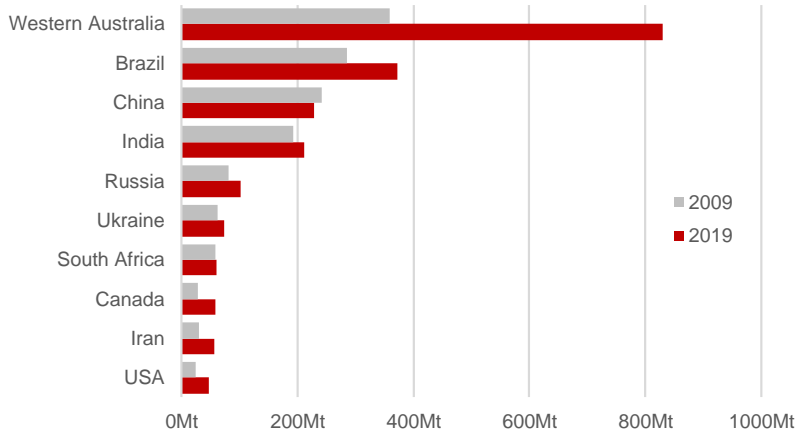




THE WORLD IRON ORE MARKET

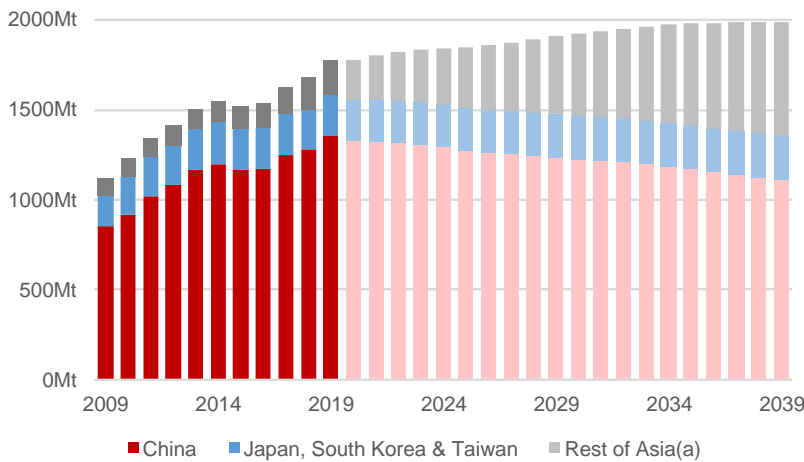
Major global iron ore¹ suppliers



¹ Dry million tonnes. Source: AME, Iron Ore Strategic Studies (Quarterly).

- Growth in Western Australia's iron ore supply was more than double the growth of the rest of the world over the past 10 years.
- Western Australia is the largest iron ore supplier in the world, accounting for 38% of global supply in 2019, followed by Brazil (17%).
- China (11%), India (10%) and Russia (5%) are major global iron ore suppliers, but retain most of their production for domestic steel manufacturing.
- In 2019, iron ore supply from:
 - Brazil fell 8% to 373 million tonnes.
 - China rose 6% to 229 million tonnes.
 - India rose 8% to 212 million tonnes.

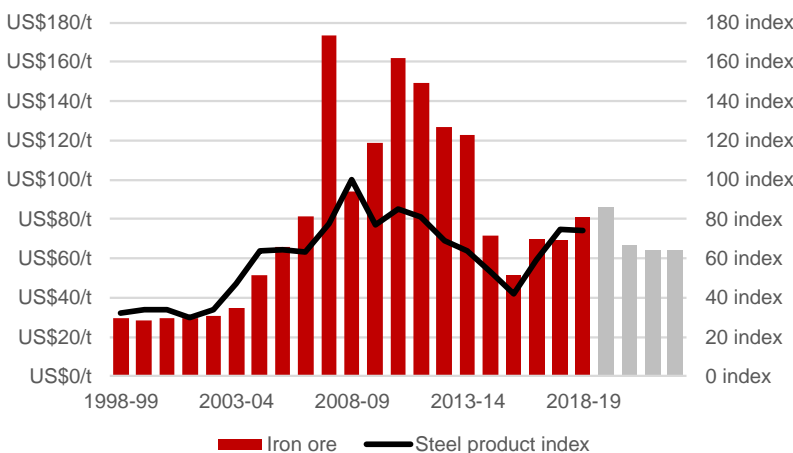
Asia iron ore¹ demand



¹ Dry million tonnes. (a) India, Vietnam, Malaysia, Indonesia, Philippines and other Asian countries. Source: AME, Iron Ore Strategic Studies (Quarterly).

- Asia accounted for 79% of global iron ore demand in 2019, with China (60%), India (7%), Japan (5%) and South Korea (3%) having the largest shares.
- In 2019, iron ore demand from:
 - Asia rose 6% to 1,775Mt.
 - China rose 6% to 1,359Mt.
 - Japan, South Korea and Taiwan combined fell 1% to 225Mt.
 - Rest of Asia rose 11% to 191Mt.
- AME forecasts Asia's iron ore demand will rise by 211 million tonnes from 2019 to 2039, with growth in the rest of Asia (up 441Mt) and Japan, South Korea and Taiwan combined (up 22Mt) offsetting a decline in China (down 251Mt).

Iron ore¹ and steel product² prices (annual average)



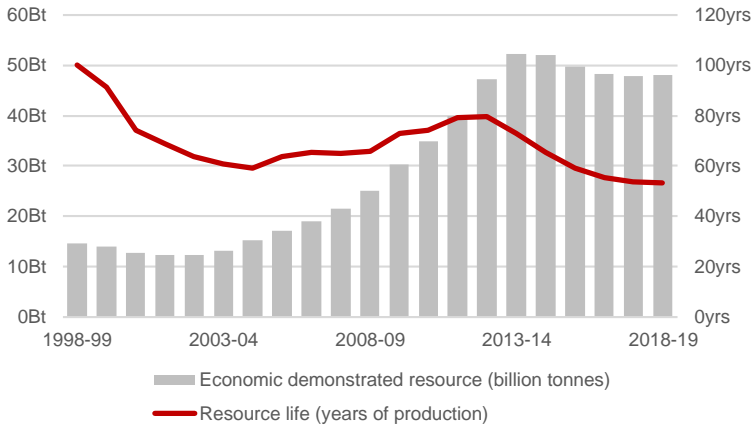
¹ China spot price in nominal US dollars, cost and freight (CFR). ² China steel product price index (2007-08 = 100.0). Source: World Bank, Commodity Markets; CEIC, China Premium Database; and ³ WA Government 2019-20 Mid-year Financial Projections Statement.

- China's rapid increase in iron ore demand lifted the iron ore price from US\$28 a tonne in 1999-00 to US\$173 a tonne in 2007-08. The iron ore price fell to US\$52 a tonne in 2015-16 as China's demand slowed and there was excess supply in the market.
- In 2018-19, the iron ore price rose 16% to US\$81 a tonne, largely due to disruptions in iron ore supply from Brazil and Western Australia. Steel product prices fell 1% in 2018-19.
- The iron ore price is forecast to be US\$86 a tonne in 2019-20 and US\$66 a tonne in 2020-21.³
- In November 2019, the iron ore price fell 4% to US\$85 a tonne and steel product prices rose 1%.



WESTERN AUSTRALIA'S COMPETITIVENESS

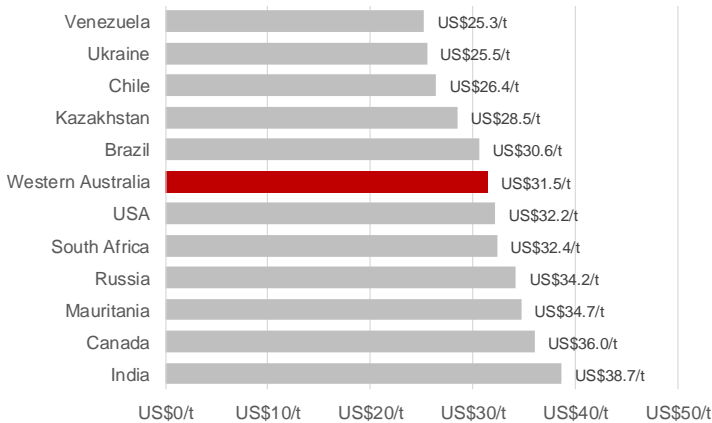
Estimated¹ iron ore resources



¹ Based on Western Australia's share of Australian iron ore production. ² US Geological Survey. ³ Compound annual growth rate. Source: ABS 5204.0 Australian System of National Accounts.

- Western Australia has large iron ore reserves, accounting for 29% of the world's crude iron ore reserves in 2018.²
- Western Australia had an estimated 48 billion tonnes of economic demonstrated iron ore resource in 2018-19, which could sustain current production for 53 years.
- Western Australia's reserves had an average iron content of 48% in 2018, below the world average of 49% and Brazil's 53%.²
- Western Australia's iron ore production had an average iron content of 62% in 2018, above the world average of 60% but below Brazil's 63%.²
- Western Australia's iron ore exploration rose 10% to \$310 million in 2018-19, compared with an annual decline³ of 6% over the past ten years.

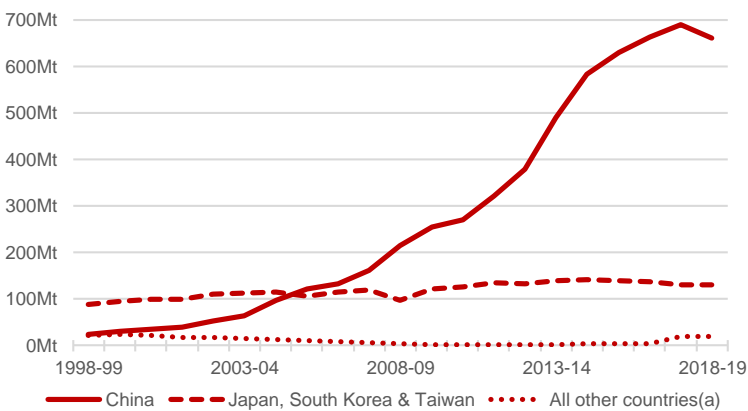
Total cash cost¹ of seaborne iron ore exports: 2018



¹ Price normalised total cash cost in US dollars, cost and freight (CFR), whereby production costs for different iron ore products are adjusted to a benchmark product (62% Fe fines) based on price differentials. Source: S&P Global Market Intelligence, Mine Economics Model.

- Western Australia's iron ore miners are among the world's lowest cost seaborne iron ore exporters.
- The average total cash cost¹ of Western Australia's iron ore exports was US\$31.5 a tonne in 2018, below the world average of US\$31.9 a tonne, although above Venezuela, Ukraine, Chile, Kazakhstan and Brazil.
- Western Australia's major iron ore ports are close to the largest iron ore markets in Asia, reducing shipping costs relative to some of its competitors.
- According to AME, Western Australia's average iron ore shipping spot rate to North China rose 14% to US\$7.6 a tonne in 2018, well below Brazil's rate of US\$18.5 a tonne.

Major iron ore export markets



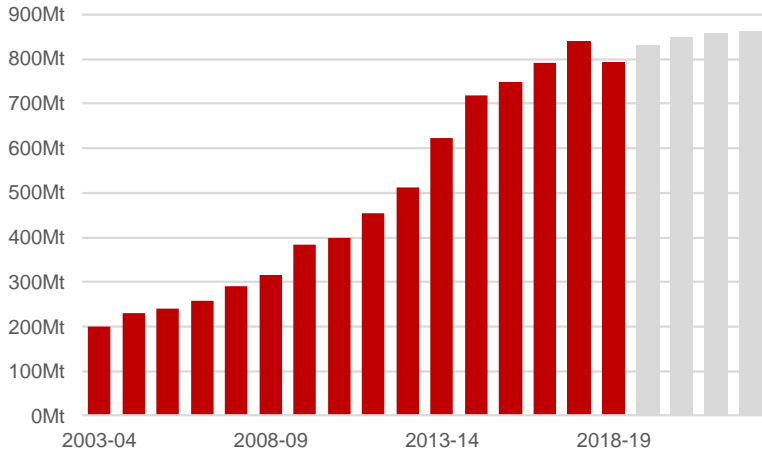
(a) Included mainly Vietnam, India, Indonesia, Malaysia, Singapore and Hong Kong (SAR of China) in 2018-19. ¹ Excludes China, Japan, South Korea and Taiwan. Source: ABS 5368.0 International Trade in Goods and Services.

- Western Australia's iron ore industry has established long-term trade relationships across Asia.
- Over 81% of Western Australia's iron ore exports went to China in 2018-19, with exports down 4% to 661 million tonnes – the first annual decline since 1998-99.
- Iron ore exports to Japan, South Korea and Taiwan combined rose 1% to 131 million tonnes in 2018-19.
- Iron ore exports to all other countries¹ rose 29% to 20 million tonnes in 2018-19 – mainly to Malaysia and Vietnam.
- In 2018, Western Australia accounted for over half of the iron ore imported by China (63%), Japan (51%) and South Korea (69%).



WESTERN AUSTRALIA'S SUPPLY

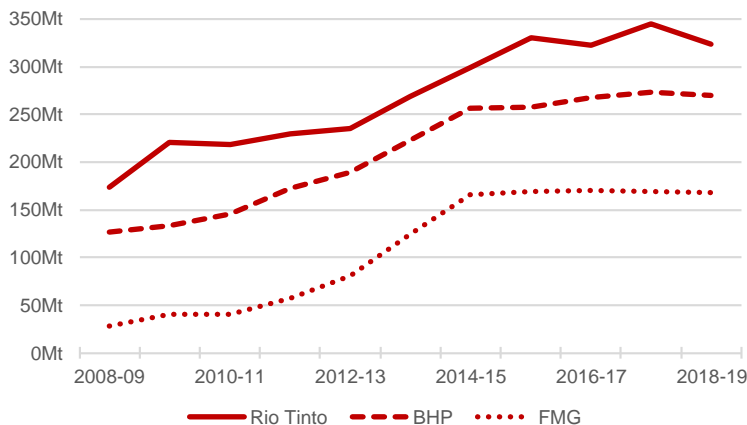
Iron ore sales volumes



¹ Compound annual growth rate. Source: WA Department of Mines, Industry Regulation and Safety, Resource Data Files; and ² WA Government 2019-20 Mid-year Financial Projections Statement.

- Growth in Western Australia's iron ore sales is slowing as China's demand slows and new mines reach full production.
- In 2018-19, Western Australia's iron ore sales fell 5% to 794 million tonnes, compared with annual average growth¹ of 10% over the past ten years.
- Western Australia's iron ore sales fell in 2018-19 largely due to supply disruptions caused by Tropical Cyclone Veronica, a train derailment (BHP) and fires at Mt Whaleback (BHP) and Cape Lambert A (Rio Tinto).
- Western Australia's iron ore sales are forecast² to rise to 862 million tonnes by 2022-23.
- Western Australia produced mainly iron ore fines (72%) in 2019, followed by lump (25%) and concentrate (3%).

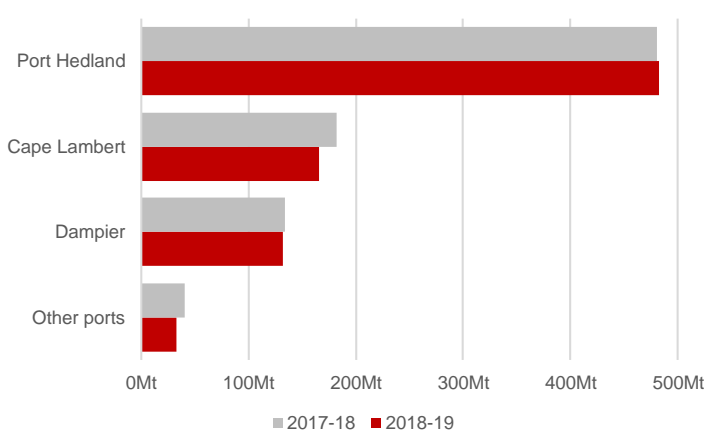
Major iron ore miners' sales¹²³



¹ Western Australian operations. ² Wet tonnes. ³ Inclusive of third party tonnes. Source: Company production reports.

- Western Australia's major iron ore miners Rio Tinto, BHP and Fortescue Metals Group (FMG) are the largest global iron ore producers behind Vale from Brazil.
- Rio Tinto (360Mtpa) and BHP (290Mtpa) are developing new mines by 2021 to utilise additional rail and port capacity developed over recent years.
- Rio Tinto's iron ore sales fell 6% to 324Mt in 2018-19 and its sales guidance for 2019 is 320-330Mt.¹
- BHP's iron ore sales fell 1% to 270Mt in 2018-19 and its production guidance for 2019-20 is 273-286Mt.¹
- FMG's iron ore sales fell 1% to 168Mt in 2018-19 and its sales guidance for 2019-20 is 170-175Mt.¹

Major iron ore export ports



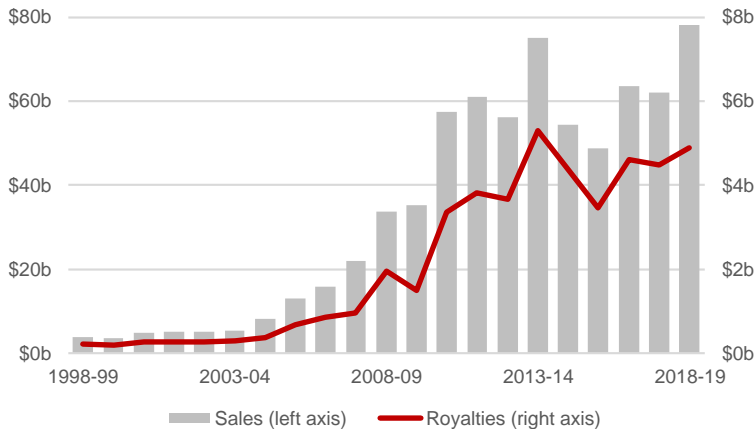
Source: ABS 5368.0 International Trade in Goods and Services.

- Port Hedland is the world's largest bulk export port, while Cape Lambert and Dampier are also major bulk export ports.
- Port Hedland (59%) exported most of Western Australia's iron ore in 2018-19, followed by Cape Lambert (20%), Dampier (16%) and other ports (4%).
- Port Hedland's iron ore exports rose 0.3% to 482Mt in 2018-19. Cape Lambert's iron ore exports fell 9% to 166Mt in 2018-19. Dampier's iron ore exports fell 2% to 132Mt in 2018-19.
- Rio Tinto expanded Cape Lambert and Dampier in 2015, raising annual capacity to 210Mt and 150Mt respectively. Annual shipping capacity in Port Hedland increased to 617Mt in 2019 due to investment in port dredging, marine technology and other port efficiencies.



CONTRIBUTION TO WESTERN AUSTRALIA'S ECONOMY

Value of iron ore sales and royalties



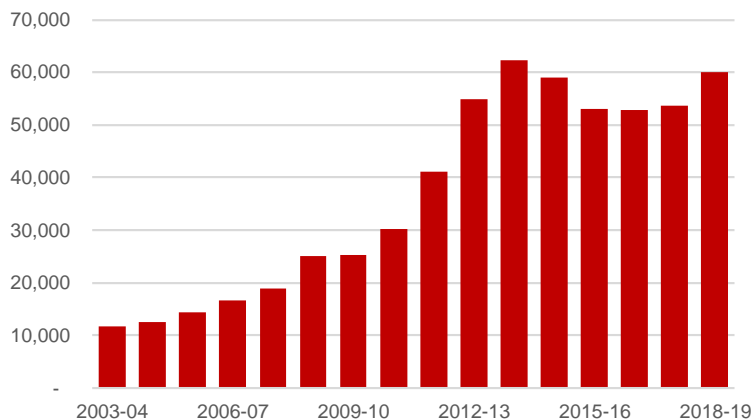
¹ Includes North West Shelf Grants. ² Compound annual growth rate.
Source: Western Australian Department of Mines, Industry Regulation and Safety, Resource Data Files.

Major iron ore projects

Operator	Mine/deposit	Capex (\$m) ¹	Mtpa	Fe (%) ²	Start-up
Major operating:					
Rio Tinto	Mt Tom Price	n.a.	40	62	1966
BHP	Newman	n.a.	100	62	1969
Rio Tinto	Robe River - Pannawonica	n.a.	35	57	1974
BHP	Yandi	n.a.	80	58	1992
Rio Tinto	Yandicoogina	n.a.	50	59	1998
Rio Tinto	Robe River - West Angelas	1,700	35	62	2002
BHP	Mining Area C	3,000	60	62	2003
Rio Tinto	Nammuldi	n.a.	60	62	2006
Rio Tinto	Hope Downs	3,400	45	61	2007
FMG	Chichester Hub	8,800	100	58	2008
Recently completed:					
FMG	Solomon Hub	9,600	70	58	2013
Gindalbie	Karara*	2,600	8-16	66	2013
CITIC Pacific	Sino Iron*	12,000	24	66	2013
BHP	Jimblebar	3,800	35-55	63	2013
Rio Tinto	Nammuldi (Expansion)	2,200	10-20	62	2014
Hancock Pros.	Roy Hill	13,700	55-60	61	2015
Rio Tinto	Silvergrass	338	10-20	62	2017
Mt Gibson	Koolan Island (Restart)	97	5	65	2019
Under construction or committed:					
FMG	Eliwana	1,700	30	60	2020
BHP	South Flank	4,700	80	62	2021
Rio Tinto	Robe Valley Mesa B,C & H	1,300	n.a.	62	2021
Rio Tinto	West Angelas Deposits C & D	800	n.a.	62	2021
Rio Tinto	Koodaideri	3,500	43-70	60	2021
Rio Tinto	Western Turner Syncline 2	1,000	30	62	2021
FMG	Iron Bridge Stage 2*	3,700	22	67	2022
FMG	Queens Valley (Solomon Hub)	400	n.a.	58	2022

n.a. – not available or not applicable. * Magnetite. ¹ Includes mines and rail and port infrastructure. ² Product grade if available, otherwise reserve grade for direct shipping ores. Source: S&P Global Market Intelligence; and company announcements, reports and presentations.

Direct iron ore industry employment¹



¹ Full-time equivalent (average on site).
Source: Western Australian Department of Mines, Industry Regulation and Safety, Resource Data Files.

- The iron ore industry is a large part of the Western Australian economy, accounting for 20% of the State's gross state product and 56% of its mining industry value added in 2018-19.
- In 2018-19, iron ore accounted for 47% of the value of Western Australia's merchandise exports and 54% of Western Australia's minerals and petroleum sales.
- The value of Western Australia's iron ore sales rose 26% to \$78.2 billion in 2018-19, above annual growth² of 9% over the past ten years.
- In 2018-19, iron ore accounted for 75% of Western Australia's royalties¹ and 18% of Western Australia's government revenue.
- Iron ore royalties rose 9% to \$4.9 billion in 2018-19.
- In November 2019, Western Australia had \$17.6 billion of major iron ore projects under construction or committed and \$41.3 billion under consideration.
- Rio Tinto is developing the Koodaideri deposit by late 2021 as part of its plan to produce 360 million tonnes a year. Rio Tinto also approved a \$44 million pre-feasibility study into Koodaideri Phase 2 in the December quarter 2018 and has three other projects to sustain production capacity at the Robe River Joint Venture and Greater Tom Price operations.
- BHP is developing the South Flank deposit to replace Yandi mine production by mid-2021.
- FMG is developing the Eliwana deposit to replace Firetail mine production by late 2020 and has approved the Iron Bridge Stage 2 and Queens Valley (Solomon Hub) developments.

- Iron ore accounted for 48% of direct employment in Western Australia's minerals mining industry in 2018-19 (excluding exploration). Iron ore's share has risen from 36% of total minerals mining employment in 2008-09.
- Direct employment in Western Australia's iron ore industry rose 12% to 60,122 in 2018-19.
- Iron ore industry direct employment reached 62,244 in 2013-14.
- Iron ore industry direct employment rose 9% a year over the ten years to 2018-19.