1</sup>	
Strate	gy		Growth		Perform	ance	Con	npliance	Sus	stainability	
Strategi scenario	ic and planning	Transa	actions Project	s	Operation excellence		Risk com	and pliance	1	siness silience	
Portfe mana	olio Igement	Mar enti	try Projec	ct opment	Operati develop	ng model ment		tatutory udit	\ <b>[</b>	Community investment	
Scena plann			ancing d M&A	bilities	Cost an tax opti	d mization		nterprise sk management		Energy, water and carbon	
_ Strat devel	egy opment	Tax stru	x ucturing - Finan	cing	- Supply transfor			iternal assurance		Material stewardship	
Peop chang	le and ge	- Due diliç	e Tax igence struct	turing	Busines intellige	-		orensic ivestigations		Mine Rehabilitation	
Tax s and p	trategy policy	Inte	egration Project	1	Busines transfor	- 1	Ц	ax compliance		Reporting and tax transparency	

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## **Strategy Series**



#### Country mining guides

This series of country guides provides an overview of the mining industry from a geographical, economic and legislative context. These country guides are invaluable for those already operating or considering an investment in the country. Published country guides include Brazil, Chile, Mexico, Mozambique, Peru and Zambia.

## **Growth Series**



#### mining sector

A combination of demand from the East, dwindling mineral resources and rising costs is reshaping the mining sector. As mining companies attempt to manage their asset life cycle in this

Growth in a time of scarcity:

Managing transactions in the

new landscape, their three main strategic priorities are growth, performance and compliance. Whether organically or (increasingly) through mergers and acquisitions, growth is a perennial objective in an industry where assets continually erode. This guide is the first in a series that discusses how mining companies can best navigate the asset life cycle, and covers the five key elements of the transaction phase: geographic expansion, financing and mergers & acquisitions, tax structuring, due diligence and integration.

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### **Performance Series**



#### KPMG Mining Operational Excellence Framework

KPMG member firms have developed their own operational excellence framework over the last several years of association with leading mining companies. It helps organizations begin a journey of efficiency and then, over

time, embeds such characteristics in order to make change sustainable over business cycles. This puts together all the capabilities necessary to assure the organization's leadership that it will be able to adapt to support their hunt for the next opportunity, whatever its nature.

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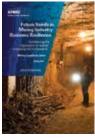


## From volume to value: Cost optimization in the mining sector

This report looks at nine different levers which mining companies need to consider when implementing cost optimization programs to sustain profitability in today's more challenging economic environment. The nine levers are: labor productivity,

asset management, energy management, supply chain and inventory management, shared services and outsourcing, operating model, information management and cost culture.

## **Compliance Series**



Business resilience in the mining industry: Conditioning the organization to succeed in an

increasing risk environment With uncertainty on all sides, mining organizations have to re-evaluate their approaches to organizational resilience. KPMG International examined a number

of existing and emerging risks faced by mining organizations around the world and identified the attributes of more resilient organizations. This paper moves ahead of those findings and looks at some practical solutions that mining executives can employ to increase resilience and provide a platform on which sustainable, profitable growth can continue.

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## **Sustainability Series**



## Capitalizing on sustainability in mining

This publication examines how mining companies can leverage sustainable development to tackle resource constraints and sociopolitical challenges in remote areas in the world.

## **Commodity Insights Bulletins**



Our bulletins focus on key mining commodities. Each bulletin provides insight into trends, issues and changes within the key mining commodity sectors. The series currently includes bulletins focusing on our key mining commodities: Copper, Diamond, Gold, Iron ore, Metallurgical coal, Nickel, Platinum, Thermal coal and Uranium.

Download the bulletins from kpmg.com/mining

## KPMG Global Mining practice

KPMG member firms' mining clients operate in many countries and have a diverse range of needs. In each of these countries, we have local practices that understand the mining industry's challenges, regulatory requirements and preferred practices.

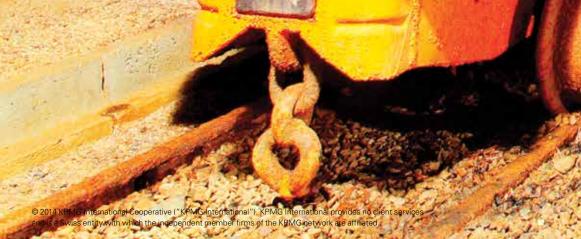
It is this local knowledge, supported and coordinated through KPMG's regional mining centers, which helps ensure our firms clients consistently receive high-quality services and the best available advice tailored to their specific challenges, conditions, regulations and markets. We offer global connectivity through our 13 dedicated mining centers in key locations around the world, working together as one global network. They are a direct response to the rapidly evolving mining sector and the resultant challenges that industry players face.

Located in or near areas that traditionally have high levels of mining activity, we have centers in Melbourne, Brisbane, Perth, Rio de Janeiro, Santiago, Toronto, Vancouver, Beijing, Moscow, Johannesburg, London, Denver, Singapore and Mumbai. These centers support mining companies around the world, helping them to anticipate and meet their business challenges.

For more information, visit **www.kpmg.com/miningamericas** 

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