Part IV

Growing Australia in the Indian Ocean region – mineral exports, mining, trade and tourism

From the view of Australia's own assets, the Indian Ocean rim presents a number of opportunities and challenges:

- In mineral export terms, the Indian Ocean rim includes current and future markets, competition, and investment opportunities.
- Australia's trade relationship with the Indian Ocean rim was the subject of some discussion in evidence presented to the committee—particularly on how Australia could take the opportunity afforded by its time as chair of IOR-ARC to reassess its approach to trade in the region.
- When it comes to tourism, Australia can view the Indian Ocean rim as both a potential market (particularly those countries with a growing middle class) and competition (especially with Australia considered a long-haul destination). This situation is captured in Tourism Australia's 2020 white paper.

The committee examines these opportunities and challenges in the following chapters.

Chapter 12

Mineral Exports and Mining in the Indian Ocean rim

…however, mining is not simply about digging holes.[1]

Introduction

12.1 A number of countries in the Indian Ocean rim are significant producers of major minerals, oil and/or gas. Iran is the world's fourth largest and the United Arab Emirates eighth largest producer of crude oil (Saudi Arabia is number 2). Australia is the largest producer of iron ore, zircon, rutile and bauxite, in the top three producers in the world of zinc, nickel, gold and uranium and a significant producer of hard coal and copper. Over the past decade Australia has held an average market share of 34 per cent of the global iron ore, 18 per cent of the global thermal and 58 per cent of metallurgical coal trade. Australia is expected to become the world's largest liquefied Natural Gas (LNG) exporter by 2016.[2] Indeed, Australia's trade of LNG is projected to quadruple.[3]

12.2 South Africa is the second largest producer of zircon and rutile and a major producer of gold, hard coal and iron ore. India is the third largest producer of iron ore and also a significant producer of zinc, hard coal, bauxite and crude oil. Indonesia is the second largest producer of nickel and a significant producer of crude oil, natural gas, hard coal, zircon and gold.[4] In 2012, Malaysia and Indonesia were the world's second and third largest LNG exporters while Tanzania and Mozambique are rapidly emerging suppliers of this commodity.[5]

12.3 In this chapter, the committee outlines the nature and extent of Australia's trade interests in the Indian Ocean rim, as they relate to Australian commodities. The committee considers the nature of competition and synergies evident in the Indian Ocean rim, relative to Australia's mineral exports.

Australia's mineral exports to the Indian Ocean rim

12.4 Australia occupies a unique place in the Indian Ocean rim in regard to mineral resources and trade. Regions within Western Australia and the Northern Territory have vast quantities of mineral and energy wealth, and contain mining development and export hubs for a number of Australia's major extractive industry ventures.[6] New

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1 Australian Chamber of Commerce and Industry, *Submission 26*, p. 15.

2 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, p. vii.

3 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, p. vii.

4 Australian Bureau of Statistics, *Year Book Australia, 2012*, no. 1301.0, issued 24 May 2012, Table 18.29.

5 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, p. 27.

6 DRET, *Submission 15*, p. 10.

South Wales and Queensland are established and major exporters of coal. Assuming that robust demand from the emerging economies such as China and India continues, the volume of Australian mineral exports is expected to grow with iron ore, coal and LNG in particular projected to increase substantially.[7] The main export markets for Australian minerals are in order of importance: China, Japan, India, South Korea, United Kingdom, Chinese Taipei, and Singapore.[8]

12.5 According to DRET, in 2011 Australia exported $26.7 billion worth of resources and energy products—mostly metallurgical coal, petroleum, gold and copper—to a small number of Indian Ocean rim countries.[9] India was the single largest Indian Ocean rim destination for both Australian fuel and minerals at $9.5 billion (6 per cent of Australia's total fuel and mineral exports for that year) including $7.2 billion of Australian coal and $1.4 billion worth of copper ores and concentrates respectively.[10] Singapore was the second largest destination for fuels and mineral exports in the Indian Ocean rim.

12.6 The three largest resource exports to the Indian Ocean rim from Australia are bituminous coal (metallurgical and thermal) ($8.1 billion), crude petroleum oils ($5 billion), and copper ores and concentrates ($1.45 billion).

Iron ore

12.7 Australia and India are among the largest iron ore producers in the world, with Australia at no. 1 and India no. 3. South Africa is also a significant producer of iron ore but its production is only a fraction of Australia's and less than one quarter of India's.[11]

12.8 The Bureau of Resources and Energy Economics reported that to 2025 China is expected to increase its consumption of iron ore to support expanding steel industries.[12] It noted that China's iron ore imports are projected to grow strongly from a relatively large base at an average annual rate of 4.5 per cent to reach 1,193 million tonnes in 2025. India has 'relatively large reserves of high quality iron ore and, despite projected strong growth in iron ore consumption, it is expected to remain a net exporter of iron ore over the short and medium term'.[13] Even though India's substantial

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7 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025,* July 2012, p. 1.

8 Bureau of Resources and Energy Economics, *Resources and Energy Statistics,* Annual 2012, p.29.

9 *Submission 15,* pp. 4 and 8.

10 DFAT, *Submission 30,* p. 40.

11 Australian Bureau of Statistics, *Year Book Australia, 2012,* Table 18.29.

12 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025,* July 2012, p. 26.

13 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025,* July 2012, p. 26.

deposits of high quality iron ore will support the growth of India's iron and steel industry:

> There is some uncertainty as to whether India's status as a net exporter of iron ore will continue through the second half of the outlook (to 2025). In particular, India's exports of iron ore will be negatively affected by government policy aimed at ensuring sufficient iron ore supply for domestic steel producers. Consequently, there is potential for India to become an importer of iron ore, particularly after 2020.[14]

12.9 Western Australia accounts for 97 per cent of Australia's iron ore production most of which is exported to Asia with China taking 70 per cent of Australia's iron ore exports and Japan and Korea importing most of the balance.[15] The Pilbara region in north west Australia produces the bulk of iron ore. Indeed, during its visit to the Pilbara, the committee inspected the Rio Tinto site at Dampier Port located adjacent to the landside areas of the port. Here non-stop, trains up to 2.5 kilometres long deliver iron ore extracted from its 14 mines throughout the Pilbara. In a single day and under a highly automated system, 24 trains or so off-load the iron ore at the port ready for export.

12.10 Iron ore makes up about 50 per cent of the value of bulk exports leaving this port. In the past 12 months, 871 iron ore bulk carriers, some up to 246,000 gross registered tonnes, transited the port en route to destinations in the Asia-Pacific region.[16]

12.11 The iron ore also leaves Australia through Port Hedland and Cape Lambert.[17] During the committee's visit to the Pilbara, it also toured Port Hedland, which is the world's largest bulk export port and continues to grow. In financial year 2011–2012, the Port Hedland Port Authority delivered a year of record-breaking activity by shipping 246.7 million tonnes, an increase of 23.9 per cent from the previous year. On one occasion, the port shipped 1.04 million tonnes in six vessels on a single tide—'a landmark performance' giving further confidence that the target of achieving 495 million tonnes per annum is within sight.

12.12 Of the total of 246.7 million tonnes leaving the port, iron ore accounted for 238.9 million tonnes.[18] The Port Hedland Authority informed the committee of the proposed developments in the harbour vicinity and the anticipated significant increases in the export of bulk commodities from the port.

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14 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, p. 26.

15 Virginia Christie et al, 'The Iron Ore, Coal and Gas Sectors', in Reserve Bank of Australia, *Bulletin*, March Quarter 2011, p. 3.

16 Information obtained during site visit to Pilbara Region.

17 Virginia Christie et al, 'The Iron Ore, Coal and Gas Sectors', in Reserve Bank of Australia, *Bulletin*, March Quarter 2011, p. 3.

18 Information obtained during site visit to Pilbara Region and see also Port Hedland Port Authority, *Annual Report 2012*, p. 97.

12.13 The sheer amount and value of the exports leaving from the Pilbara highlight the importance of safe passage of these commodities through the Indian Ocean.

Iron ore being mixed prior to shipping.

Thermal coal

12.14 World demand for thermal coal is projected to increase based on the assumption that robust economic growth would continue in emerging economies particularly China and India. There are four major coal producers in the Indian Ocean rim. In world ranking for thermal coal: Indonesia rates no. 1; Australia no. 2; South Africa no. 5 and India no. 15. Currently, Australia, Indonesia, South America, Russia and Southern Africa dominate global exports of low-grade, or thermal coal. Although Australia, Indonesia and South Africa are Indian Ocean rim countries, the majority of global trade of this commodity does not pass through the Indian Ocean rim.[19]

12.15 Indonesia is expected to remain Australia's largest competitor in thermal coal markets due to its large reserves and its considerable freight advantage over Australian producers into Asian import markets.[20] In 2006, Indonesia exported more thermal

19 DRET, *Submission 15*.

20 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, pp. 37–38.

(low-grade) coal than Australia, making it the world's largest exporter of this resource.[21] Given its geographic proximity to Australia, a developing relationship in terms of resource development and trade is a priority. South Africa's export of thermal coal is 'unlikely to pose a significant threat to Australia's market share'.[22]

12.16 Although India produces thermal coal, most of its electricity demand and associated electricity generation capacity is located in coastal regions removed from the main coal producing regions, resulting in high transport costs.[23]

Metallurgical or coking coal

12.17 Along with the United States and Canada, Australia is a dominant force is the global export of high-grade, metallurgical or coking coal. According to DRET, Australia currently accounts for over 50 per cent of the world trade in metallurgical coal.[24] Australia produces high quality metallurgical coal and substitutes for this grade of coal in steel production are very limited.[25]

12.18 With regard to the production of metallurgical coal: Australia ranks no. 1 in world ranking; Indonesia no. 6; South Africa no. 8; and India no. 12. Around 80 per cent of Australia's metallurgical coal is exported.[26] The Bureau of Resources and Energy Economics noted that because of its geographic position, Australia has an advantage over other established exporters, such as the United States, Canada and the Russian Federation, in supplying metallurgical coal to rapidly developing Asian economies. Most of the coal production comes from New South Wales and Queensland and is exported through four ports along the east coast from Port Kembla in the south to Abbot Point north of Mackay in Queensland.[27]

12.19 India has a large and growing demand for metallurgical coal. Although endowed with coal reserves, India has low capacity for coal production, due to internal infrastructure issues and a limited supply of high quality hard coking coal making the country highly reliant on imports.[28] In 2011, Australia exported 28.9 million tonnes of metallurgical coal to India, accounting for 22 per cent of all

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21 Australian Coal Association, *Submission 18*, p. 4.

22 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, p. 38.

23 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, p. 19.

24 *Submission 15*, p. 7.

25 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, p. 57.

26 Virginia Christie et al, 'The Iron Ore, Coal and Gas Sectors', in Reserve Bank of Australia, *Bulletin*, March Quarter 2011, p. 4.

27 Virginia Christie et al, 'The Iron Ore, Coal and Gas Sectors', in Reserve Bank of Australia, *Bulletin*, March Quarter 2011, p. 5.

28 International Energy Agency, *World Energy Outlook 2011*, p. 431.

Australian exports of this product.[29] According to the Bureau of Resources and Energy Economics, India's projected increase in demand for metallurgical coal is expected to result in imports increasing at an average annual rate of 8.4 per cent, to reach 101 million tonnes by 2025.[30] The International Energy Agency recorded that coal accounted for nearly half the world's increase in energy consumption in the last decade, and that India was set to displace the US as the world's second largest coal consumer after China by 2025.[31] Its forecast indicates that Indian imports of coal are expected to grow to about 56 million tonnes by 2016.[32]

12.20 Australia would be expected to be favourably placed to meet much of this growth, although Mozambique, a major emerging coal-producing economy, would be expected to become a significant supplier to India by 2016.[33] Indeed, Mozambique is expected to emerge as a major competitor in the metallurgical coal export market along with the established and dominant exporters, the United States and Canada.[34] New projects are being developed in the northwest of Mozambique and projects recently completed or under construction are expected to support increased Mozambique's coal exports.[35] Major infrastructure is also expanding such as the ports of Beira and Maputo, which are currently under construction along with construction and upgrades to existing rail links.[36] The Australian Coal Association stated:

> Australian policymakers should be alive to the fact that Mozambique is ideally located to export to Indian coal markets at low freight cost. In these circumstances it is hardly surprising that the Indian company, Jindal Steel and Power, has invested US$250 million in its mine in the Changara district and expects to start exporting to India later this calendar year. The company expects to export 10 million tonnes per annum when the mine is fully developed.[37]

12.21 Noting the rapid emergence of new competitors, the Australian Coal Association highlighted the importance 'of keeping Australia a competitive coal-exporting nation'.[38]

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29 DRET, *Submission 15*.

30 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, p. 24.

31 International Energy Agency, *World Energy Outlook 2011*, p. 353.

32 International Energy Agency, *Medium Term Coal Market Report 2011*, p. 114.

33 International Energy Agency, *Medium Term Coal Market Report 2011*, p. 82.

34 International Energy Agency, *Medium Term Coal Market Report 2011*, pp. 82–83.

35 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, p. 35.

36 International Energy Agency, *Medium-Term Coal Market Report 2011*, p. 93.

37 *Submission 18*, p. 4.

38 *Submission 18*, p. 4.

Summary

12.22 The Bureau of Resources and Energy Economics outlook to 2025 indicates that Australian exporters of thermal and metallurgical coal will face competition from a number of exporting countries including Indonesia which is anticipated to be Australia's main competitor for thermal coal exports. South Africa is a major exporter of coal, historically to Europe; however indications are that India is likely to emerge as a growth export market.[39] Mozambique is also a likely competitor. Even so Australia is expected to maintain its strong market share of metallurgical coal trade because of its quality.[40] There is no place for complacency, however, and as noted by the Australian Coal Association, Australia must continue to strive to maintain its competitiveness with the increasing number of contenders.

Gold and copper

12.23 Australia sells significant quantities of gold and copper to Indian Ocean rim countries. Exports to India, Singapore and Thailand alone make up 29 per cent (over $7 billion) of this figure. Emerging economies in South East Asia and India also import a wide range of other Australian minerals reflecting rapid growth in their industrial development. For example, India matches Japan and trails China only in the volume of copper imported from Australia.[41]

Crude oil, Liquefied Petroleum Gas

12.24 Australia is as heavily dependent on certain mineral resource imports—notably oil and petroleum—as are many other countries in the region. Even though, Australia was a net importer of petroleum in 2010-11, it also exported a significant amount of crude oil and Liquefied Petroleum Gas (LPG).[42] Much of Australia's LPG originates in the Indian Ocean adjacent to Australia's north and western coastlines. Similarly, much of Australia's LPG transits through the Indian Ocean rim, en route to export destinations, though only a very small amount of this resource is exported to Indian Ocean rim nations. China and Korea are the lead destinations although South East Asia and India are significant beneficiaries of Australian exports.[43]

12.25 In recent years, Australia's oil production has fallen rapidly as the Bass Strait oil fields decline. Australia's production of petroleum liquids peaked in 2000 and has been steadily declining since then.[44] Australia's crude oil resources are only small by world standards and are being depleted at a faster rate than they are being replenished

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39 DRET, *Submission 15*, p. 7.

40 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, pp. 33 and 51.

41 DRET, *Submission 15*, p. 8.

42 DRET, *Submission 15*, p. 9.

43 DRET, *Submission 15*, p. 9.

44 Australian Petroleum Production and Exploration Association, 'Oil and petroleum liquids', http://www.appea.com.au/oil-a-gas-in-australia/oil.html (accessed 6 May 2013).

by discovery.[45] Thus, without significant new discoveries of crude oil, or development of condensate and LPG resources associated with offshore gas resources, or other alternatives, Australia is likely to be increasingly dependent on imports for transport fuels.[46]

LNG

12.26 The north west of Australia is also an important producer of Liquefied Natural Gas (LNG). Indeed, the largest proven gas reserves in Australia are located in the Carnarvon Basin in north west of Western Australia with the Browse Basin and Bonaparte Basin also having large reserves.[47] In recent years up to 20 million tonnes of Australian LNG per annum have been extracted, from the North West Shelf off the West Australian coastline and Darwin projects. LNG extraction is expanding rapidly with new projects in existing regions and Queensland expected to increase production to 81 million tonnes by 2017.[48] Ninety-six per cent of Australia's significant output of LNG is exported to North Asia—Japan, China, Korea and Taiwan.

12.27 Malaysia and Indonesia are two of the world's most significant LNG exporters serving the key markets of Japan, China, Taiwan and South Korea. Indonesia is a major competitor for Australian natural gas exports.[49] But, according to the Bureau of Resources and Energy Economics, they have relatively small reserves and over the past ten years their reserves to production ratio has been declining. It noted that this trend 'reflects an inability to add to existing gas reserves and relatively strong growth in domestic gas consumption'.[50] The Bureau's outlook also noted that Iran and Yemen have substantial reserves, but 'the perceived high likelihood of continued political volatility in the region is expected to constrain investment in LNG production capacity'.[51] Mozambique and Tanzania are two emerging producers.[52]

12.28 The Australian Petroleum Production and Exploration Association noted the potential supply competition from established producers such as Qatar, Yemen, Oman the United Arab Emirates, Malaysia, Brunei and Nigeria and from new entrants Nigeria, Angola and PNG. It also drew attention to the growing excitement about

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45 Department of Resources, Energy and Tourism, Geoscience Australia, Australian Bureau of Agricultural and Resource Economics, *Australian Energy Resource Assessment*, 2010, p. 10.

46 Department of Resources, Energy and Tourism, Geoscience Australia, Australian Bureau of Agricultural and Resource Economics, *Australian Energy Resource Assessment*, 2010, p. 4.

47 Virginia Christie et al, 'The Iron Ore, Coal and Gas Sectors', in Reserve Bank of Australia, *Bulletin*, March Quarter 2011, p. 6.

48 DRET, *Submission 15*, p. 14.

49 Australian Coal Association, *Submission 18*, p. 89.

50 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, p. 47.

51 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, p. 51.

52 Bureau of Resources and Energy Economics, *Australian bulk commodity exports and infrastructure—outlook to 2025*, July 2012, p. 51.

recent large gas discoveries in Keyna, Mozambique and Tanzania. For example, an estimated 100 trillion cubic feet of recoverable gas reserves have been discovered in Mozambique and Tanzania since mid-2010. In addition, 'a whole new source of competition is emerging as access to different forms of unconventional gas increases'. It reported:

> Shifts of this nature, the entry of new LNG producers in North America and East Africa, and the potential rise of unconventional gas in the longer term, could have significant implications for the Australian LNG industry's prospects. With Australia likely to become the largest LNG supplier to Asia accounting for around 35 per cent of the market by 2017…LNG buyers may seek to diversify their sources of supply and shift attention towards new projects.[53]

12.29 Thus, Australia faces competition from numerous other sources even with a commodity where demand is strong, world-wide and increasing, for which Australia has an established, growing market, and is in a major expansion phase. These new developments mean that both government and industry must be vigilant about maintaining Australia's reputation as a secure, reliable and cost-effective supplier of LNG.

LNG tanker in the background; iron ore stored in piles in the foreground.

53 Australian Petroleum Production and Exploration Association, *State of the industry 2012*, p. 5.

Uranium

12.30 Uranium is expected to become a major export commodity for Australia in coming years.[54] It is very much the sleeping giant of Australian export commodities, as extensive markets are expected to emerge in the Indian Ocean rim after 2020.[55] Asia has recently overtaken the US as the largest regional market for Australian uranium exports. Australia is well placed to benefit from growing demand due to proximity to growth markets and resource abundance. Market growth is forecast to occur in non-OECD countries and Australia has the largest supply of recoverable uranium resources in the world.[56]

12.31 It should be noted that Australia's ability to meet market needs is dependent upon Government uranium mining and export policy. This has always been a controversial area in public policy, due to environmental and public health concerns over the safe use and disposal of uranium. The Australian Government is currently considering a change in policy to enable exports of Australian uranium to India, subject to negotiation and ratification of a bilateral safeguard agreement.[57] Mr Bryan Clark from the Australian Chamber of Commerce and Industry (ACCI), was of the view that supplying uranium to India would 'unlock a number of doors in our relationship with India' and would also assist India with a low-carbon technology.[58]

12.32 Australia is also finalising a bilateral safeguard agreement with the United Arab Emirates (UAE) to supply uranium for future UAE energy needs. Vietnam, Malaysia, Bangladesh and Thailand have also stated their intentions to use nuclear energy.[59]

Future growth

12.33 Many Indian Ocean rim countries are beginning to industrialise, resulting in an increased market for energy resources and metals.[60] DFAT noted that:

> Many of the Indian Ocean rim economies continue to enjoy significant levels of growth. Rapid industrial development and increasingly affluent domestic markets are helping to fuel growing demand for Australia's resources and food exports. Australia's comparative and geographic advantages ensure it is well placed to continue to capitalise on these trends.[61]

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54 *Submission 15*, p. 11.

55 *Submission 15*, p. 15.

56 *Submission 15*, p. 15.

57 *Submission 15*, p. 11.

58 *Committee Hansard*, 5 December 2012, p. 35.

59 *Submission 15*, p. 15.

60 Austrade, *Submission 19*, p. 95. See also Virginia Christie et al, 'The Iron Ore, Coal and Gas Sectors', in Reserve Bank of Australia, *Bulletin*, March Quarter 2011, p. 7.

61 *Submission 30*, p. 31.

12.34 Future Directions International also highlighted the increasing potential in the Indian Ocean rim, with its 'developing wealth, increasing population, evolving trade and shipping capabilities'.[62] This rapid growth presented Australia with great opportunities and will continue to have an important place in Australia's future. Professor Raghbendra Jha, from East Asia Bureau of Economic Research, noted that there is going to be 'a great push from India and several other countries for getting energy related resources', which is another area of potential complementarity. Australia, however, as a very significant producer and exporter of natural resources, will also face competition from Africa, where India has now started to invest quite heavily and, secondly, with Central Asia. There are important synergies and complementarities between developments in the Indian subcontinent and developments in Australia.[63]

12.35 Overall, according to Future Directions International, the Kimberley and the Pilbara regions' strategic share of iron ore, gas, base metals and uranium means sustained growth and contribution to Australia's national GDP. This development is expected despite market volatilities and new competing sources of commodities. Putting the possibility of market volatilities aside, Indian Ocean economies were projected to continue to expand and demand more materials and energy supplies from Australia. Large and accessible known deposits will sustain current production levels for the coming decades with the potential to further extend supply through ongoing exploration and technological advances and investment.[64]

12.36 Thus, while there are synergies with growing demand from the Indian Ocean rim, there are also Indian Ocean rim countries that compete with Australia in the export market.

Competition and investment opportunities

12.37 As stated earlier, many Indian Ocean rim countries will increase their consumption of resources exponentially in line with development. Austrade referred to a macro-economic trends forecast for the Indian Ocean rim identifying rapid growth in industrial and economic development, fostering associated growth in affluence and consumption.[65] It is this growth in consumption from the Indian Ocean rim that stands to benefit the Australian economy, particularly with regard to exports of mineral and energy resources. Opportunities will also be present in terms of foreign investment diversity, particularly with regard to Australian mining interests and associated industry.[66] However, these opportunities will be matched by intense competition around energy supply and demand.

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62 *Submission 12*, p. 2.

63 *Committee Hansard*, 17 August 2012, p. 27.

64 Mr McHugh, Future Directions International, *Committee Hansard*, 2 October 2012, pp. 31–32.

65 *Submission 19*, p. 4.

66 *Submission 19*, p. 3.

12.38 Analysts forecast increased competition for Western Australia resources in the decades ahead as new competing sources of commodities emerge, particularly in Africa.[67] Although Australia is a major player in the region at the moment, in terms of resource exports and mining and extractive industry expertise, careful strategic planning is needed to consolidate and grow this position of strength for Australia's ongoing economic benefit. Specifically, in regard to Australia's coal exports, the Australian Coal Association noted:

> The [Australian] trade sector is highly exposed to relentless competition and Australia cannot afford to be complacent, as it faces strong and increasing competition inside the Indian Ocean region from Indonesia, South Africa and Mozambique, and outside the region from Mongolia, Colombia, the USA and Canada (among others).[68]

12.39 It is highly likely that Western Australia will continue as a leader in mining efficiency in the years ahead, with increased level of automation reducing manning levels and operating costs. The Western Australian mining sector, however, is predicated on Australia's comparatively low sovereign risk, and, as noted earlier, it is therefore vital Australia does all it can to protect its comparative advantage.[69]

Services

12.40 The ACCI noted that mining is 'not simply about digging holes', but also creates demand for improved technology such as highly specialised mining equipment and services associated with mining.[70] According to ACCI, many Australian firms are diversifying into this area to attain 'a portion of the share market'. It stated:

> Legal, accounting, project engineering, software and finance companies are all building specialist resource operations seeking resource skills and developing designing and producing hi-tech mining equipment and servicing support industries.[71]

12.41 The resource processing industry also 'demonstrates that there are positive downstream effects from increased mining activity'. Australian firms are responding to the growing demand for mining services and Australia is 'developing a cluster of internationally competitive firms based on mining services'.[72] The Western Australia government informed the committee that a number of Western Australian resource companies are also active in developing resources and servicing mining activities in Indian Ocean rim countries—including servicing petroleum activities in Singapore or developing mines in Mozambique and Tanzania. This area opens up opportunities not only for the large mining companies but for small and medium enterprises. The

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67 See for example, Future Directions International, *Submission 12*, p. 9.

68 *Submission 18*, p. 88.

69 Future Directions International, *Submission 12*, p. 9.

70 See *Submission 26*, p. 9.

71 *Submission 26*, p. 9.

72 *Submission 26*, p. 9.

Australian Export Finance and Insurance Corporation (EFIC) cited the example of Gasco Pty Ltd, an Australian combustion and processing engineering firm, which secured a US$6.5 million contract to supply equipment to the Dolphin Energy Project in the United Arab Emirates. The contract required installing two fired heaters for the 240km Taweelah-Fujairah gas pipeline project which involves the production and processing of natural gas from offshore Qatar and transporting the processed gas by pipeline to the United Arab Emirates and Oman.[73] In respect of Africa, EFIC reported:

> Africa contains 30% of the world's mineral reserves but only five per cent of the global mineral extraction budget is allocated to African projects. This provides great opportunity both for Africa, and Australia. More than 220 Australian resource companies have assets in Africa—200 of these are involved in mining. There companies account for 600 individual projects spread over 42 countries representing over $20 billion of actual and perspective investment.[74]

12.42 Mr Giles Nunis, from the Western Australian Department of State Development, noted that 70 per cent of Australian mining companies in West Perth operate in Africa, and that Australia mining companies are developing expertise in terms of mining services and mining development.[75] He mentioned that a lot of African companies seek mining services:

> A lot of the issues they have to deal with in Africa are predominantly around sovereign risk issues in terms of investment, and we are certainly assisting African governments in looking at how this state of Western Australia has been able to provide greater security for larger investments over successive state governments. That is by way of state agreements and has been quite attractive for African countries to have a look at. When they get through that particular cycle, we think we can play a much larger role in Africa.[76]

12.43 Mr Nunis noted that contact was mainly government department to government department. He explained:

> The Department of Mines and Petroleum look at their regulatory regimes, the royalty structure, safety and how the mine plans are constructed by the industry, so we show examples of those. We frequently get involved in the development of the state agreements that we have within the state…what they are looking at is how they could potentially apply a similar regime over there. We give government-to-government advice. We say, 'These are the things that we do over here,' and they take those with them. What they do with them we are not quite sure yet, but we have not been drawn over

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73 *Submission 37*, p. 7.

74 *Submission 37*, p. 10. See also the Hon Kevin Rudd, former Minister for Foreign Affairs, 'Building bridges between Africa and Australia, International Forum on Africa', University of Sydney, Speech, 13 May 2011, http://www.foreignminister.gov.au/speeches/2011/kr_sp_110513.html (accessed 8 May 2013).

75 *Committee Hansard*, 2 October 2012, p. 18.

76 *Committee Hansard*, 2 October 2012, p. 20.

> there to give on-the-ground advice; they predominantly come here and seek that.[77]

12.44 The committee notes that at their 2012 meeting, the Council of Ministers referred to enhanced connectivity that could have 'a catalytic effect on economic integration by drastically reducing the costs of doing business'. They recognised that the development of port and harbour infrastructure in the region assumed critical importance and directed the Working Group on Trade and Investment to 'explore the potential of cooperation in this sector, including investment in and upgrading of shipping infrastructure and logistic chains in the region' (see paragraph 3.45).

12.45 During its visit to the Pilbara region, the committee witnessed the benefits that are accruing from the rapid introduction of advanced technology not only in the actual extractions of minerals but in their transportation. Much of this technology is ground breaking. For example, the committee was told about the proposed advanced floating deck concept for Port Dampier, which involves installing a large pontoon deck at the end of the Dampier Cargo Wharf to provide additional berth capacity for offshore vessel tonnage. According to the Port Authority, the concept has 'attracted considerable interest from industry, suppliers and shipping agents'.[78] There is also the use of highly automated machinery to transport bulk commodities and of sophisticated software to facilitate the fast, safe, efficient movement of vessels in and out of the harbours with enormous potential to boost productivity. The committee even heard the term 'industry tourism' used to describe visitors coming to the Pilbara attracted by the mining and transportation expertise that the region showcases.

12.46 Having visited the two largest bulk export ports in the world and witnessed the use of advanced technology to improve the productivity of the ports, the committee believes that Australian expertise in this area could be the catalyst to which the ministers referred. In this regard, the committee found that the opportunities for Australian industry to build on the work being done in the Pilbara were yet untapped and extend well beyond the export of minerals to the complete range of services accompanying mining.

Africa

12.47 The pattern of energy supply and demand varies greatly across the Indian Ocean rim, from crude oil abundance and self-sufficiency in the Gulf to oil dependence in India and the opening of new reserves in Kenya.[79] Within Africa the scope of activity and development in mineral extraction is also very broad, with vast quantities of untapped mineral wealth attracting global interest from foreign mining companies. This international interest includes a large and growing Australian presence. With particular reference to Africa, Austrade surmised that:

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77 *Committee Hansard*, 2 October 2012, p. 25.

78 Dampier Port Authority, *Annual Report 2012*, p. 8.

79 *Submission 19*, p. 5.

> …most of these minerals still remain untapped due to inadequate knowledge on their status, economic viability and appropriate mining technologies...This sector will increasingly offer Australian firms opportunities in mineral exploration, mining software, mining processing technologies, mining equipment, engineering services, and mining education and training services.[80]

Africa Down Under

12.48 Ms Sonia Grinceri, Western Australia Department of State Development, referred to the Africa Down Under conference, which has been held annually in Perth for the past ten years. She noted that this Austrade event has 'grown exponentially—doubling each year' and is now the largest mining conference in Australia and the second-largest mining conference focused on Africa in the world, after the Mining Indaba in Cape Town.[81] Ms Grinceri explained that the attendees:

> …usually travel with very substantial government delegations headed up by either a minister, a ministerial delegation, and a head of the department of mines et cetera, and the various bureaucrats that fall in behind. Then there is a great deal of interest on the part of Australian companies, most of which are Western Australian companies. That is the configuration of it. But I have seen an increasing number of private sector players from Africa coming across over the years.[82]

12.49 According to Ms Grinceri, 70 per cent of Australian companies in the resources sector are out of Western Australia and are involved in Africa. She explained that West Perth is considered a 'little Africa' for the mining sector, which is a growth industry. In her view, the companies have, by and large, been the drivers of building links with the African mining sector through their people-to-people contacts. She stated:

> Our migrant population is an undervalued contributor to trade factors, not just in this discussion about the Indian Ocean rim countries…That is my first port of call. You need to look at the industry networks that are associated with those countries and engage with them. They are very important, very valuable and underestimated.[83]

12.50 Dr Hameiri described the Africa Down Under conference as 'quite a substantial event', bringing together a lot of policymakers and business people from both Australia and various African states. He believed that the business community has 'a very powerful role' and that linkages were occurring on a more bilateral rather than on a multilateral level because the multilateral arrangement had been quite weak.[84]

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80 *Submission 19*, p. 5.

81 *Committee Hansard*, 5 December 2012, p. 21 and *Committee Hansard*, 2 October 2012, p. 25..

82 *Committee Hansard*, 2 October 2012, p. 25.

83 *Committee Hansard*, 2 October 2012, p. 27.

84 *Committee Hansard*, 2 October 2012, p. 13.

12.51 Mr Jeff Hart, AAMIG, pointed to the importance of initiatives such as the 'Africa Down Under Mining Conference'. He informed the committee that the 2012 conference attracted 28 African delegations including 18 African mining ministers and over 2,500 delegates in total.[85] There were 166 exhibitors and 'a full three day programme of top-notch speakers'. Mr Hart used the example of AAMIG's interaction with Puntland, in North-Eastern Somalia, to extrapolate the importance of the conference for its work. More generally, the Puntland example highlighted the synergies and complexities that exist in the interaction between corporate, state and international interests, in the context of Australia's engagement in mining in the Indian Ocean rim.

12.52 Puntland is an autonomous region with a fragile political history that continues to this day—its borders are still in dispute.[86] In late 2011, Mr Hart met with a delegate from Puntland Petroleum and Minerals agency to discuss the considerable mineral resources of the region: petroleum, iron-ore, gold, copper, tin, titanium and gemstones.[87] While the delegate noted the interest of individual Australian mining companies, he also referred to the presence of Chinese and Indian foreign direct investment mining interests active in the region.[88] According to Mr Hart, the delegate acknowledged the enormous importance of sustainable management of Puntland's mineral resource wealth for the long-term benefit of the region. The delegate also acknowledged the expertise and reputation of Australian mining companies, in that he 'would like to see more Australian Energy companies involved in the process'.[89] Mr Hart cited the delegate's attendance at the Africa Down Under conference, as critical to exposing Puntland, and potentially a number of similarly placed African regions and countries in the Horn of Africa, to the sustainable benefits of international investment.[90] He also emphasised the importance of this region strategically to Australia's ongoing international resource and security interests.

12.53 The organisers expect the conference in August 2013 to be far bigger than in 2012, 'consolidating our reputation as the best melting-pot for business conducted between the two continents'.[91]

Investment opportunities

12.54 The largest country recipients of Australian investment in the Indian Ocean rim resource and energy sector, in terms of the size of investments and the number of

85 *Committee Hansard*, 5 December 2012, p. 21.

86 BBC News, 'Puntland profile', http://www.bbc.co.uk/news/world-africa-14114727 (accessed 6 May 2013).

87 *Committee Hansard*, 5 December 2012, p. 21.

88 *Committee Hansard*, 5 December 2012, p. 21.

89 *Committee Hansard*, 5 December 2012, p. 21.

90 *Committee Hansard*, 5 December 2012, p. 21.

91 Africa Down Under, 'About the conference', http://www.africadownunderconference.com/ (accessed 6 May 2013).

companies involved, are South Africa, Indonesia and Tanzania.[92] In Tanzania alone, at least 21 Australian companies are involved in 45 mining projects.[93] Austrade noted:

> Australian firms will also see increasing opportunities to invest and innovate in these markets to capture improvements in resource (land, water, energy and food) productivity, as well as increasing supply of these goods from Australia.[94]

12.55 Mr Hart sensed that the Australian mining sector, including medium-sized and so-called junior miners tend to go where they think there are opportunities. According to Mr Hart, historically Australian companies have had a lot of mining investment in Africa and now in Botswana on the east coast, and particularly countries such as Kenya where there are significant Australian interests. He argued that, while there are some important trading relationships including with South Africa, the mining sector was 'the first sector at the moment in terms of Australian economic interests in Africa'.[95]

12.56 Like many who presented evidence to the inquiry, Mr Hart was firm in his view of the fundamental importance that mining industries would play in the development of Africa in the 21st century'.[96] From an Australian perspective, AAMIG cited many examples of the importance of the sector. The Australian mining industries portfolio represented over 600 projects in 42 African nations and, according to Mr Hart, the potential that Africa offered Australia economically had only just begun to be realised. He understood that there were about 400 companies already active in the mining sector in Africa with more opportunities opening for Australia because it has good competitive advantages:

> Apart from the potential of up to $50 billion of Australian mining investment projects, existing or in the pipeline—and more than half of that is already firmly on the books—Africa, with a population of over 1 billion, already has a GDP of $1.7 trillion, larger than India or Russia's. It is expected to grow by 6 per cent a year into the future, with consumer spending at double the OECD average. Australia will ignore Africa at its peril as the 21st century unfolds.[97]

12.57 He added that the opportunities were not limited to mining but that clearly mining and mining services was 'one of the areas where we do have an extraordinary base to build on at the moment'.[98] According to Mr Hart:

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92 *Submission 30*, p. 31.

93 *Submission 30*, p. 31.

94 *Submission 19*, p. 4.

95 *Committee Hansard*, 5 December 2012, pp. 22–23.

96 Africa Mining Vision, 'About AMV', http://www.africaminingvision.org/about.html (accessed 6 May 2013).

97 *Committee Hansard*, 5 December 2012, p. 21.

98 *Committee Hansard*, 5 December 2012, pp. 30-31.

> So we need to be making sure that Australian firms are the ones who are able to grasp the opportunities earliest and set themselves up in the marketplace and be, as we would like to think anyway, ultimately the dominant players and the beneficiaries of development in the countries of our region.[99]

12.58 Dr Shahar Hameiri noted the considerable potential with mining developments in Africa becoming operational mines and of the world-wide growing interest in investing in Africa.[100] He explained that this trend reflected the current very high price of key commodities: that when prices are very high, as they are now, business and governments develop 'initiatives to invest in areas that are far more expensive'. He cited the seabed resources in the Indian Ocean, which 'suddenly got a lot of interest from the Chinese government and the Indian government but also parts of Africa'.[101] While opportunities abound in the Indian Ocean rim for Australian companies, especially those with much needed expertise in the mining and allied industries, there are downsides. EFIC noted that Australian exporters must manage 'additional political and country risks associated with some markets'. It stated that:

> …there are challenges associated with operating in these developing countries, particularly for those placing significant investment in resource projects which can be subject to challenges such as political instability or civil unrest.[102]

Partnerships and Synergies

12.59 The nature of competition in the Indian Ocean rim has previously been discussed in this chapter, as it relates to Australia's mineral resource exports. In a general sense, submissions have indicated the importance of Australia's mineral export trade in the Indian Ocean rim, linking this trade to Australia's ongoing economic prospects. In terms of competition, Australia's abundant stock in a number of resource sectors has been noted but even then competitors are emerging.[103] A consistent theme is that Australia needed to be mindful of the fact that emerging resource producers in the Indian Ocean rim should be seen as export competitors, in addition to being export markets.

Corporate Interests

12.60 By way of relevant summary, Australian Coal Association's recommendations relating to mineral exports and strategy synergies included:

- ensuring regional energy issues are high on the agenda of the IOR-ARC;

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99 *Committee Hansard*, 5 December 2012, p. 31.

100 *Committee Hansard*, 2 October 2012, p. 13.

101 *Committee Hansard*, 2 October 2012, p. 14.

102 *Submission* 37, p. 10.

103 *Submission 15*, p. 7.

- using other relevant bodies such as the commonwealth of nations, the Australia-India Framework Dialogue and the Australia-India Energy and Minerals Forum to pursue open trade and regional security; and
- forming a subcommittee of the Council of Australian Governments to encourage intergovernmental cooperation and consistency on Indian Ocean policies.[104]

12.61 Speaking on behalf of the AAMIG, Mr Hart suggested that the Australian Government's mining interests would be served by doing 'more in engaging actively with the private sector'.[105] The AAMIG, Australia-Africa Business Council and the Australian Uranium Association are just a few examples of organisations that have an active and valid contribution to make to this discourse.

12.62 There is evidence before the committee to suggest that specific synergies are operating between Australia's mining interests and general engagement in the Indian Ocean rim. There are less concrete examples of broader cooperative synergies between government departments and agencies, and corporate and non-government operatives, that incorporate the Indian Ocean rim as a region. This approach is particularly apparent in relation to strategic high-level outcomes that are Indian Ocean rim region-specific, relating to mining and resource extraction and trade. Indeed, the committee's consideration of mining activities in the Indian Ocean rim has been determined largely by its bilateral nature or in the case of Africa with the focus on a subregion that includes countries not within the Indian Ocean rim. The IOR-ARC makes no mention of mining as one of its priority areas though mining could be included under trade and investment.

Energy security:

12.63 Mr Nunis spoke of the security implications and concerns in Western Australia, as the state with significant mining and energy projects, including multibillion-dollar resource projects, that underpin the state and national economy. The Woodside LNG projects of Pluto and North-West Shelf, and the Wheatstone and Gorgon projects, exemplify the state's strong track record implementing such large scale projects all of which add up to more than $167 billion.[106]

Sea transport security

12.64 The level of commodity trade through the Indian Ocean sea routes for Australian producers is likely to increase in line with Australian foreign direct investment in Indian Ocean rim resource provinces, particularly Eastern Africa and South East Asia.[107] As noted in the previous chapter, the Indian Ocean is a major

104 *Submission 18*, p. 87.

105 Mr Jeff Hart, *Committee Hansard*, 5 December 2012, p. 22. The Australia-Africa Mining Industry Group (AAMIG) is a member-based organisation, drawing membership from over 100 companies, http://aamig.com/category/member-profiles/ (accessed 6 May 2013).

106 *Committee Hansard*, 2 October 2012, p. 18.

107 *Submission 18*, p. 1.

transit route for Australian import and export trade, within and external to the Indian Ocean rim.[108] These shipping routes connect Europe, East Africa, East Asia and Australia and with the economic expansion of Asia, the Indian Ocean rim becomes more important to global trade, especially energy trade.[109]

12.65 The importance of the Indian Ocean rim for Australia's coal interests should not be understated. Australia is the largest seaborne exporter of coal in the world, accounting for 4 per cent of global production of this resource.[110] Australia's export trade of this resource generated over $48 billion in revenue in 2011-12.[111] The Australian Coal Association notes:

> The oceans—particularly the Western Pacific and Indian Ocean—provide the essential highway which sustains this trade and contributes to Australia's economic wellbeing.[112]

12.66 The Australian Coal Association noted in regard to the Indian Ocean that 'any major disruption to these sea lines of communication would have a significant impact on every Australian's standard of living'.[113]

12.67 While security risks are present for all shipped energy commodities, these risks are magnified for class 7 goods such as uranium. Indian Ocean transit routes pose significant risks from issues such as piracy and terrorism.[114] Both matters of security in the North West and of the Indian Ocean sea lanes were discussed in chapter 10.

Conclusion

12.68 The committee has identified the many opportunities available to Australia to capitalize on its already highly successful mining industry, including in the services sectors accompanying mining activity.

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108 Austrade, *Submission 19*, p. 3.

109 Sam Bateman and Anthony Bergin, *Our western front: Australia and the Indian Ocean*, Australian Strategic Policy Institute, March 2010, p. 12.

110 *Submission 18*, p. 1.

111 Bureau of Resources and Energy Economics, Resources and Energy Quarterly, December 2012, p. 76.

112 *Submission 18*, p. 1.

113 *Submission 18*, p. 1.

114 *Submission 15*, p. 13.

Recommendation 12

The committee recommends that ministers attending the Council of Ministers' Meeting in Perth or their representative be invited to visit the Pilbara as part of a delegation to see the work being done at Dampier Port and Port Hedland to improve the ports' productivity.

Recommendation 13

The committee recommends that DFAT work with other federal government departments, as well as state and territory governments, on strengthening government consultation with groups such as AAMIG, the Australian Coal Association, and the Australia-Africa Business Council. The committee notes that while Africa Down Under has been successful in generating discussion, more concrete measures are needed to ensure that the input of groups working with industry and African countries is captured in policy making.