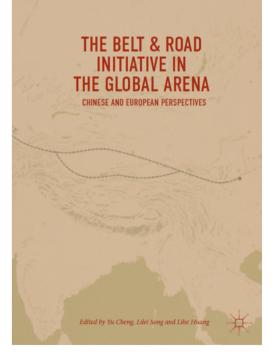
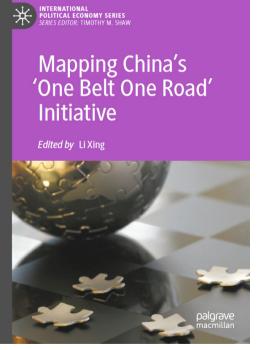


# The Belt and Road Initiative and Australian Mineral Industry



丝绸之路经济带和21世纪海上丝绸之路

Vladimir David





### Acknowledgement to the Traditional Owners the the Gadigal people

- This SMEDG meeting is being held on the lands of the the Gadigal people and I wish to acknowledge them as Traditional Owners.
- I would also like to pay my respects to their Elders, past and present, and Aboriginal Elders of other communities who may be here today.



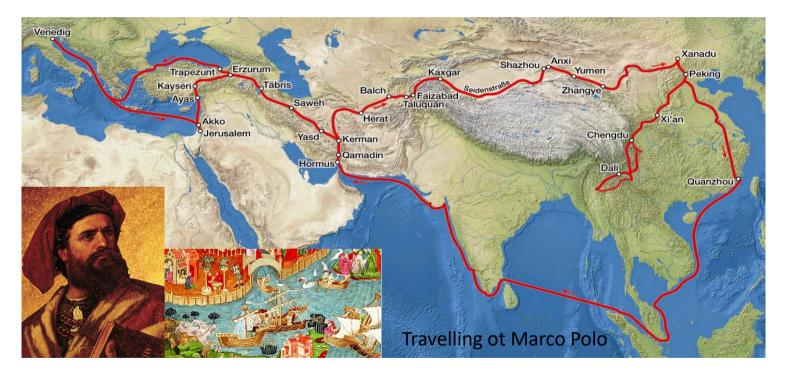
# The Belt and Road Initiative? Reviving the Silk Road

- The Belt and Road Initiative (BRI), also known as the One Belt One Road (OBOR) (Chinese: 一带一路) or the Silk Road Economic Belt and the 21st-century Maritime Silk Road (Chinese: 丝绸之路经济带和21 世纪海上丝绸之路).
- Project is a global development strategy adopted by the Chinese government involving infrastructure development and investments in 152 countries and international organizations in Asia, Europe, Africa, the Middle East, and the Americas.
- President Xi Jinping launched China's BRI in 2013 with the stated aim to connect major Eurasian economies through infrastructure, trade and investment.

### Silk Road and Marco Polo



The Silk Road was an ancient network of trade routes that connected the East and West. It was central to cultural interaction between the regions for many centuries and the life time journey. The Silk Road primarily refers to the terrestrial routes connecting East Asia/Southeast Asia with West Asia, South Asia, East Africa and Southern Europe.



Venetian merchant and adventurer Marco Polo travelled from Europe to Asia from 1271 to 1295. He wrote 'Il Milione,' known in English as 'The Travels of Marco Polo.' Marco Polo was born in 1254, in the Venetian Republic on Island Korcula (today Croatia).

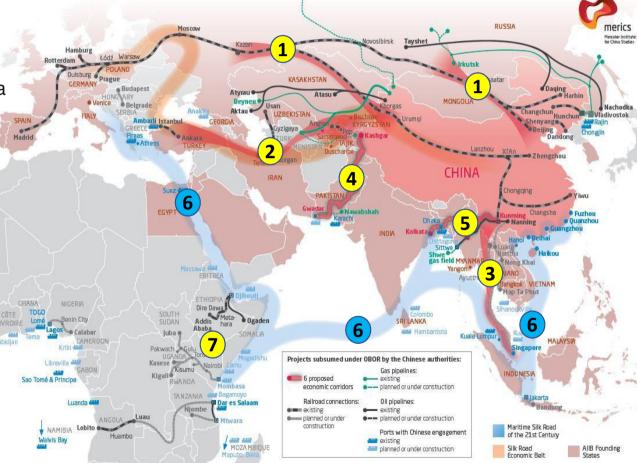


### The Belt & Road Initiative

- "Silk Road Economic Belt," primarily land-based and is expected to connect China with Central Asia, Eastern Europe and Western Europe.
- "21st Century Maritime Silk Road," a sea-based based route expected to connect China's southern coast to the Mediterranean, Africa, South-East Asia and Central Asia.

#### Six economic corridors

- 1. New Eurasian Land Corridor that connects North China to Eastern Russia via Mongolia and the subsequently to Europe,
- 2. China Central Asia West Asia Corridor that connects Western China to Turkey via Central and West Asia,
- 3. China Indochina Peninsula Corridor that connects Southern China to Singapore via Indo-China,
- 4. China Pakistan Corridor that connects South Western China through Pakistan to Arabia sea routes,
- 5. China Myanmar Bangladesh India Corridor that connects Southern China to India via Bangladesh and Myanmar.
- 6. The Maritime Silk Road connects coastal China to the Mediterranean via Singapore-Malaysia, the Indian Ocean, the Arabian Sea and the Suez Canal.
- 7. Additionally, Africa railways and ports infrastructure.





### Framework of the BRI

BRI is to promote regional economic development, through creation of win-win cooperation and joint prosperity, (Yiping Huang, 2016).

#### **BRI follows four principles:**

- 1) openness and cooperation;
- 2) harmony and inclusiveness;
- 3) market-based;
- 4) mutually beneficial and win-win for all countries.

#### BRI emphasises five key areas of cooperation:

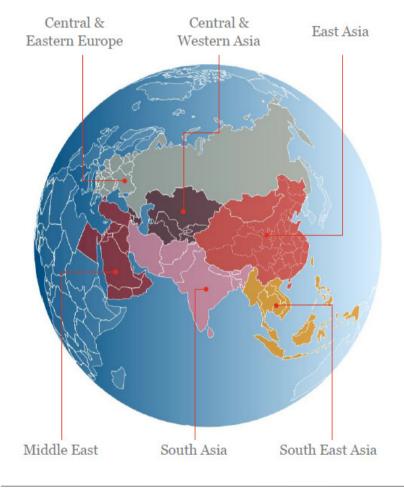
- 1) coordinating development policies;
- 2) forging infrastructure and facilities networks;
- 3) strengthening investment and trade relations;
- 4) enhancing financial cooperation; and
- 5) deepening social and cultural exchanges.

# However, the main attention of the initiative is infrastructure such as railways, roads, ports, energy systems and telecommunications networks.

### **BRI - 2013**



### 60 countries - 62% world population, 39% world area and 30% of world GDP



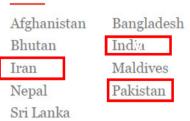
#### Central & Western Asia

Armenia Azerbaijan Georgia Kazakhstan Kyrgyzstan Tajikistan Turkmenistan Uzbekistan

#### East Asia

China (incl. Hong Kong and Macau) Mongolia

### South Asia



#### Central & Eastern Europe

Albania	Belarus	Bosnia	Bulgaria
Croatia	Czech Republic	Estonia	Hungary
Latvia	Lithuania	Macedonia	Moldova
Montenegro	Poland	Romania	Russia
Serbia	Slovakia	Slovenia	Ukraine

#### South East Asia

Brunei	Cambodia	Indonesia	Laos
Malaysia	Myanmar	Philippines	Singapore
Taiwan	Thailand	Vietnam	

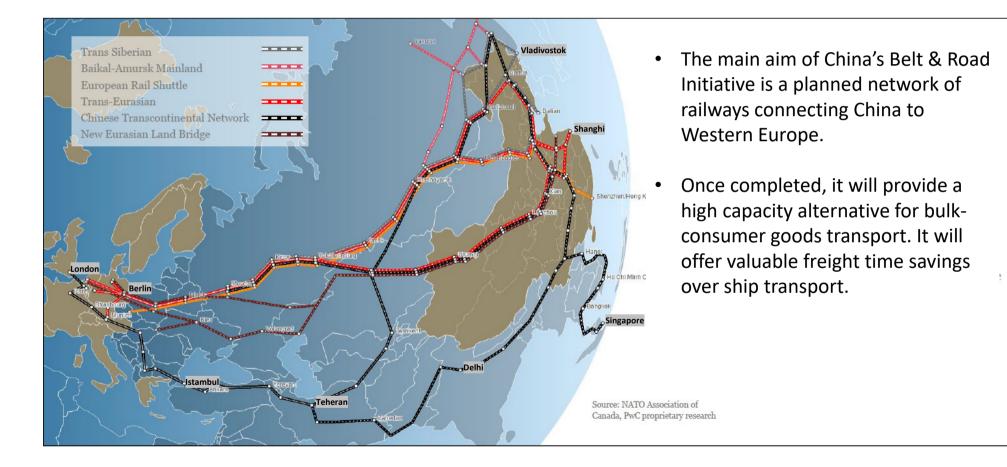
### Middle East

Bahrain	Egypt	Iraq	Israel
Jordan	Kuwait	Lebanon	Oman
Palestine	Qatar	Saudi Arabia	Syria
Turkey	UAE	Yemen	



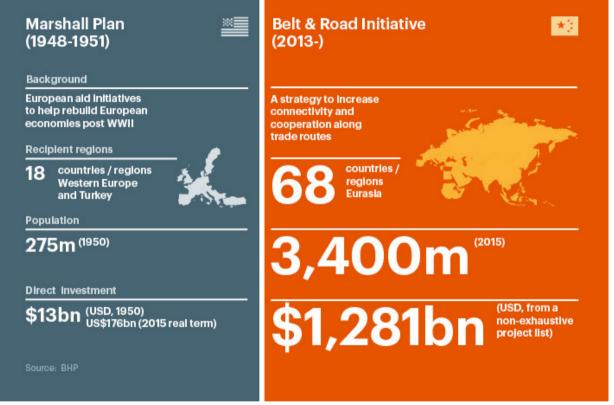
### **BRI back bone - Trans-Eurasian rail networks**

Dramatically reducing travelling time between China and European consumer markets



### **Marshall Plan vs BRI**

a catalyst for a virtuous cycle of economic development



https://www.bhp.com/media-and-insights/prospects/2017/09/belt-and-road-initiative

US\$1.3 trillion of projects having already been initiated under the One-Belt One-Road banner, the program is more than seven times the size of the Marshall Plan. Marshall Plan triggered the reconstruction and then recovery of war-torn Europe almost 70 years ago.

One Belt One Road Initiative, Vladimir David, SMEDG July 2019



Power, railways, pipelines and other transport projects account for 70 per cent of the total investment;

The Asian Development Bank (ADB) estimates that Asia requires US\$26 trillion in infrastructure investment by 2030. That implies US\$1.7 trillion in spending per year.

The ADB highlights that funding infrastructure is likely to be split 40/60 between public and private sectors.



# **BRI – Where money will come from?**

AIIB's vice-president and corporate secretary in Beijing, Danny Alexander, says six multilateral banks had signed up to finance BRI projects:

- Asian Infrastructure Investment Bank (newly established);
- Export-Import Bank of China;
- World Bank;
- Asian Development Bank;
- European Bank of Reconstruction and Development; and
- European Investment Bank.

Financial Review May 23, 2017



### The Asian Infrastructure Investment Bank (AIIB)



- AIIB is a multilateral development bank with a mission to improve social and economic outcomes in Asia.
- Headquartered in Beijing, operations began in January 2016 and have now grown to 97 approved members worldwide.
- The role of AIIB investing in sustainable infrastructure and other productive sectors in Asia and beyond to connect people, services and markets that over time.



### **BRI update 2019**



Today, Project has expanded to 115. The second BRI Forum was held in Beijing from 21st to 27th of April 2019. It was intended by 5000 delegates from 150 countries, including 40 heads of government and representatives of 90 international organisations.

China Development Bank reportedly said it would invest almost \$900 billion into more than 900 projects.

Asia Infrastructure Investment Bank is widely expected to support the initiative with a considerable share of its \$100 billion in lending.

The Economies magazine reported that more than \$1 trillion in "government money" would be spent on the initiative.

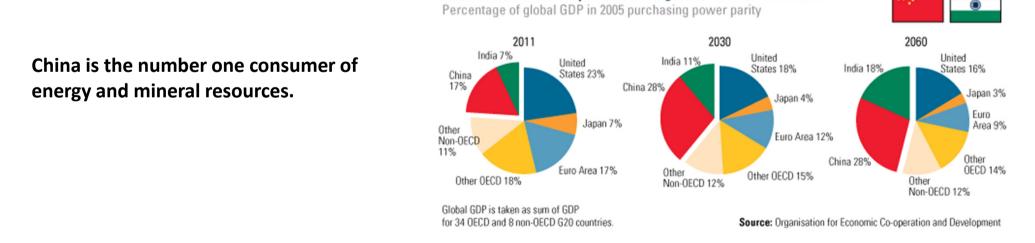
igures of up to \$US1.3 trillion in the first decade of the initiative.





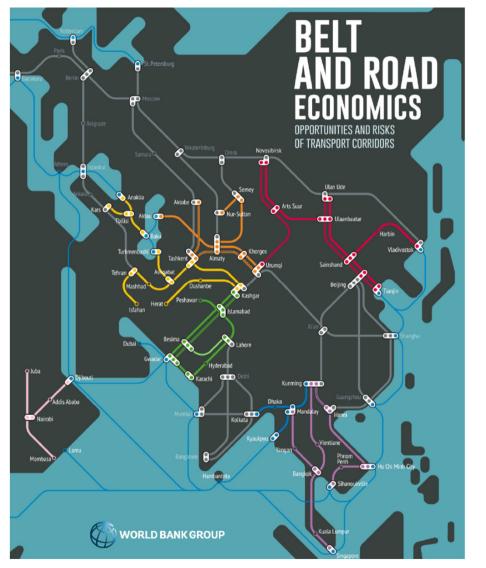
# Driver of BRI – China's Economy

- Back in 1820, China was by far the world's largest economy with GDP was twice that of India's, the world's second-largest economy at the time, six times as large as Britain's, and almost 20 times of the United States.
- 2. China's economic decline in the second half of the 19th century was, in part, the result of the devastation of China's agricultural lands following the Opium Wars and the Taiping Rebellion. In addition, China also lost ground economically in the 19th century as Western nations grew wealthier from the Industrial Revolution.
- 3. However, after three decades of economic reforms, by 2019 China is the second largest economy with GDP of \$ 16 T (20% of the total world GDP) where manufacturing represent 30% (World Bank Data).



China and India GDP Projected to be Larger than G-7 Countries' GDPs





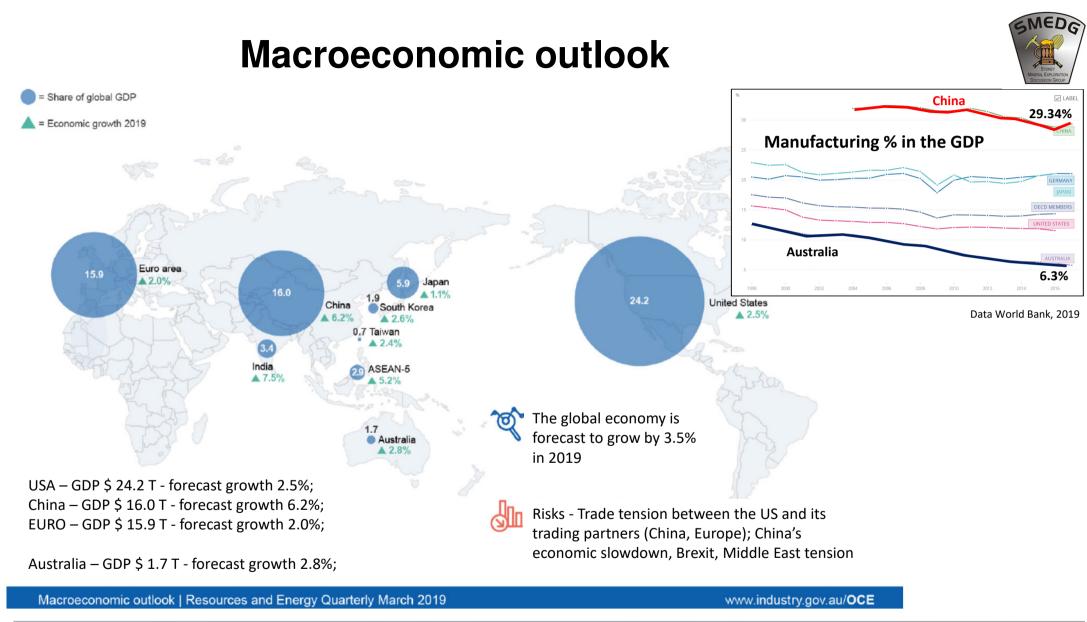
# BRI in World Bank research

- World Bank Group has produced empirical research and economic models that assess the opportunities and risks of BRI projects.
- Since May 2018, the World Bank Group has produced a series of 19 background papers and one summary report that provide independent analysis of the BRI's links to trade, investment, debt, procurement, environment, poverty reduction and infrastructure.

#### THE WORLD BANK GROUP

1818 H STREET, NW, Washington, DC 20433, USA. WWW.Worldbank.org

https://www.worldbank.org/en/topic/regional-integration/brief/belt-and-road-initiative



#### SMEDG Vere Marke Bergentrik Declasore Group

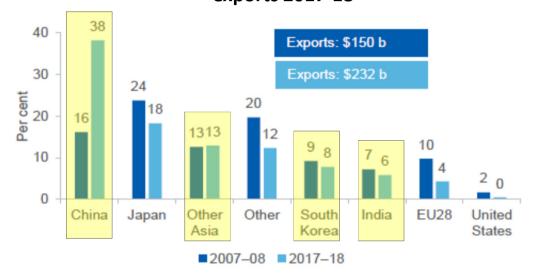
### Stage of Australian Mineral Industry March 2019 Resource and Energy report

https://publications.industry.gov.au/publications/resourcesandenergyquarterlymarch2019



Share of GDP

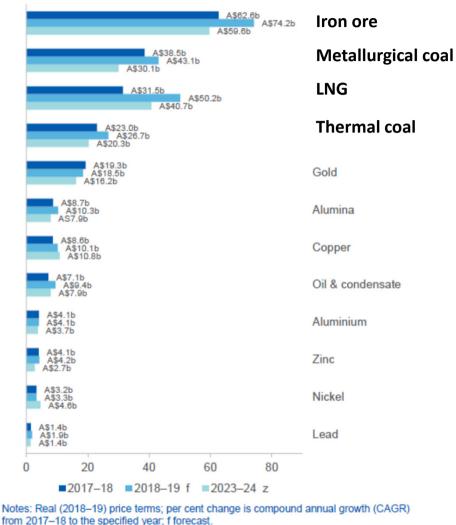
Principal markets for Australia's energy and resources exports 2017-18



Source: ABS (2019) Australian National Accounts, National Income, Expenditure & Production, 5204.0

Source: ABS (2019) International Trade in Goods and Services, 5368.0

- Mining contributes 8% in Australian GDP;
- BRI markets for Australian energy and resource export in 2018-19 represents more than 65%;
- BRI markets resource only represents 70% (in 2007-2008 it was 36%);
- US market representation felt below 1%.



Source: ABS (2019) International Trade in Goods and Services, 5368.0; Department of Industry, Innovation and Science (2019)

# Australia's major resource 8 energy exports



### be critical for BRI project:

- 1. Iron ore;
- 2. Copper;
- 3. LNG;
- 4. Metallurgical Coal;
- 5. Thermal Coal;
- 6. Bauxite/Alumina;
- 7. Nickel;
- 8. Zinc.

Disappearance in the ABS data:

- Economy \$ 1,815 B;
- Only Export major commodities \$ 250 B;
- Official percentage from mining in **GDP is 8%** but numbers presented on this graph show more than is more than **13% of GDP** is generated with export of major mineral resources.

SMEDG



The most valuable

\$80B;

Australian commodity

2018/2019 of more than

Australia has more than

50% of the global share

The major costumer of

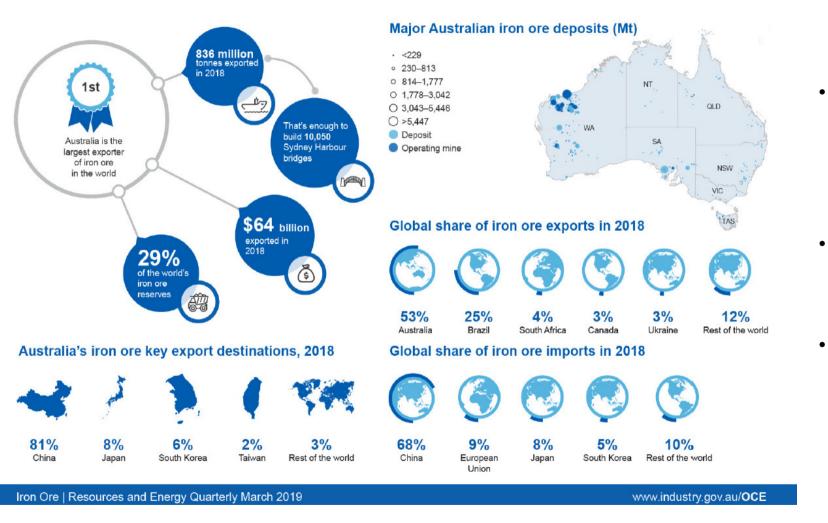
Australian iron ore is China with more than

80% share.

of iron ore export;

with export value for

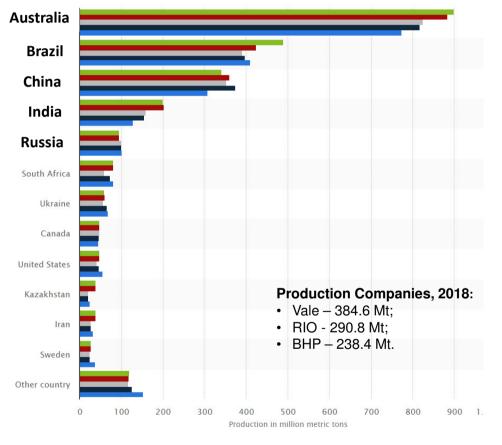
### Iron Ore

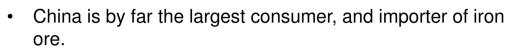


### **Iron Ore – production**



Iron ore mine production worldwide from 2010 to 2018 (in Mt)





- In 2018 China imported 1, 075.4 Mt of iron ore.
- In 2018, China had produced around 930 Mt of crude steel using 55% of global ore production.
- Australia is the largest producer and the biggest exporter.
- In 2018 Australia produced 846 Mt which represents more than 26% of the global output.
- Brazil is second world's largest iron ore mine producer producing 490 Mt (2018) and second exporter – 25% of the world's total iron exports.

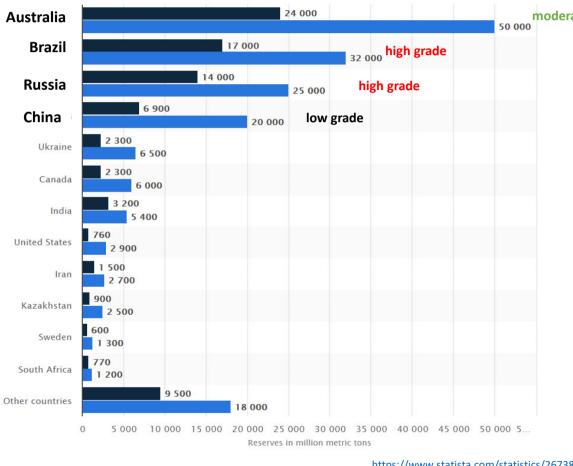
https://www.statista.com/topics/1919/iron-ore/



https://www.statista.com/statistics/267380/iron-ore-mine-production-by-country

### **Iron Ore – Resources**

World resources of iron ore as of 2018 (in Mt)



#### moderate grade

 Australia and Brazil hold a large portion of the world's iron ore reserves (47% of the known resources). NEDG



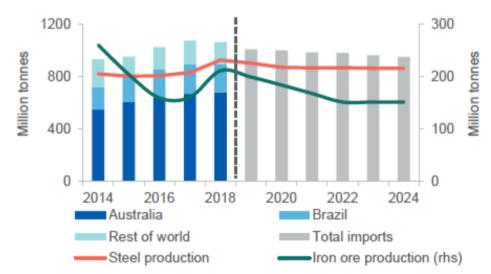
#### https://www.statista.com/statistics/267381/world-reserves-of-iron-ore-by-country/

Crude ore Iron content



### **Iron Ore – consumption forecast**

#### China market



Notes: China's iron ore production is quality adjusted. 2018 import figures are estimates. Source: Bloomberg (2019) Antaike Information Development; Bloomberg (2019) China Customs General administration; Department of Industry, Innovation and Science (2019)

• Forecast - China demand for iron ore is going to be flat?



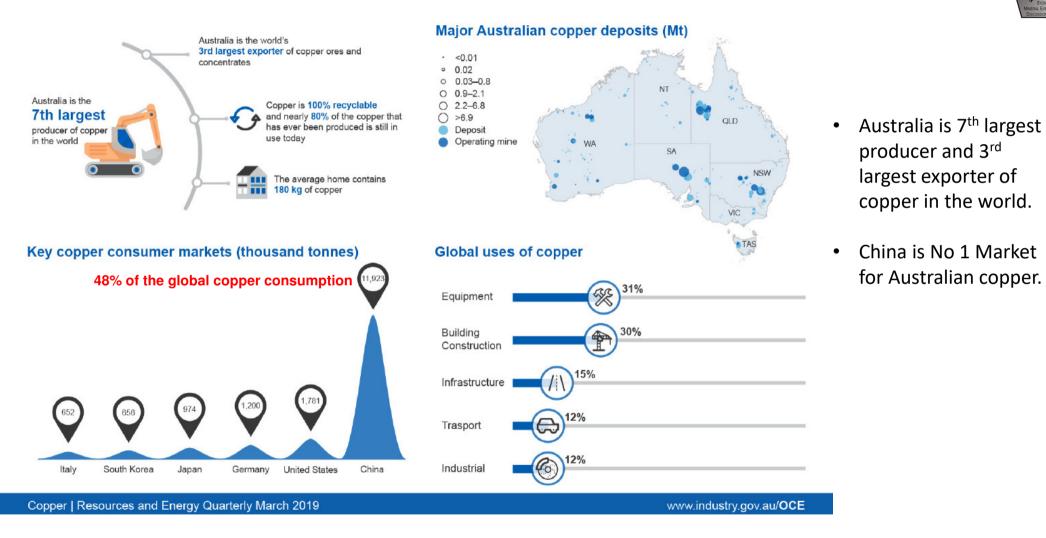


Notes: Implied import demand is the amount of iron ore required for steel production minus domestic supply of iron ore

Source: AME Group (2019) Strategic Iron ore; Department of Industry, Innovation and Science (2019)

 Forecast - iron ore demand in Southeast Asia is going to increase for more than 100 Mt by 2024.

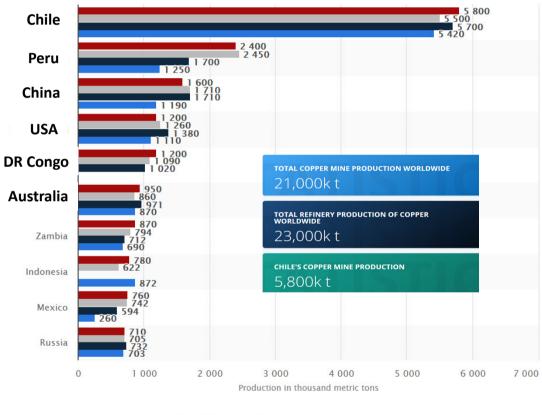
# Copper





### **Copper – global production**

Copper mine production worldwide from 2010 to 2018 (in 1,000 metric tons)





https://www.statista.com/statistics/264626/copper-production-by-country

One Belt One Road Initiative, Vladimir David, SMEDG July 2019



In 2018, there was about 21 Mt of copper produced in mines worldwide.

Chile, the world's leading copper producer by far, with an estimated copper mine production 5.8 Mt followed by Peru with 2.4 Mt.

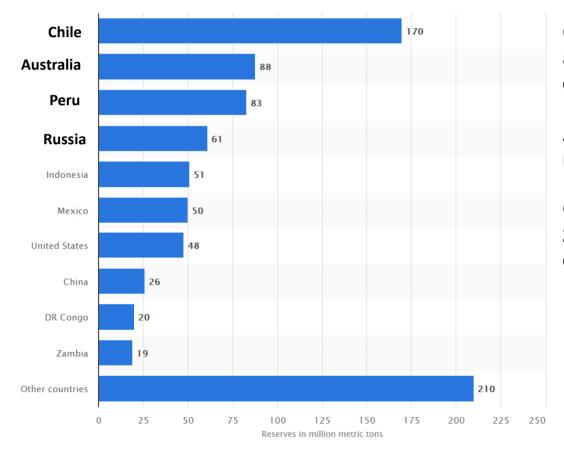
The world's third-largest copper producer from mines is China with 1.6 Mt.

In 2018, an estimated 23.8 Mt of copper was consumed worldwide with annual increasing rate of 2.7%.

The world's largest consumer of refined copper in 2018 was China. In that year, China consumed more than 48% of the global copper consumption.

### **Copper – global resources**





World resources of copper as of 2018 (in Mt)

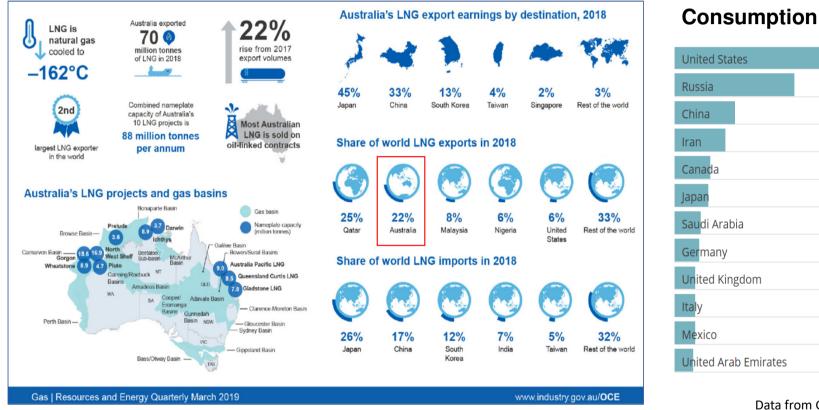
Chile has the world's largest copper resources of any country by far, with 170 million metric tons as of 2018.

Australia has the world's second largest copper resources with 88 Mt metals as per 2018.

China copper resources are limited and – only 26Mt of what is less than what needed for 3 years of consumption.

https://www.statista.com/statistics/264626/copper-rezerve-by-country

### **Natural Gas**





### Production

	762	United States	767
	471	Russia	694
	238	Iran	209
	200	Canada	184
	134	Qatar	166
	129	China	147
	98	Norway	128
	94	Australia	99
n	79	Saudi Arabia	98
	75	Algeria	95
	74	Turkmenistan	81
nirates	71	Malaysia	73

Data from Global Energy Statistical Yearbook 2018

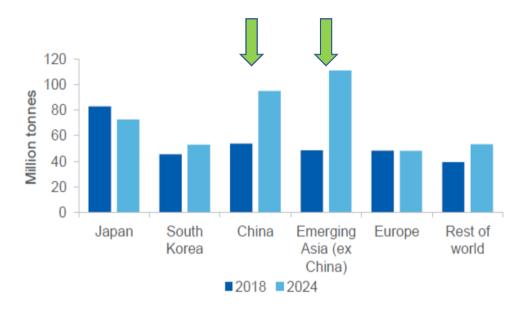
- Australia is second largest gas exporter covering 22% of market share according to ASB;
- Japan is the largest market for Australian gas (45%) followed by China (33%) and South Korea (13%).
- \* Please note disparency in data between ABS and Global Energy Statistical Yearbook (2018).

### Natural Gas - production and demand



#### **Import countries**

#### **Potential Market**

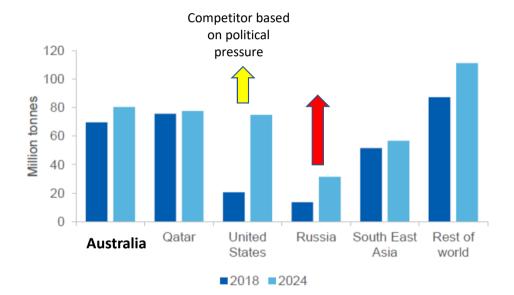


Source: Department of Industry, Innovation and Science (2019); Nexant (2019)

The highest demand for natural gas is in China and Emerging Asian countries.

#### **Export countries**

### **Potential Competitors**

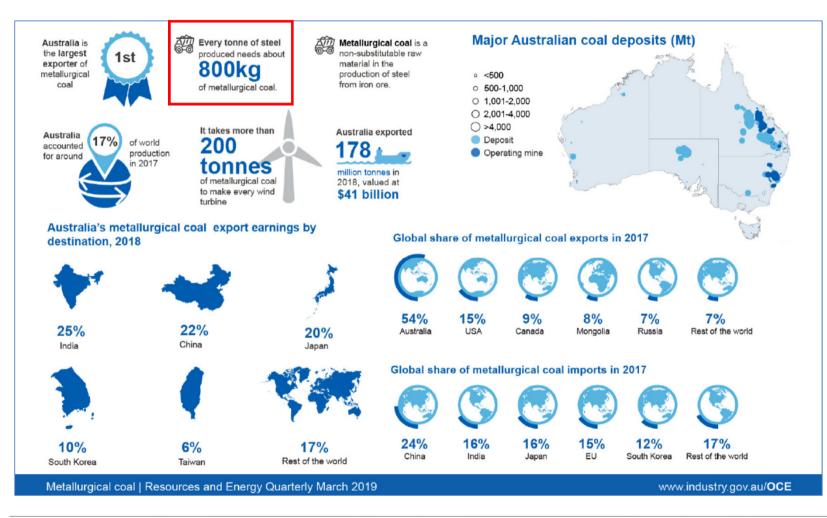


Source: Department of Industry, Innovation and Science (2019); Nexant (2019)

The most unpredictable competitor is US – putting political pressures to control the market.



### **Metallurgical Coal**

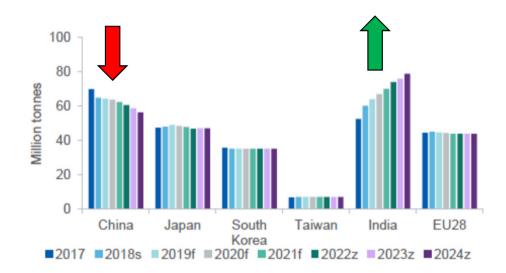


- Australia is the largest exporter of metallurgical coal totaling 178Mt with a value of \$ 41 B (2019).
- BRI demands for the more than 50% of world market share;
- Australia exports 47% of metallurgical coal to BRI countries (India and China).

### **Metallurgical Coal - forecast**

#### **Import countries**

#### **Potential Market**



#### Notes: s Estimate f Forecast z Projection

Source: IHS (2019); IEA (2018) Coal Market Report; Department of Industry, Innovation and Science (2019)

China is going to import lees Australian metallurgical coal, but market will be offset by increased Indian imports.

### Potential Competitors

**Export countries** 

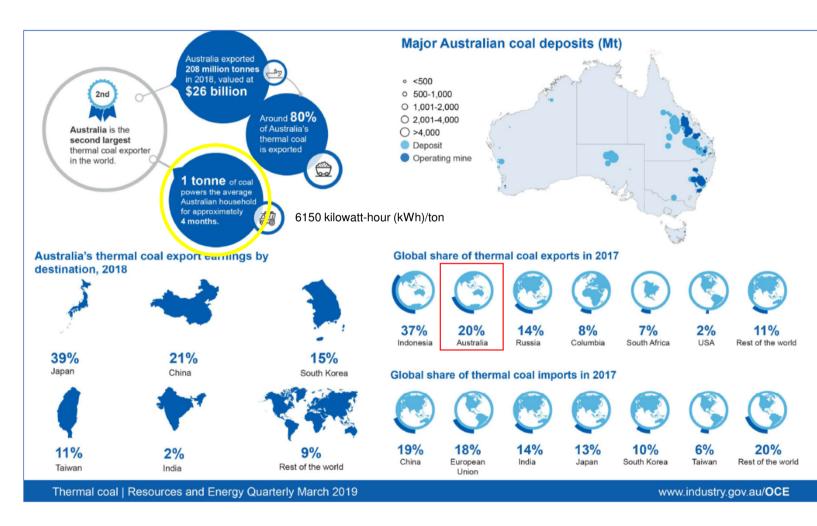


#### Notes: s Estimate f Forecast z Projection Source: IHS (2019); IEA (2018) Coal Market Report; Department of Industry, Innovation and Science (2019)

Potential market competitors in metallurgical coal market are Canada, Mongolia Russia and Mozambique. USA became serious competitor through recent trade war.



### **Thermal Coal**





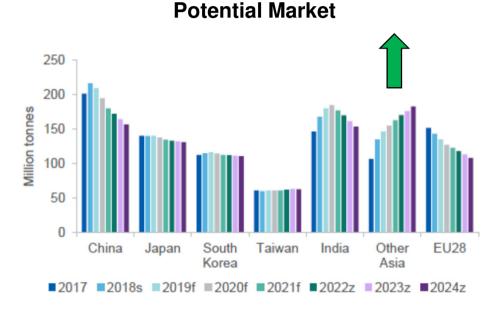
- Australia is the second largest exporter of thermal coal – in total of 208 Mt with a value of \$ 26B.
- BRI demands for the more than 33% of world market share;
- Australia exports 24% (38% including South Korea) of thermal coal to BRI countries;
- Chinese thermal coal market:
  - 58% Indonesia;
  - 24% Australia;
  - 10% Russia.

Bloomberg (2019) National Bureau of Statistics China

### **Thermal Coal - forecast**

#### **Import countries**

#### **Export countries**



#### Notes: s Estimate f Forecast z Projection

Source: IHS (2019); IEA (2018) Coal Market Report; Department of Industry, Innovation and Science (2019)

Thermal coal market is flat with a forecast to fell in next decade except in emerging economies of Southeast Asia.

#### **Potential Competitors** 450 400350 Million tonnes 300 250 200 150 100 50 0 Indonesia Australia Russia Colombia South US Africa

■2017 ■2018s ■2019f ■2020f ■2021f ■2022z ■2023z ■2024z

Notes: s Estimate f Forecast z Projection

Source: IHS (2019); IEA (2018) Coal Market Report; ABS (2019) International Trade, Australia 5454.0; Department of Industry, Innovation and Science (2019)

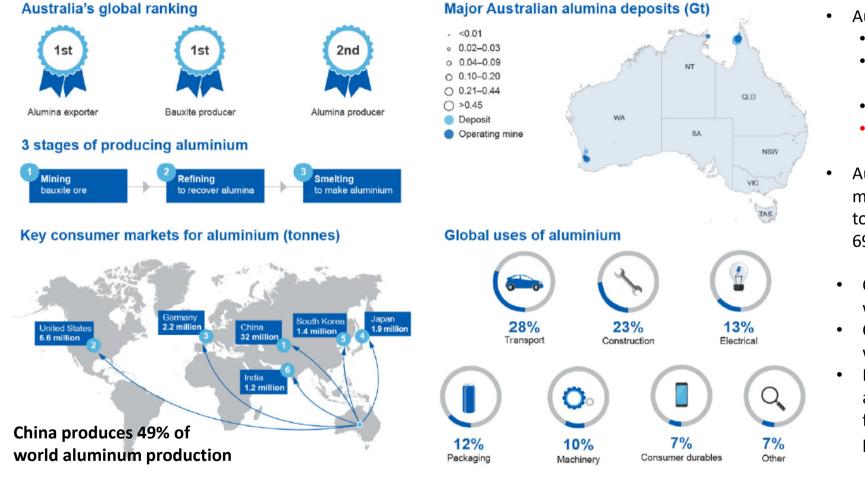
Competition is strong - competitors in thermal coal market are Indonesia, Russia and South Africa.

#### One Belt One Road Initiative, Vladimir David, SMEDG July 2019

ΛΕΓ



# Aluminum



Australia is:

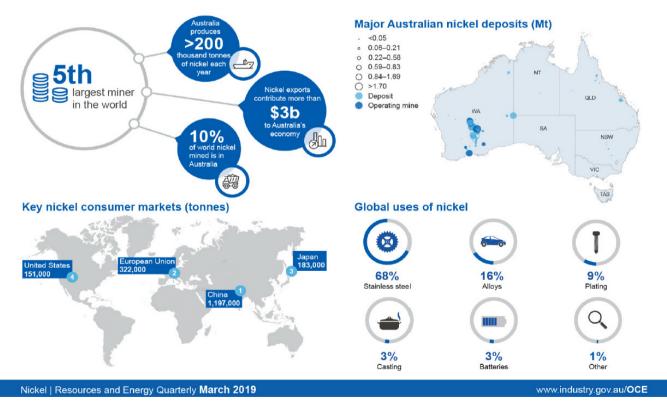
- Largest bauxite producer;
- •Second largest alumina producer;
- Largest alumina exporter
- But very small producer of refined aluminum.
- Australia exports 32 Mt metals (bauxite-alumina) to China which represents 69 % of total Aus exports.
- China produces 49% of world aluminum;
- China consumes 48% of world production,
- But imports bauxite and alumina from Australia for more than 80% of produced metal.

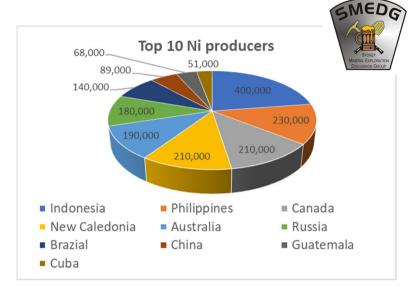
Aluminium, alumina and bauxite | Resources and Energy Quarterly March 2019

www.industry.gov.au/OCE

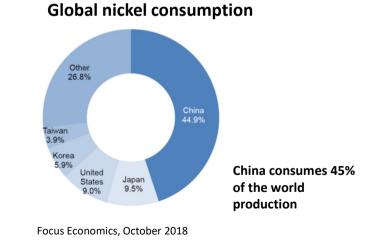
# Nickel

- Global mine production of Nickel is 2,300 kt and China consumes 1,197kt more than 50% of world production;
- Australia is 5<sup>th</sup> in the world nickel producer with production around 200kt
- Australia has one of the world's largest resources at 19 Mt;
- Globally, there are known resources of 78 Mt nickel metal .



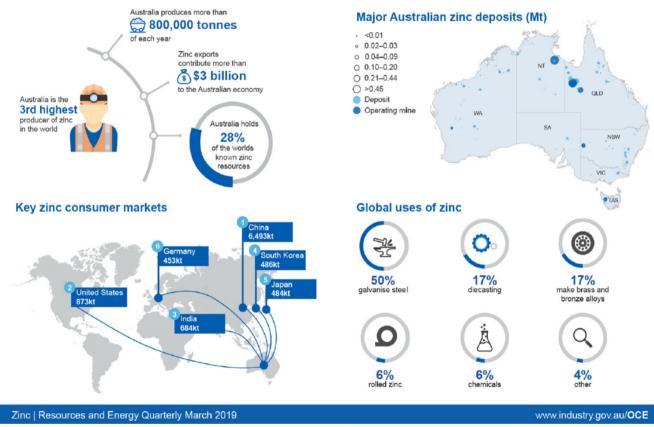


https://investingnews.com/daily/resource-investing/base-metalsinvesting/nickel-investing/10-top-nickel-producing-countries/

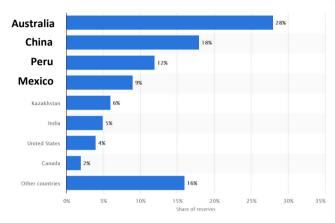


# Zinc

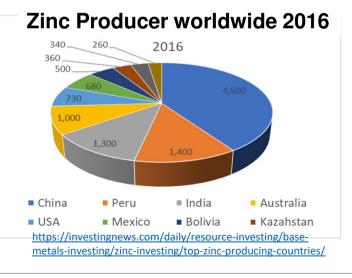
- Global mine production of zinc is 14.7 Mt and China consumes 8.25 Mt more than 50% and produce 5.4 Mt Zn more than 37% world production;
- In 2017, Australia produced 1Mt Zn (2017) and also has the larges world's recourses (> 200 Mt , Large at all, 1990).



### Zinc Resources worldwide 2017



https://www.statista.com/statistics/264642/

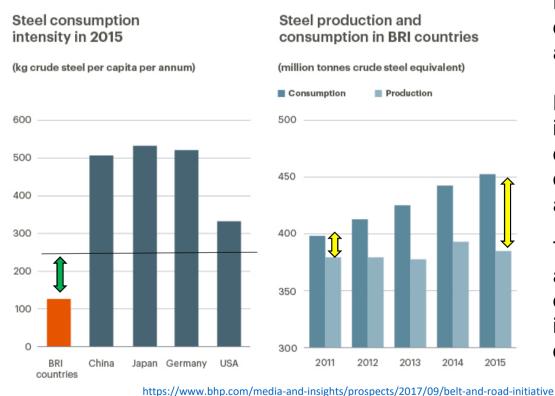


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### BRI commodities demand Iron ore/steel

In 2018, China had produced 930 Bt of crude steel (worldsteel data)



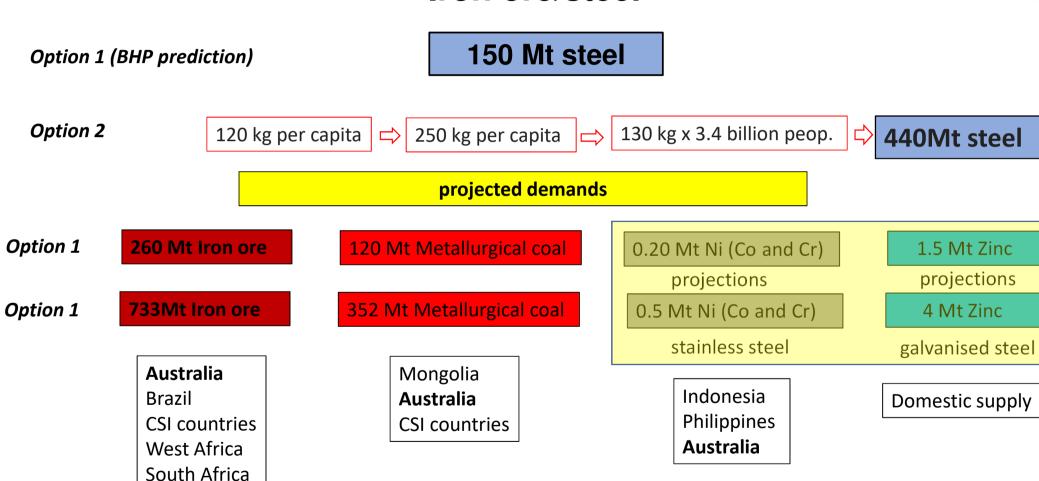
BRI would drive significant demand for construction materials and equipment, leading to an increase in direct and indirect demand for steel.

BRI projects could result in up to 150 MT of incremental steel demand. Of that amount, 80 per cent would be used in structures and reinforced concrete, with 20 per cent going into machinery and other equipment (BHP report).

The 68 BRI countries and regions have an average steel consumption intensity of 130 kg per capita per annum, well below levels in China and in the developed world. They are also short of domestic steel making capacity.

Source: BHP; worldsteel

### BRI commodities demand Iron ore/steel



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### BRI commodities demand Copper



🗧 Power 🛛 🔍 Grid

Map of major power project across BRI countries

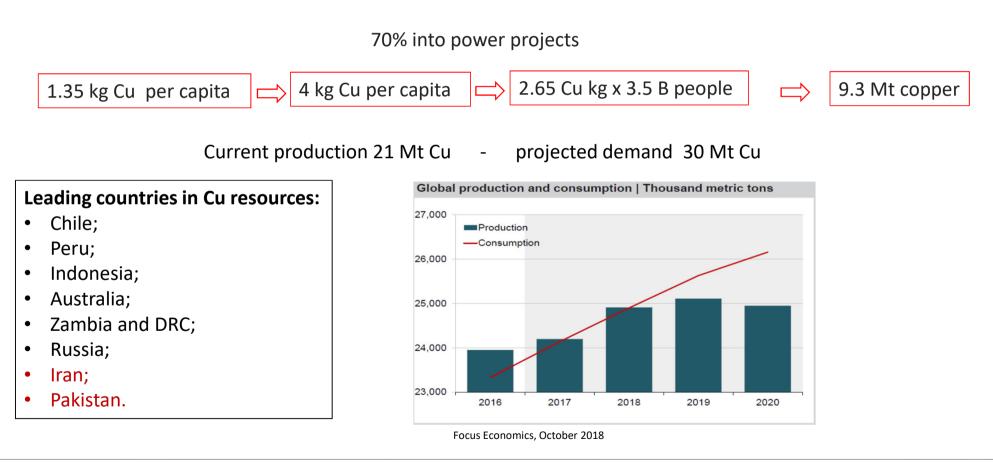


- Around 70 per cent of the new copper demand that BHP had identified comes from over 100 power projects. The 115 BRI countries and regions have an average copper consumption intensity of 1.35 kg per capita per annum, well below the world average of around 4 kg.
- BRI projects could add up to an incremental 1.6 million tones of refined copper demand, equivalent to 7% of annual demand in 2017.
- Power sector accounts for 70% of BRI copper demands.

https://www.bhp.com/media-and-insights/prospects/2018/10/chinas-belt-and-road-initiative-episode-threecopper-bottomed

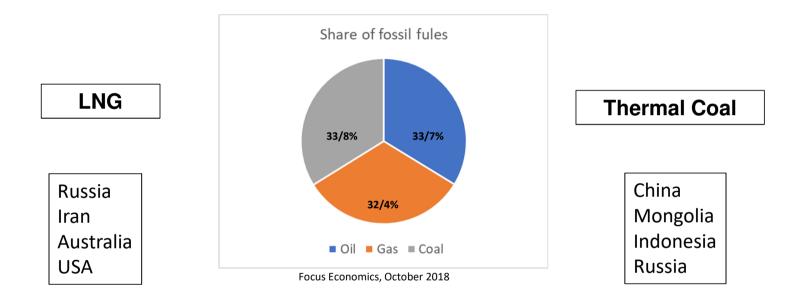
Only 30 of the countries in the BRI have indigenous copper fabricating capability, and even then, 10 of those 30 are still net importers of copper cathode. This implies that much of the incremental direct and indirect demand for refined copper generated by the BRI will need to be meet by an increase in cross-border trade.

### BRI commodities demand Copper





# **BRI energy demand**



Giant Yamal gas project (Krasnoyarsk oblast – Russia ) with two pipelines to China makes Russian gas very competitive, but there is still space for gas market. Decrease in use of coal fired power station and cheaper coal from more proximal counties (Mongolia, Russia, Indonesia) make this market very competitive.



### BRI benefits and challenges to participants

#### **BENEFITS**

- Project will fill gaps in infrastructure projects for developing countries.
  Afghanistan and Pakistan see it as a "path out of poverty".
- Enable economic growth.
- Increased trade and faster transit of goods.
- International cooperation.
- Peace building.

#### CHALLENGES

- Lack of trust between China and some countries involved.
- Two out of three countries involved have a sovereign credit rating below investment grade.
- Some countries are unstable, which poses security risks to Chinese companies and workers.
- Some Chinese bankers are worried about the risks of investing, such as the feasibility of some projects and political instability.
- Critics fear China is seeking economic and strategic domination, and human rights and environmental standards could be undermined.
- There's concerns poor countries could be left laden with massive debts.
- It's unclear who is in charge of One Belt One Road initiative.



### **BRI and Australia**

A controversial trillion-dollar BRI push by China is being resisted by "senior national security figures" who warn of serious "strategic" consequences if Australia formally signs up.

### Supportive to BRI

- Big business (mining, construction and agriculture);
- Big banks;
- · Law firms and
- Academic community.

http://asiapacific.anu.edu.au/news-events/allstories/australia-and-belt-and-road-initiative

Australia risks missing out on China's One Belt One Road Conversation May 16, 2017 12.44pm AEST





http://asiapacific.anu.edu.au/news-events/all-stories/australia-and-belt-and-road-initiative

### **Resistant to BRI**

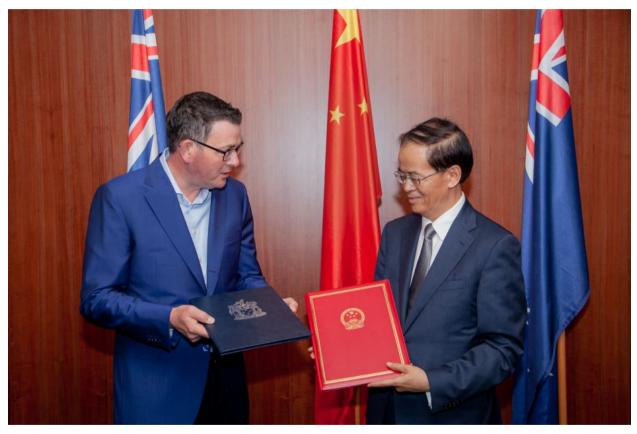
- Defense departments and Department of Immigration and Border Protection :
- Including Dennis Richardson ex-ASIO boss and Michael Pezzullo Secretary of the Department of Immigration and Border Protection.



Photo: Mike Pezzullo and Dennis Richardson https://www.abc.net.au/news/2017-10-22/composite-image-mikepezzullo-and-dennis-richardson/9074668



### **BRI and Victoria**



- Victoria has formally pledged to sign up to China's controversial One Belt, One Road initiative in a deal the state hopes will generate more trade and jobs.
- Victoria is the first Australian state or territory to pledge its allegiance to the project.
- Premier Daniel Andrews and Chinese ambassador to Australia Cheng Jingye finalised a memorandum of understanding.
- The MOU talks mostly about 'friendship' and cooperation between China and Victoria
- It is not legally binding and can be terminated by either party
- Canberra is against signing up to the 1B1R and is cautious of China's activity in the Pacific.

https://www.abc.net.au/news/2018-10-26/victoria-and-china-belt-and-road-signing-mou/10435148

In the last four years Victoria has tripled its share of Chinese investment in Australia, and nearly doubled Victorian exports to China, according to Mr Andrews.



### **BRI** benefits to Australia

 "Australia's financial services, professional and management consulting, and technical, trade-related businesses offer both excellent reputations worldwide and embedded participation in Southeast Asia, which could play an important role in implementing mutually acceptable Belt and Road projects,"

https://www.business.hsbc.com.au/en-au/au/campaign%20sub%20page/belt-and-road-initiative

### **OPPORTUNITIES FOR AUSTRALIA**

- Even though Australia isn't geographically located on the Belt and Road the initiative aligns with the federal government's plans for developing northern Australia.
- There could be opportunities for Australian industries such as engineering, architecture and finance as well as services such as hospital management, education, tourism and aged care.
- There could be scope for Australia to increase investment in China or third countries. (Sources: Chinese government, Lowy Institute Peter Cai report, BHP briefing, PwC, APH Library, The Economist and Reuters)



# Political threats to BIR and Australian position





### Conclusion

I think the rise of China is one of the great events of all economic and human history, and I think this will be overwhelmingly a positive thing for the region and the world.

Paul Keating

Capital is money, capital is commodities. By virtue of it being value, it has acquired the occult ability to add value to itself. It brings forth living offspring, or, at the least, lays golden eggs.

Karl Marx