

Nickel (Q4, 2013 and Q1, 2014)

Improving times, but still great uncertainty

The confirmation of the ban of Indonesian ore exports in early January 2014 has helped drive nickel prices higher. Previously, nickel producers had experienced a prolonged period of low prices. As a result, where possible, many producers sought to cut production, decrease operating costs, and defer capital development. Today, with improved nickel prices, producers that made those adjustments in an effective manner are experiencing significantly improved returns. Some are even considering moderate expansion.

However, the continued improvement in the nickel market in the short-term will be dependent on the continued ban placed on Indonesian ore exports. Unfortunately, as a result of some relaxation on other metal ores and a newly-elected government,

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Derek Melo
KPMG in Canada

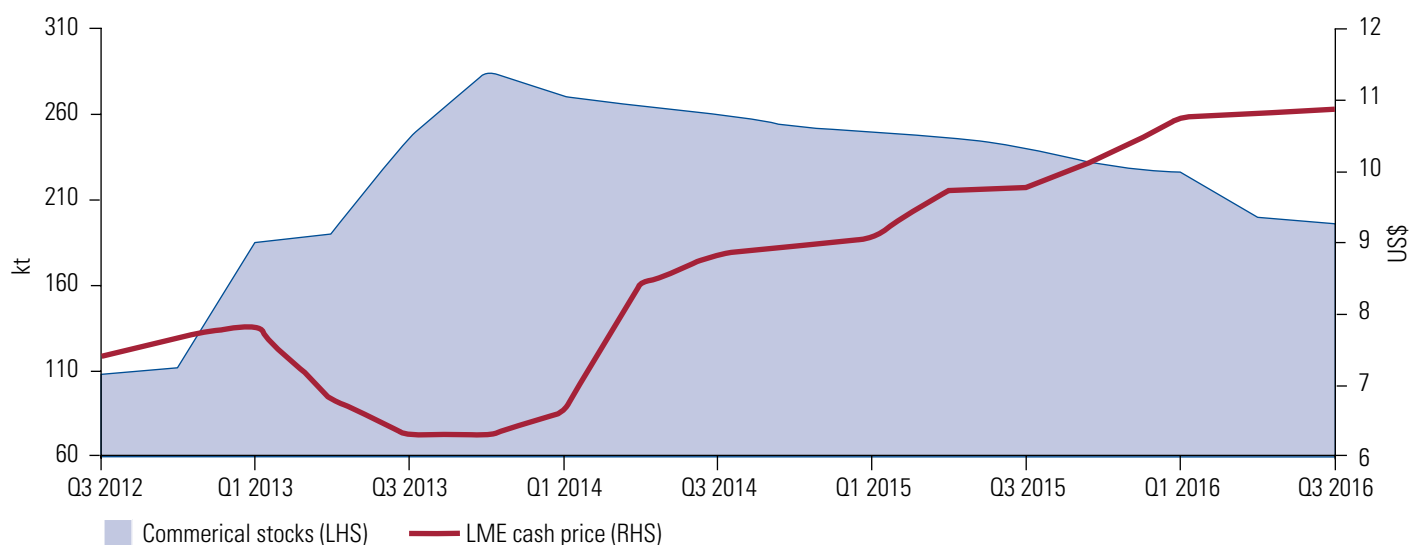
uncertainty remains on whether Indonesia will continue to enforce the ban on the export of unprocessed nickel ore.

Price outlook¹

The anticipation and then the confirmation of the Indonesian ore exports ban led to a rush for buying nickel ore and metal supplies, which drove up prices on the London Metal Exchange (“LME”) in late 2013 and into 2014. Refined nickel prices increased from about US\$6.30/lb in Q4, 2013 to about US\$6.60/lb in Q1, 2014. Prices further increased to approximately US\$9.50/lb during May 2014. In addition

to the shortage of ore from Indonesia, supply disruptions from New Caledonia have contributed to the higher price environment. The prices are expected to further increase in 2014, supported by a number of factors such as recovering industrial demand; shortages of ore from Indonesia; possibility of constrained ore exports from Russia; and failure of new projects to meet production targets.

Figure 1: International refined nickel prices and stocks



Source: “World commodity forecasts: industrial raw materials”; The Economist Intelligence Unit, July 2014

¹ “Resources and Energy Quarterly”; Bureau of Resources & Energy Economics (BREE), Australian Government, June quarter 2014; “World commodity forecasts: industrial raw materials”; The Economist Intelligence Unit, July 2014

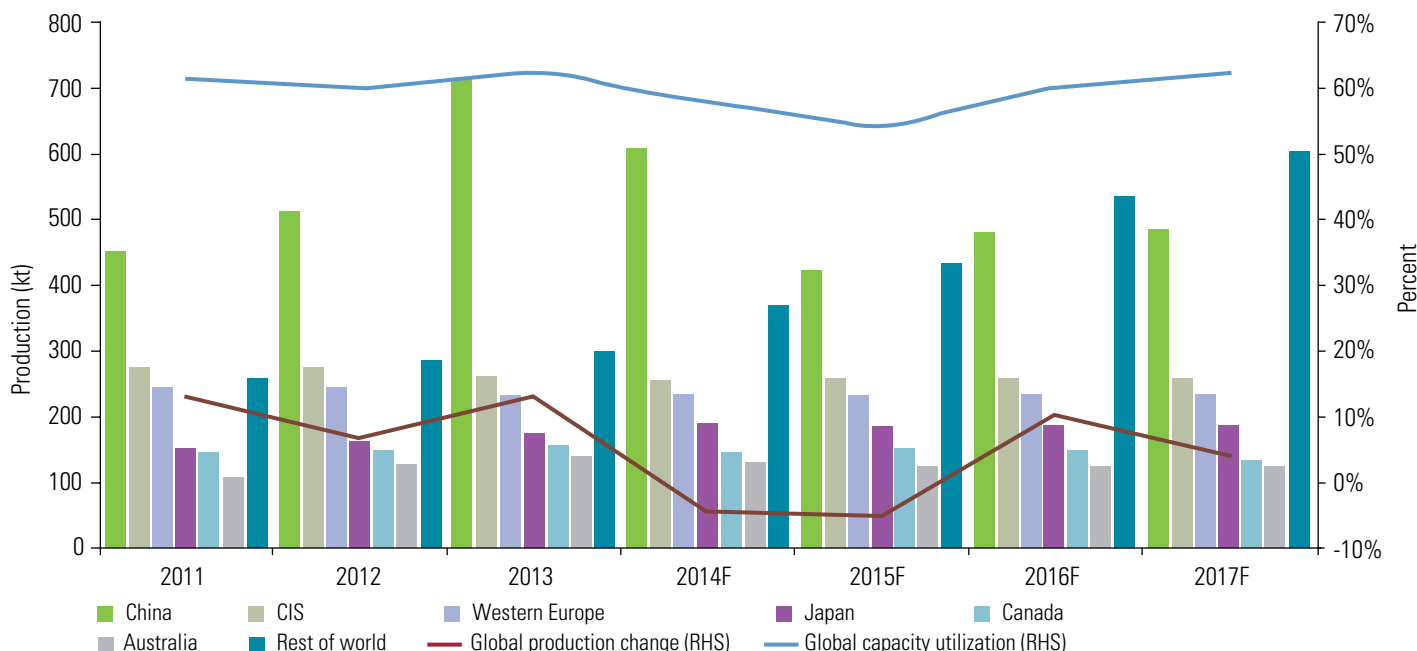
Going ahead, a demand-supply deficit in global nickel markets and the exhaustion of stockpiles built up in late 2013 and early 2014 are expected to push up prices further. However, if

prices increase even further increased supply in response to higher prices is expected to limit further price advances.

Supply and demand²

Supply

Figure 2: Global refined nickel, ferronickel production and capacity utilization, 2011–17F*



Source: Credit Suisse – Nickel The Bright Star, Upgrading price forecasts, EPS and target prices, 23 June 2014, via Thomson Research/Investext accessed July 2014.

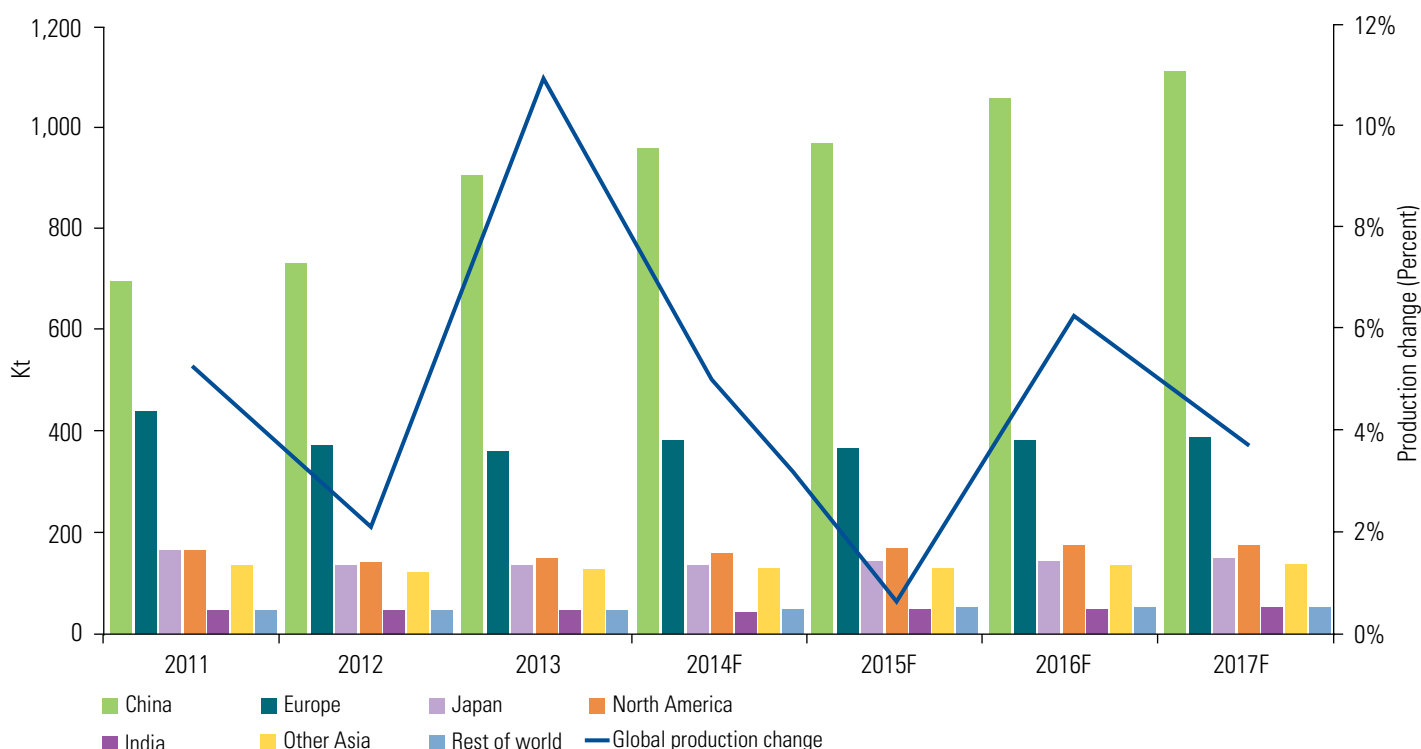
*Commonwealth of Independent States (CIS) consists of Azerbaijan, Armenia, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Uzbekistan and Ukraine; Western Europe consists of Austria, Belgium, Germany, Liechtenstein, Luxembourg, Netherlands and Switzerland

- In calendar year 2013, global refined nickel and Ferro-nickel ("FeNi") production increased by 12.5 percent year-over-year driven by the commissioning of new projects. This includes the Koniambo project in New Caledonia, which started up during Q2, 2013 and is estimated to have produced 17kt in 2013. The global production of refined nickel, including FeNi, is now expected to fall in 2014 due to capacity closures and lower output in China driven by shortage of nickel ore from Indonesia. Even at a lower level, this is expected to keep the global refined-nickel market in surplus for 2014. A tighter market and recovering prices should see production increase again in 2015.
- The global nickel industry is continuing to adjust to Indonesia's regulatory ban on raw ore exports. Some transition arrangements linked to investments in downstream processing were allowed for a few miners. For example, Freeport McMoran will be allowed to export ores concentrated to a copper content of 15 percent until 2017, but stricter rules will apply to nickel operations, effectively allowing the export of only nickel matte of 70 percent nickel content, 10 percent FeNi and nickel pig iron ("NiCrFe") containing 4 percent nickel. In response to the ban, a number of stainless steel companies are advancing work on downstream operations in Indonesia. However, the ability to consume the domestic stockpile of nickel ore mined prior to the ban will require substantial investment across processing capacity, infrastructure growth and power supply. Even when funds are available, the build-up will take time. Thus, refined nickel output from Indonesia is expected to pick up only beyond 2016.
- Refined nickel output from Australia increased 9.3 percent year-over-year to 141kt in 2013. However, this is expected to slip back in 2014 as capacity shutdowns related to weak prices in 2013 take effect. In addition, pollution problems at the Yabulu nickel refinery have led to suspension of operations. Thus, Australian output is expected to decline 4.3 percent year-over-year to 135kt in 2014. At the Yabulu nickel refinery, water in the tailings dam reached maximum limits in mid-April due to torrential rains brought by Cyclone Ita. In Canada, production in 2014 is expected to recover from the interruptions in 2013. However, incidents such as fatalities have resulted in the temporary suspension of operations. Technical problems and harsh weather have also reduced output and further production losses could take place in 2014.
- In the Philippines, nickel mine output has risen to significant levels in recent years driven by the re-opening of some large mines, such as the Nonoc mine in Mindanao, and also the 30ktpa Taganito project of Sumitomo Metal Mining that began commercial production in Q4, 2013. The decision of the Philippines' government to lift a 2 year ban on new mining projects in April 2013 has also improved medium-term prospects. The development of Philippines nickel operations could seek to replace the lost ore exports from Indonesia.

² "Resources and Energy Quarterly," Bureau of Resources & Energy Economics (BREE), Australian Government, June quarter 2014; "World commodity forecasts: industrial raw materials," The Economist Intelligence Unit, July 2014

Demand

Figure 3: Global refined nickel consumption, 2011–17F



Source: Credit Suisse – Nickel The Bright Star, Upgrading price forecasts, EPS and target prices, 23 June 2014, via Thomson Research/Investext accessed July 2014.

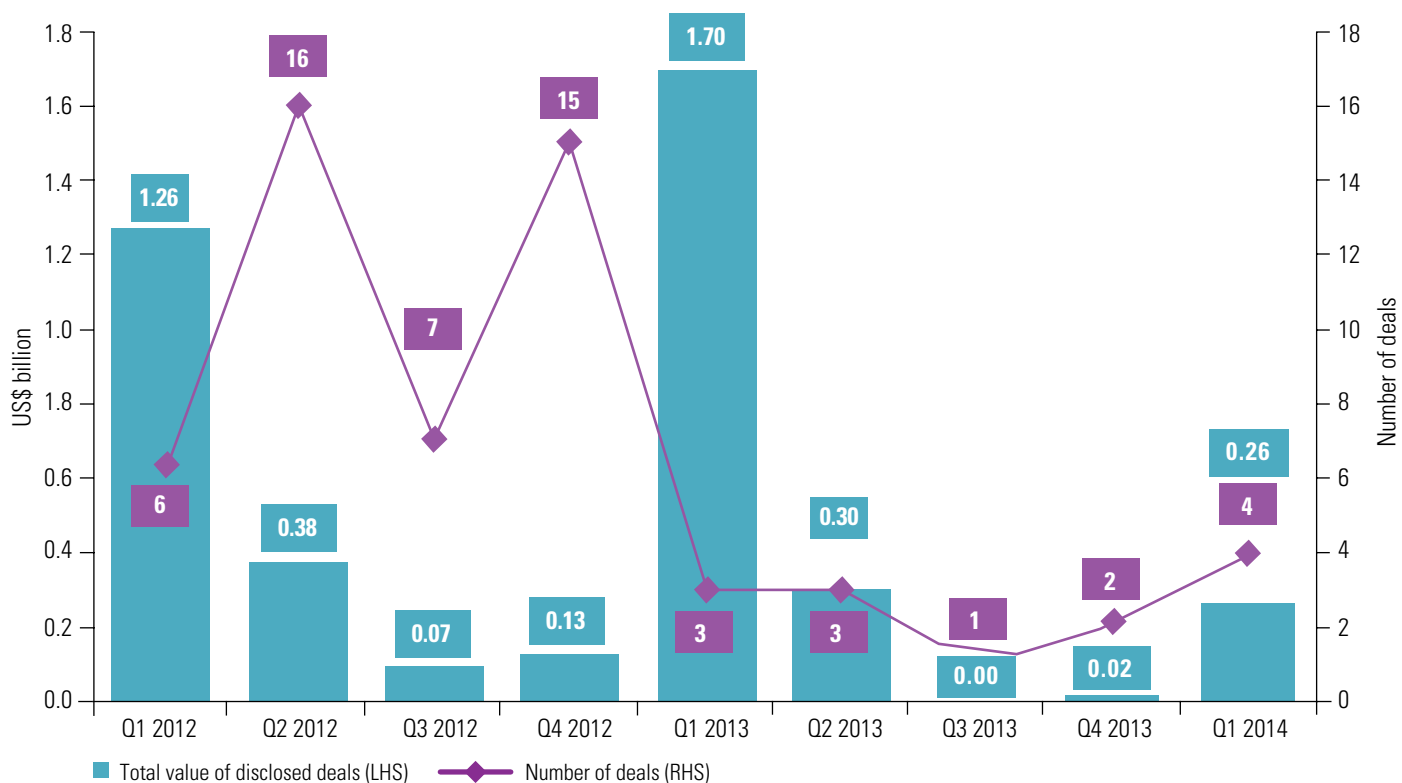
- Globally, recovery in the US and the expectations of modest growth in Japan are expected to help in compensating for the weaker demand from the EU. This is also expected to drive global growth in nickel consumption by 4.9 percent year-over-year in 2014. The Indonesian ban on nickel ore export is reshaping the global trade and production scenario for nickel. Stainless steel producers outside China have increased production in the expectation that the output in China would be constrained due to supply disruptions from Indonesia. China, the world's largest producer of stainless steel and the dominant consumer of nickel, has built up ore stocks to cater to its NiCrFe industry. However, their distribution is uneven. Also, the NiCrFe producers and steelmakers are hoarding supplies in anticipation of difficulties expected in 2H14 for the Chinese nickel industry.
- The LME prices for primary nickel at the beginning of 2014 led to an increase in the price of nickel-bearing scrap, yet nickel-bearing scrap continues to remain as a cheap source of nickel. The increased scrap imports from China could indicate that its steelmakers find it cost-effective in comparison with NiCrFe. This could lead to higher scrap imports. Also, difficulties in importing ores from a variety of new sources could incline producers more toward scrap. This would lead to slower growth in fresh nickel consumption and promote recycled nickel use in 2014. Thus, consumption in China is expected to grow 6.1 percent year-over-year in 2014 as compared to the 23.6 percent year-over-year growth seen in 2013.
- The US is showing signs of growth in its manufacturing sectors. A growth in self-sufficiency in the country's stainless steel sector is expected to drive higher US nickel consumption. For North America as a whole, consumption is expected to increase 6.6 percent year-over-year in 2014. A steady improvement in the economy in 2014 and public spending is also expected to aid in nickel consumption. Japan's nickel consumption is slowly stabilizing now and is expected to have increased nearly 13 percent in the first 2 months of 2014 compared to calendar 2013. The consumption growth from Japan is expected to result in a 2.2 percent y-o-y to 139Kt in 2014.
- Higher production of stainless steel is also being seen from newly industrializing countries such as India, Brazil and Malaysia. These economies have been the leading sources of additional demand for nickel among the world's smaller consumers. Brazil's consumption increased by about 50 percent y-o-y in 2013 and by over 92 percent y-o-y in Q1, 2014. Industrial activity in India increased during Q4, 2013, which increased total nickel consumption in 2013. Also, a slew of regulatory measures to push infrastructure investment could follow the recently concluded elections in India. This could provide a base for sustained demand from the country.

Key developments

Ownership changes³

The total deal valuation for the nickel industry announced during Q1, 2014 stood at US\$0.26 billion. This represented a significant quarter-over-quarter deal valuations increase from US\$0.02 billion in Q4, 2013 (Refer to Figure 4). There were two deals in Q4, 2013. Subsequently, the deal activity increased to four deals in Q1, 2014. Four out of six deals reported during Q4, 2013 and Q1, 2014 were closed.

Figure 4: Deals in nickel industry



Source: Deals search: Mergermarket database accessed 20 November 2013; KPMG Analysis

Table 1: Nickel deals in Q4, 2013 and Q1, 2014

Date announced	Target	Target nation	Acquirer	Acquirer nation	Status	Value of transaction (US\$ million)	Stake (%)
25-Mar-14	ENK Plc	United Kingdom	DMCI Holdings Inc	Philippines	Completed	69	40%
14-Feb-14	Fraser Range JV (Nova-Bollinger Project)	Australia	Sirius Resources N.L.	Australia	Announced	170	30%
21-Jan-14	Norilsk Nickel Australia Pty Ltd (Thunderbox and Bannockburn gold mines and operations)	Australia	Saracen Metals Pty Ltd.	Australia	Completed	20	100%
11-Dec-13	Nyota Minerals (Ethiopia) Limited	Ethiopia	KEFI Minerals plc	Turkey	Completed	7	75%
13-Nov-13	FinnAust Mining Plc.	United Kingdom	Centurion Resources Plc	United Kingdom	Completed	12	100%

Source: Deals search: Mergermarket database accessed 21 July 2014; KPMG Analysis

³ Deals search: Mergermarket database accessed 21 July 2014

Regulatory updates

The regulations introduced during Q4, 2013 and Q1, 2014 were aimed at conserving domestic ore reserves and promoting the indigenous development of the nickel mining and refining industry.

Table 2: Recent regulations in nickel industry

Country	Regulation	Description
Indonesia ⁴	Freeport-McMoRan tax deal with Indonesia	<ul style="list-style-type: none"> Freeport-McMoRan struck a deal with the Indonesian government on 27 March 2014 to allow for the recommencement of annual ore shipments. Freeport received a reprieve on paying an export tax by pledging a 5 percent security bond to the Indonesian government to be used in constructing a smelter.
Indonesia ⁵	Export ban	<ul style="list-style-type: none"> Indonesia halted mineral ore exports for a number of commodities on 12 January 2014. The government intends to promote domestic processing through this measure. The Indonesian mining industry is discussing export quotas for nickel and bauxite ore post the ban.
Colombia ⁶	Agreement	<ul style="list-style-type: none"> Colombia's mines and energy ministry (Minminas), the Zenú indigenous community and representatives of BHP Billiton's Cerro Matosonickel mine in Colombia signed an agreement in November 2013. This put an end to protests by the Zenú community that took place in October 2013. The Zenú community lives within the area of influence of the mine.
Venezuela ⁷	State assumption of nickel projects	<ul style="list-style-type: none"> The Venezuelan government through the oil and mines ministry assumed nickel exploration and production activities in the states of Aragua and Miranda in October 2013. The state will directly carry out the mining activities in the areas of San Antonio, Camedas, Cofemina, El Tigre and San Onofre, located in the Santos Michelena and Guacaipuro municipalities through the state-owned mining firm Corporacion Venezolana de Minería.

Cross-section of global nickel projects

Table 3: Cross-section of global nickel projects*

Project	Country/Region	Operators/Owners	Potential start year	Nickel production (ktpa)
Koniambo Laterite Nickel Mine	New Caledonia	Glencore plc (Operator)	2014	60.0#
Mindoro Laterite Nickel Project	Philippines	Intex Resources ASA (Operator)	N/A	53.0
Long Harbour Hydrometallurgy Nickel Smelter	Canada	Vale S.A. (Operator)	2014	50.0
Minago Nickel Project	Canada	Victory Nickel Inc. (Operator)	2014	11.0
Honeymoon Well Nickel Project	Australia	MMC Norilsk Nickel OJSC (Operator)	N/A	40.0
FeNi Haltim Nickel Project	Indonesia	PT Antam Tbk (Operator)	2015	27.0
Acoje Laterite Nickel Mine	Philippines	DMCI Holdings Inc (Operator)	2014	25.0**
Aquila Nickel Project	Indonesia	Solway Group (Operator)	N/A	38.0
Fenix Laterite Nickel Operation	Guatemala	Solway Group (Operator)	2014	24.0
Agata Laterite Nickel Project	Philippines	TVI Pacific Inc (Operator)	N/A	21.0
Decar Nickel Project	Canada	Cliffs Natural Resources Inc. (Operator)	N/A	37.4
Dumont Nickel Project	Canada	Royal Nickel Corporation (Operator)	2016	47.0
Kalgoorlie Laterite Nickel Project	Australia	Heron Resources Limited (Operator)	N/A	37.0
Marlborough Laterite Nickel Project	Australia	Gladstone Pacific Nickel Ltd (Operator)	N/A	63.0
Mayaniquel Laterite Nickel Mine	Guatemala	Cunico Resources NV (Operator)	N/A	36.5
Ronnbacken Nickel/PGE Project	Sweden	Nickel Mountain Group AB (Operator)	N/A	26.0
Wingellina Laterite Nickel Deposit	Australia	Metals X Limited (Operator)	N/A	40.0

Source: Company data accessed July 2014; Intierra database accessed July 2014
Note: Project names are hyperlinked to source links.



* The list is not exhaustive and contains only a limited number of projects.
Ramp up to 60 ktpa expected from 2015; ** Ramp up to 25 ktpa expected from 2027

⁴ "Freeport-McMoRan strikes tax deal with Indonesia, exports to resume", 31 March 2014, via Factiva accessed July 2014

⁵ "Indonesian mining industry lobbies for nickel ore, bauxite export quotas", 24 January 2014, via Factiva accessed July 2014; "UPDATE 2-Indonesia bans mineral ore exports, all eyes on nickel impact", Reuters, 12 January 2014

⁶ "Minminas, Cerro Matoso sign agreement with indigenous community", 5 November 2013, via Factiva accessed July 2014

⁷ "Venezuela govt assumes nickel projects in Aragua, Miranda", 8 October 2013, via Factiva accessed July 2014



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