Nickel

Resources and Energy Quarterly June 2017

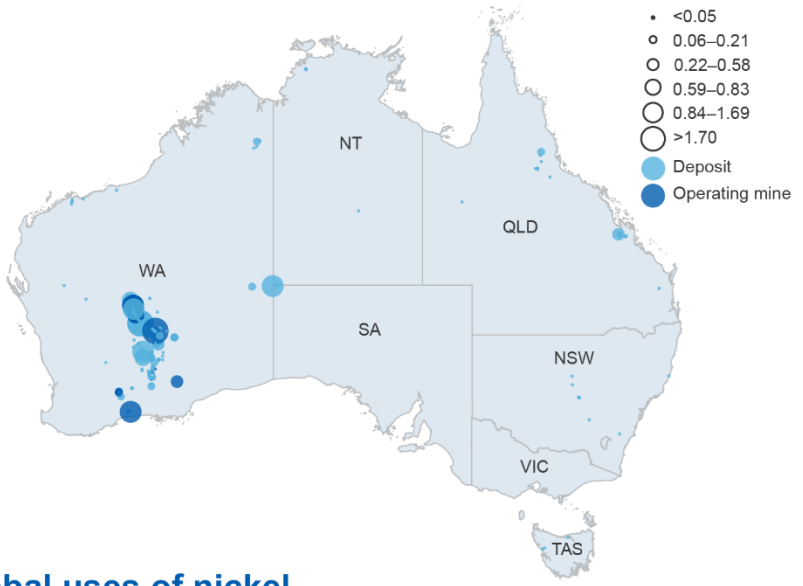
5th
largest miner in the world

211 thousand tonnes exported in 2016

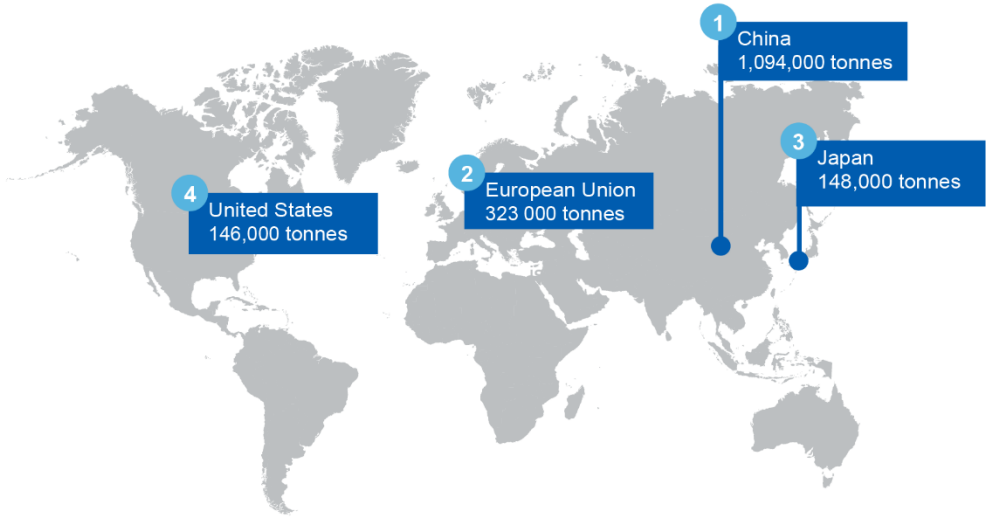
14% fall in exports from 2015

10% of world nickel mined is in Australia

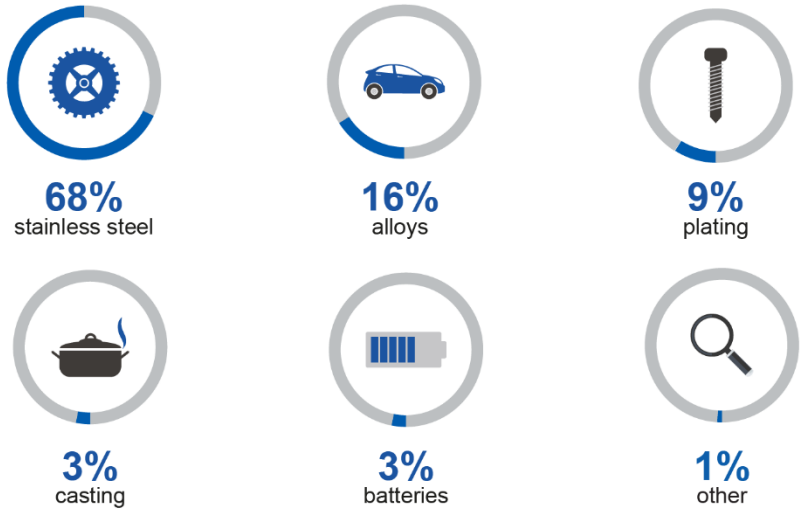
Major Australian nickel deposits (Mt)



Key nickel consumer markets



Global uses of nickel



Market summary

Australia's nickel export earnings are estimated to have declined by 31 per cent to $2.1 billion in 2016–17, largely reflecting a decline in export volumes. The cessation of production at Queensland Nickel's Yabulu refinery, as well as several mine closures in Western Australia, contributed to the decline.

Over the next two years, nickel export values are forecast to be relatively steady. The ramping up of production at Independence Group's Nova mine is expected to contribute to a moderate increase in volumes, but this is forecast to be offset by a slight decline in nickel prices in real terms.

Prices

LME nickel prices declined for the second consecutive quarter in the June quarter 2017 — by an estimated 8.5 per cent — although they are estimated to be 6.5 per cent higher than a year earlier.

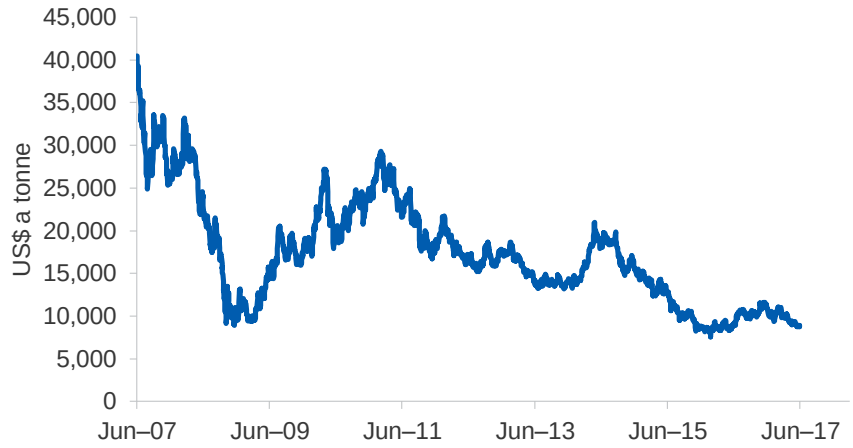
The outlook for nickel prices over the next two years has been revised down, following government policy announcements in the Philippines and Indonesia that are expected to add more supply to the global market. However, demand is still expected to remain relatively strong in China — the world's largest market for nickel.

On balance, nickel prices are forecast to remain close to current levels over the next two years, decreasing marginally in real terms. However, with a high degree of uncertainty surrounding the impact of political decisions in the Philippines and Indonesia on nickel production, the price outlook remains particularly uncertain and volatility may be high.

World consumption

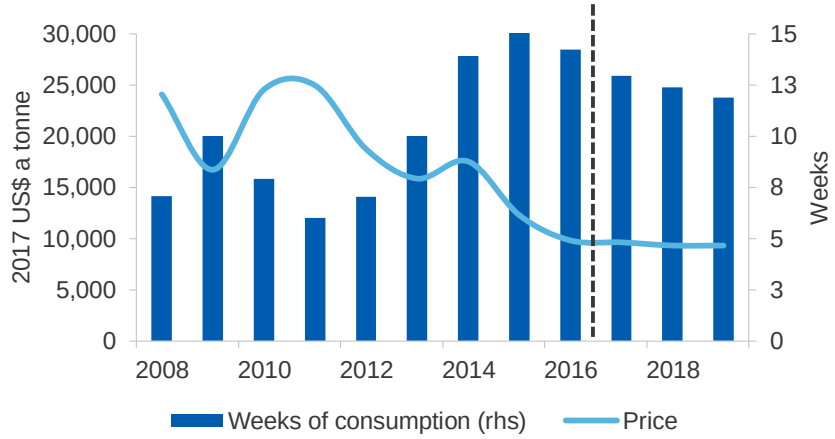
World nickel consumption increased by 9.6 per cent year-on-year in the March quarter 2017. Growth in world nickel consumption continues to be driven by China, which accounted for 65 per cent of world nickel consumption growth in the year to the March quarter. World nickel consumption is forecast to moderate, but remain strong in 2017, growing by 5.9 per cent. Nickel consumption growth is forecast to slow over the next two years, to 4.7 per cent and 4.2 per cent in 2018 and 2019, respectively.

Figure 13.1: LME nickel spot price



Source: Bloomberg (2017) London Metal Exchange

Figure 13.2: Nickel stocks and price



Source: ABS (2017) International Trade in Goods and Services, 5368.0;Department of Industry, Innovation and Science (2017)

Nickel consumption growth in recent years has been supported by rapid growth in stainless steel production in China (69 per cent of the China's nickel use is in the manufacture of stainless steel). In 2016, China's stainless steel production grew by 16 per cent to 25 million tonnes. India replaced Japan as the world's second largest stainless steel producer in 2016, with production growing by 9 per cent to 3.3 million tonnes.

World production

World mined nickel production declined year-on-year for the sixth consecutive quarter in the March quarter 2017 to 462,000 tonnes. However, at 0.8 per cent, the pace of decline has slowed considerably compared to recent quarters. Falling output in the Philippines (down 19,000 tonnes) and in Russia (down 15,000 tonnes), as well as elsewhere, more than offset an increase in output of 36,000 tonnes in Indonesia.

In the Philippines, Regina Lopez — who as acting Secretary of the Department of Environment and Natural Resources ordered 23 mine closures, cancelled 75 mining exploration contracts and banned new open-pit mines — was removed from her position on 2 May 2017. It now appears that mining suspensions may be lifted and supply will return to the market.

Further adding to global nickel supplies is Indonesia, which is beginning to export nickel ores again. In January 2017, Indonesia eased its ban on nickel ore exports, subject to certain conditions. The ban was introduced in January 2014, to provide support to 'higher value-added' refining industries.

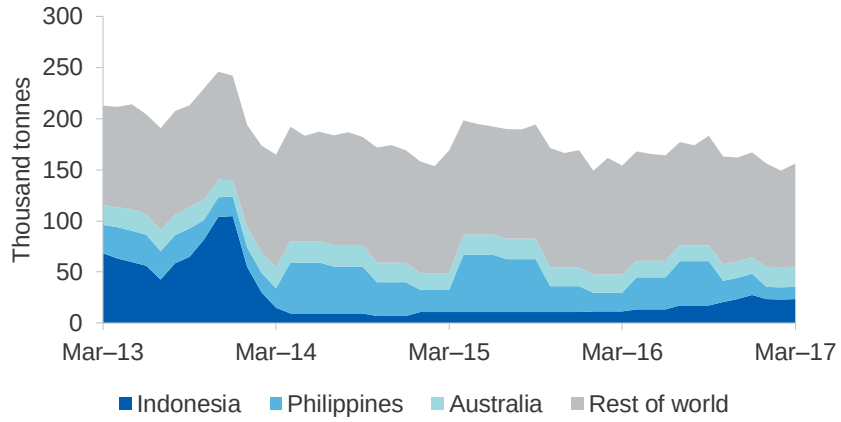
Australia's exploration, production and exports

Exploration expenditure

Nickel and cobalt exploration expenditure increased by 187 per cent year-on-year to $20 million in the March quarter 2017 — the highest quarterly expenditure on nickel and cobalt exploration in over two years.

Despite the recent increases in exploration activity, with nickel prices forecast to remain low, it is unlikely that exploration activity will increase substantially over the next two years.

Figure 13.3: World mined nickel production, monthly



Source: International Nickel Study Group (2017)

Figure 13.4: Australia's nickel and cobalt exploration expenditure, quarterly

Source: ABS (2017) Mineral and Petroleum Exploration 8412.0

Australia's nickel production forecast to increase in 2017–18

Australia's refined and intermediate nickel production is estimated to have declined sharply in 2016–17, but is forecast to increase in the next two years. Intermediate and refined nickel production is estimated to have declined by 20 per cent to 148,000 tonnes in 2016–17. The decline in Australia's refined nickel production in 2016–17 is largely attributable to the closure of Queensland Nickel's Yabulu refinery in early 2016.

Mined nickel production (metal content) declined by 4.5 per cent to 207,000 tonnes in 2016–17, but is forecast to increase in the next two years. The decline in mined production is attributable to several mine closures in Western Australia. In particular, Mincor's Kambalda mine and Panoramic Resources' Savannah and Lanfranchi mines ceased operations in late 2015 and early 2016.

Forecast growth in mined nickel production in the next two years is largely attributed to the commissioning of Independence Group's Nova mine. However, with nickel prices expected to remain low, there may be little incentive to recommence operations at mines currently placed as being ' under care and maintenance'. As a result, Australia's mined nickel production is forecast to remain well below 2011–12 to 2014–15 levels.

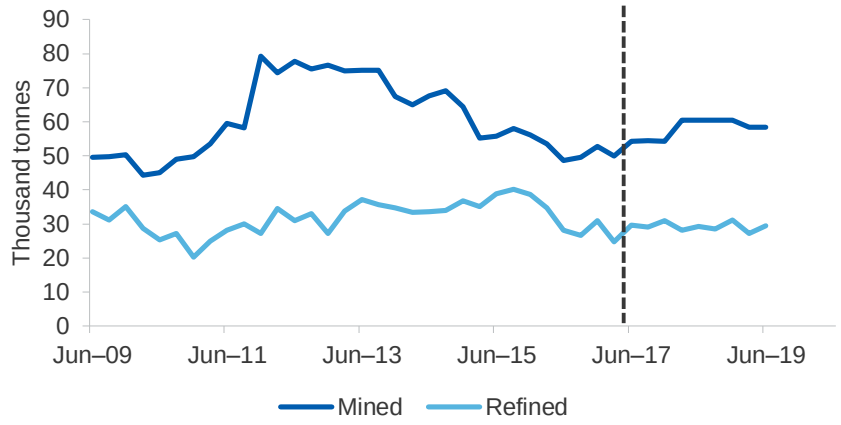
Australia's nickel production declined in the March quarter 2017

In the March quarter 2017, Australia's refined nickel production declined by 27 per cent year-on-year to 33,000 tonnes, while mined output is estimated to have declined by 6.5 per cent to 50,000 tonnes.

Declining nickel production in the March quarter 2017 was largely attributed to temporary disruptions. Glencore's Murrin Murrin mine reported a 33 per cent year-on-year drop in own-source nickel production in the March quarter 2017, which it attributed to maintenance stoppages. First Quantum reported a 21 per cent drop in output at Ravensthorpe, which it attributed to equipment maintenance and flooding.

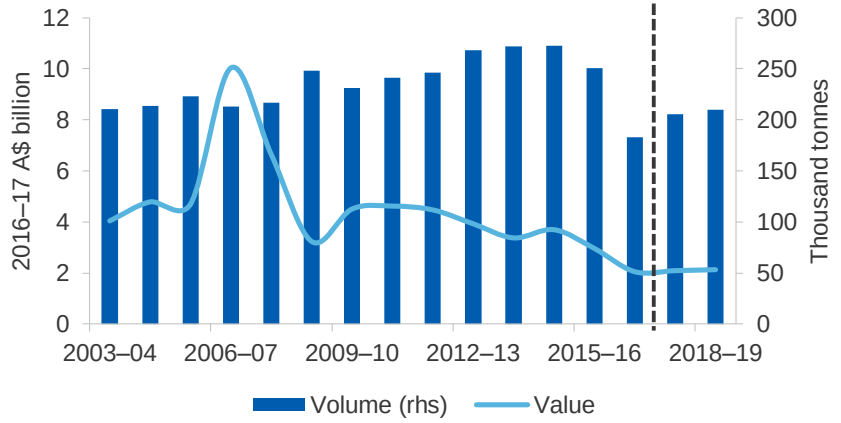
Meanwhile, production at Western Areas NL nickel mines was little changed in the March quarter. Nickel metal production at BHP Billiton's Nickel West facility declined by 2.4 per cent in the March quarter 2017, although BHP expects production to increase by 10 per cent in 2016–17, following ongoing debottlenecking activities.

Figure 13.5: Australia's nickel production



Source: Department of Industry, Innovation and Science (2017)

Figure 13.6: Australia's nickel export volumes and values



Source: ABS (2017) International Trade in Goods and Services, 5368.0; Department of Industry, Innovation and Science (2017)

Independence Group's Nova mine, which commenced production in the December quarter 2016, continued to ramp up production in the March quarter 2017. It is expected to have an annual productive capacity of 30,000 tonnes when fully operational.

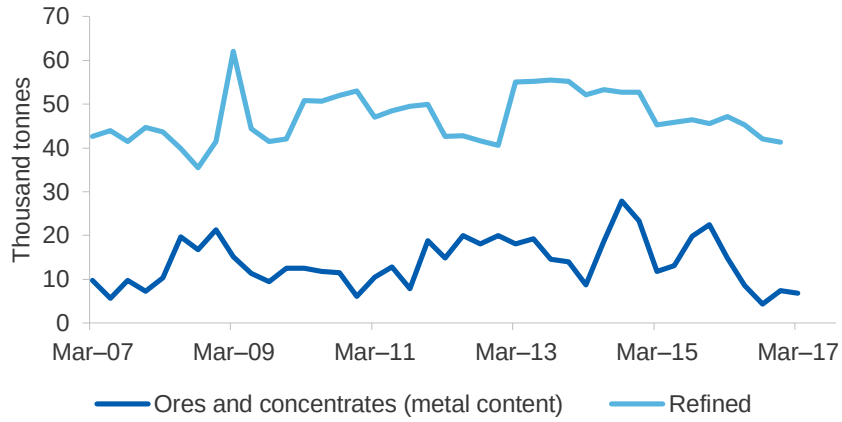
Export values forecast to be relatively flat in the next two years

Australia's nickel export earnings are estimated to have declined by 31 per cent to $2.1 billion in 2016–17, largely reflecting a decline in export volumes. The decline in export volumes is attributed to declines in both refinery and mine output.

Exports of nickel ore and concentrates have declined particularly sharply in 2016–17. In the September quarter 2016, exports of nickel ores and concentrates declined to 25,000 tonnes (metal content) — the lowest level since March quarter 1995. While nickel ore and concentrate export volumes have recovered somewhat in recent months, in the March quarter 2017 they were still down 47 per cent year-on-year.

Nickel exports values are forecast to be relatively stable in 2017–18 and 2018–19. This reflects a declining nickel price (in real terms) offsetting the impact of a forecast increase in export volumes.

Figure 13.7: Australia's nickel exports, quarterly



Notes: The March quarter 2017 estimate for refined is not shown because data is subject to a 6 month lag
Source: ABS (2017) International Trade in Goods and Services, 5368.0;Department of Industry, Innovation and Science (2017); International Trade Centre (2017) International Trade Statistics 2001-2017

Table 13.1 Nickel outlook

World	Unit	2016	2017 f	2018 f	2019 f	Annual percentage change 2017 f	2018 f	2019 f
Production								
– mine	kt	1,990	2,150	2,273	2,369	8.0	5.7	4.2
– refined	kt	1,984	2,135	2,257	2,352	7.6	5.7	4.2
Consumption	kt	2,033	2,146	2,247	2,342	5.6	4.7	4.2
Stocks	kt	555	533	533	533	-4.0	0.0	0.0
– weeks of consumption		14.2	12.9	12.3	11.8	-9.0	-4.5	-4.1
Price LME								
– nominal	US$/t	9,599	9,617	9,534	9,747	0.2	-0.9	2.2
	Usc/lb	435	436	432	442	0.2	-0.9	2.2
– real	US$/t	9,814	9,617	9,311	9,305	-2.0	-3.2	-0.1
	USc/lb	445	436	422	422	-2.0	-3.2	-0.1

Australia	Unit	2015–16	2016–17 s	2017–18 f	2018–19 f	Annual percentage change 2016–17 s	2017–18 f	2018–19 f
Production b								
– mine	kt	216	207	230	238	-4.5	11.1	3.6
– refined	kt	142	112	117	116	-21.1	4.8	-1.0
– intermediate	kt	44	36	40	38	-16.6	10.0	-4.5
Export volume	kt	250	183	202	201	-27.0	10.4	-0.2
– nominal value	A$m	2,909	2,052	2,109	2,155	-29.5	2.8	2.2
– real value	A$m	2,960	2,052	2,064	2,064	-30.7	0.6	0.0

Notes: ***b*** *In 2017 US dollars;* ***c*** *Nickel content of domestic mine production; d Includes metal content of ores and concentrates, intermediate products and nickel metal;* ***e*** *In 2016–17 Australian dollars;* ***f*** *forecast; s estimate*

Source: ABS (2017) International Trade in Goods and Services, Australia, Cat. No. 5368.0; Company reports; Department of Industry, Innovation and Science; International Nickel Study Group (2017); LME (2017); World Bureau of Metal Statistics (2017).