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CRITICAL MINERALS

HYPOCRITICAL SPIN



Critical minerals mining and processing has had horrific impacts on Indigenous peoples and land, the workers in Latin America, the African continent, the Asian continent and the Global South for decades. Indigenous peoples have been speaking out and resisting for decades against this industry, which has ravaged their lands. The warnings about the impacts that mineral extraction, whether framed for renewable energy transition or defence, will have when continued along in the interests of capital and imperial hegemony have gone largely unheard.

The focus of this paper is to provide a background on the strategic push for critical minerals extraction, processing and trade in so-called Australia, with specific emphasis on their necessity for defence and the governmental military industrial complex.

This background is by no means exhaustive, but seeks to frame critical minerals, particularly rare earth elements, within the current policy landscape of the AUKUS alliance, against the backdrop of the largest defence budget of any Australian Government to date.

The economic and political context of critical minerals is a point of concern for the 99%. In particular, anti-military, anti-nuke, environmental, human rights and anti-war campaigners, and primarily in the fight for First Nations justice.

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WHAT ARE CRITICAL MINERALS?

The Albanese Government has championed critical minerals and rare earths as a central feature of its strategic policies. The overarching objective of these policies is to position Australia as a global leader in the critical minerals sector, with notable emphasis on key minerals such as Lithium, Vanadium, Neodymium-Praseodymium, Scandium, and various other rare earth elements.

The 'Assessment of Critical Minerals' that was presented to the White House in March 2016 defined critical minerals as:

"those that have a supply chain that is vulnerable to disruption, and that serve an essential function in the manufacture of a product, the absence of which would cause significant economic or security consequence."

The definition in the Australian Government's Critical Minerals Strategy 2023-2030 states:

"Critical minerals are metallic or non-metallic materials that are essential to our modern technologies, economies and national security, and whose supply chains are vulnerable to disruption. Risks of disruption to critical mineral supply chains are heightened when mineral production or processing is concentrated in particular locations, facilities or companies."

The extraction of rare earth element concentrate also results in the extraction of uranium as a 'by-product', which is considered an exemption in uranium mining legislation.



The Australian Government's critical minerals list comprises 31 critical minerals, including 'rare earth elements'. The rare earth elements include yttrium, lanthanum, cerium, praseodymium, neodymium, promethium, samarium, europium, gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium and lutetium. The platinum group elements include ruthenium, rhodium, palladium, osmium, iridium and platinum. The Critical Minerals Strategy outlines why these minerals are considered critical... to a point.

Lithium is most notably recognised as being necessary for battery storage technologies, but critical minerals and rare earth elements are integral to the development of weapons systems, components, precision guided missile systems and sensor suites. Magnets produced from rare earth elements are used in systems such as Tomahawk missiles, a variety of radar systems, Predator unmanned aerial vehicles, and the Joint Direct Attack Munition series of smart bombs. Also making use of rare earth elements are; fiber optics communication systems; cerium-polished optical lenses; and sonic transducers used in submarine sonar systems. Antimony is necessary for armaments and bullets.

Vehicle-mounted laser range finders, such as those found on Abrams M1A1/2 tanks, make use of rare earth elements, as do their portable counterparts and target designators. The Australian Army so far has received 46 of the total of 75 Abrams tanks from the US. Almost every US weapons system requires light and heavy rare earths.

Critical mineral	On US list[1]	On EU list[2]	On India list[3]	On Japan list[4]	On Republic of Korea list[5]	On UK list[6]	Australian geological potential[7]
High-purity Alumina	No	No	No	No	No	No	High
Antimony	Yes	Yes	Yes	Yes	Yes	Yes	Moderate
Arsenic	Yes	Yes	No	No	No	No	Moderate
Beryllium	Yes	Yes	Yes	Yes	No	No	Moderate
Bismuth	Yes	Yes	Yes	Yes	Yes	Yes	Moderate
Chromium	Yes	No	No	Yes	Yes	No	Moderate
Cobalt	Yes	Yes	Yes	Yes	Yes	Yes	High
Fluorine[13]	Yes	Yes	No	Yes	No	No	Moderate
Gallium	Yes	Yes	Yes	Yes	Yes	Yes	High
Germanium	Yes	Yes	Yes	Yes	No	No	High
Graphite[14]	Yes	Yes	Yes	Yes	Yes	Yes	Moderate
Hafnium	Yes	Yes	Yes	Yes	No	No	Moderate
Indium	Yes	No	Yes	Yes	Yes	Yes	Moderate
Lithium	Yes	Yes	Yes	Yes	Yes	Yes	High
Magnesium	Yes	Yes	No	Yes	Yes	Yes	High
Manganese	Yes	Yes	No	Yes	Yes	No	High
Molybdenum	No	No	Yes	Yes	Yes	No	Moderate
Nickel	Yes	Yes	Yes	Yes	Yes	No	High

Critical mineral	On US list[1]	On EU list[2]	On India list[3]	On Japan list[4]	On Republic of Korea list[5]	On UK list[6]	Australian geological potential[7]
Niobium	Yes	Yes	Yes	Yes	Yes	Yes	Unknown (interpreted moderate)[15]
Platinum-group elements[16]	Yes	Yes	Yes	Yes	Yes	Yes	Moderate
Rare-earth elements[17]	Yes	Yes	Yes	Yes	Yes	Yes	High
Rhenium	No	No	Yes	Yes	No	No	Unknown (interpreted moderate)
Scandium	Yes	Yes	No	No	No	No	High
Selenium	No	No	Yes	Yes	Yes	No	Unknown (interpreted moderate)
Silicon	No	Yes[18]	Yes	Yes	Yes	Yes	High
Tantalum	Yes	Yes	Yes	Yes	Yes	Yes	High
Tellurium	Yes	No	Yes	Yes	No	Yes	Unknown (interpreted moderate)
Titanium	Yes	Yes[19]	Yes	Yes	Yes	No	High
Tungsten	Yes	Yes	Yes	Yes	Yes	Yes	High
Vanadium	Yes	Yes	Yes	Yes	Yes	Yes	High
Zirconium	Yes	No	Yes	Yes	Yes	No	High

SOURCE: [HTTPS://WWW.INDUSTRY.GOV.AU/PUBLICATIONS/AUSTRALIAS-CRITICAL-MINERALS-LIST-AND-STRATEGIC-MATERIALS-LIST](https://www.industry.gov.au/publications/australias-critical-minerals-list-and-strategic-materials-list)

The Lockheed Martin F-35 Lightning II Joint Strike Fighter requires more than 400kg of rare earth elements. Each Arleigh Burke DDG-51 naval destroyer requires 2350kg, and a Virginia class submarine, those that Australia may or not get as part of AUKUS Pillar I, needs over 4 tonnes. So, for the \$368 billion AUKUS Virginia class nuke subs, over 12.5 tonnes of rare earths are needed.

For every tonne of rare earth produced, the mining process yields 13kg of dust, 9,600-12,000 cubic metres of waste gas, 75 cubic metres of wastewater, and one tonne of radioactive residue. The processing of rare earths through leaching ponds contaminates air, water and earth. Every tonne of rare earth extracted and processed produces 2000 tonnes of toxic waste.

And that is just rare earths, of which 17 elements are combined into one category of the 31 minerals on the Critical Minerals List.

The BARGAINING CHIP

China dominates the global critical minerals sector, in particular the global rare earths refining and processing sector. China has a monopoly on supply chains, therefore dominates the global market. China's rare earth production accounts for 60% of the global market, yet its rare earth processing accounts for over 90%, through imports.

The military industrial complex, and largely the US defence industry, relies heavily upon the imports of critical minerals and rare earths from China.

Critical minerals have become of "vital strategic importance". During the Biden regime, bans were placed on chip exports, which have resulted in subsequent bans by China on critical mineral extraction and processing technology, and critical minerals like antimony, gallium and germanium. China have further restricted the exports of tungsten, tellurium, bismuth, indium and molybdenum-related products to US arms companies in response to the imposition of Trump's tariffs. These minerals are critical for defence technologies and are required in almost every US weapons system.

As the US-China trade war is intensifying, and the drums of war are beating, the reliance on China's supply chains have become a sticking point, and has swayed policy in the US and lackeys like Australia to bolster their own domestic supply chains to counter China's dominance. Trump has already signalled doing a deal with Ukraine for rare earths in exchange for military aid, which is a terrifying development. As the US is floundering to maintain military and technological dominance, critical minerals have become the geopolitical bargaining chip.

THE QUIET PART... LOUD

Whilst the US is extensively highlighting the central role of critical minerals for defence, Australia is tending to obfuscate their centrality in this sector. The Government is instead focussing on the reliance of the renewable energy sector on the bolstering of critical minerals supply chains. Two things can be true at once, however the lack of information provided to the public by the Department of Defence in regards to critical minerals is in line with a department shrouded in secrecy.

Renewable energy is easier to sell to the population. Australia can maintain its acquiescent role to the US by maintaining its position as the mine pit for US Defence manufacturing using Australian Government funds to bolster the critical minerals industry for supply and processing with little public pushback. This is a central feature of AUKUS Pillar II – Advanced Capabilities, coupled with the Defence Trade Controls Amendments of 2024 and the 2023 US-Australia Innovation Alliance.

The Defence Trade Controls Amendment Act 2024 came into force in September 2024. The Defence Trade Controls Amendment Act creates a licence-free environment between Australia, the US and the UK, which extends to any citizen, body-corporate or Government of the AUKUS partners. The licence-free environment exempts Defence and Strategic Goods List (DSGL) goods, technology and services from permit requirements when transferring between Australia, the US and the UK. Therefore the free-flow of these items can go unhindered, with lack of oversight and without transparency.



On the 10th of February, Defence Minister and Deputy Prime Minister Richard Marles and Minister for Defence Industry and Capability Delivery and Minister for International Development and the Pacific Pat Conroy released a joint media statement of the ‘benefits’ of the export licence-free environment.

“In less than six months, these generational reforms have provided over 210 companies across Australia with unprecedented access to the world’s largest defence markets and have already facilitated over \$25 million in licence-free exports to the UK and the US.

Under these reforms, local businesses no longer need a licence to export most military and dual-use goods, technologies and services to the UK and the US, unlocking billions of dollars of investment in Australia and cutting red tape for Australian industry and our AUKUS partners.

This early progress demonstrates the significant benefits these reforms offer local businesses as well as the unprecedented trade, innovation and collaboration opportunities with our AUKUS partners.”

In the 2024-25 Budget, \$28 million has been committed to the implementation of these reforms, and to support industry engagement.

The DSGI was amended and enforced by Richard Marles in August 2024. Part 1 is referred to as Munitions and Part 2 as Dual-Use...



Division 2—Simplified outline of the Defence and Strategic Goods List

The Defence and Strategic Goods List is divided into 2 Parts.

Part 1 of the List covers defence and related goods, that is goods and technologies designed or adapted for use by armed forces or goods that are inherently lethal. These goods include:

- military goods, being goods or technology that is designed or adapted for military purposes, including their parts and accessories; and
- non-military lethal goods, being equipment that is inherently lethal, incapacitating or destructive, such as non-military firearms, non-military ammunition and commercial explosives and initiators.

Part 2 of the List covers those goods that have a dual use. Dual-use goods comprise equipment and technologies developed to meet commercial needs but which may be used either as military components, or for the development or production of military systems or weapons of mass destruction. This Part is made up of the following 10 categories:

- Category 0 — Nuclear Materials;
- Category 1 — Materials, Chemicals, Microorganisms and Toxins;
- Category 2 — Materials Processing;
- Category 3 — Electronics;
- Category 4 — Computers;
- Category 5 — Telecommunications and Information Security;
- Category 6 — Sensors and Lasers;
- Category 7 — Navigation and Avionics;
- Category 8 — Marine;
- Category 9 — Aerospace and Propulsion.

The List is amended from time to time to reflect changes in the various multilateral non-proliferation and export control regimes of which Australia is a member.



The following is Critical Minerals List and where each coincides with both the Munitions List, the Dual-Use List and the categories. Their listing within the Defence and Strategic Good List, whether for Munitions or Dual-Use, means that critical minerals fall under some legislative influence of the Defence Department. Where the critical minerals are listed in the Munitions List and Dual-Use Lists, they are often listed as part of alloys, particular isotopes, compounds and the outcome of processing. Both the extraction and processing of these minerals forms the basis of the Critical Minerals Strategy, therefore their inclusion is of great concern.

CRITICAL MINERAL	MUNITIONS LIST	DUAL-USE LIST	CATEGORY
Rare-Earth Elements: Yttrium; Lanthanum; Cerium; Neodymium (often NdPr); Gadolinium; Erbium; Ytterbium	✗	✓	Yttrium: Materials processing Lanthanum: Sensors and lasers Cerium: Materials processing Neodymium: Sensors and lasers Gadolinium: Materials, chemicals, microorganisms and toxins Erbium: Materials processing Ytterbium: Sensors and lasers
Rhenium	✗	✓	Materials, chemicals, microorganisms and toxins
Scandium	✗	✗	
Selenium	✗	✗	
Silicon	✗	✓	Materials, chemicals, microorganisms and toxins; Materials processing; Electronics; Sensors and lasers
Tantalum	✓	✓	Nuclear materials, facilities and equipment; Materials, chemicals, microorganisms and toxins; Materials processing
Tellurium	✗	✓	Sensors and lasers
Titanium	✓	✓	Materials, chemicals, microorganisms and toxins; Materials processing; Sensors and lasers; Marine; Aerospace and propulsion
Tungsten	✓	✓	Materials, chemicals, microorganisms and toxins; Materials processing
Vanadium	✗	✗	
Zirconium	✓	✓	Materials, chemicals, microorganisms and toxins; Materials processing; Sensors and lasers



CRITICAL MINERAL	MUNITIONS LIST	DUAL-USE LIST	CATEGORY
High Grade Alumina	✗	✓	Materials Processing
Antimony	✗	✓	Electronics
Arsenic	✗	✓	Materials, chemicals, microorganisms and toxins; Electronics; Sensors & lasers
Beryllium	✓	✓	Materials, chemicals, microorganisms and toxins; Materials processing; Sensors and lasers
Bismuth	✓	✓	Materials, chemicals, microorganisms and toxins
Chromium	✗	✓	Materials, chemicals, microorganisms and toxins; Materials processing;
Cobalt	✗	✓	Materials processing; Materials, chemicals, microorganisms and toxins
Fluorine	✓	✓	Materials, chemicals, microorganisms and toxins; Materials processing
Gallium	✗	✓	Materials processing; Electronics; Sensors and lasers; Sensitive list of dual-use goods and technologies
Germanium	✗	✓	Materials processing; Electronics; Sensors and lasers
Graphite	✗	✓	Nuclear materials, facilities and equipment; Materials, chemicals, microorganisms and toxins; Materials processing;
Hafnium	✓	✓	Materials, chemicals, microorganisms and toxins; Materials processing; Sensors and lasers
Indium	✗	✓	Electronics; Sensors and lasers; Sensitive list of dual-use goods and technologies
Lithium	✓	✓	Materials, chemicals, microorganisms and toxins; Sensors and lasers; Sensitive list of dual-use goods and technologies; Very sensitive list of dual-use goods and technologies
Magnesium	✓	✓	Materials, chemicals, microorganisms and toxins; Materials processing; Sensors and lasers;
Manganese	✗	✗	
Molybdenum	✓	✓	Materials, chemicals, microorganisms and toxins; Materials processing; Electronics
Nickel	✗	✓	Nuclear materials, facilities and equipment; Nuclear materials, facilities and equipment; Materials processing
Niobium	✓	✓	Materials, chemicals, microorganisms and toxins;
Platinum-Group Elements: Iridium; Platinum	✗	✓	Iridium: Sensitive list of dual-use goods and technologies Platinum: Materials processing; Sensitive list of dual-use goods and technologies



The role of critical minerals in defence manufacturing is paramount. Future Made in Australia National Interest Framework, while still championing renewable energy as the core impetus for critical minerals supply chain stability, does mention defence, even as an afterthought;

“A stable and diversified supply of critical minerals is critical to the smooth operation of global and domestic supply chains, including to support the net zero transformation, defence industries and a range of other applications.”

Defence and security is listed as a key objective of the Australian Government’s Critical Minerals Strategy 2023-2030. The Critical Minerals Strategy highlights that the initial priority technologies for critical minerals align directly with those set out in Australia’s Critical Technologies Statement. Front and centre in Australia’s Critical Technologies Statement is the importance of critical technologies in the national interest, these being; economic prosperity, national security and lo and behold, social cohesion (cue beefed up surveillance networks).

Lifting only a paper thin veil of transparency, the ‘List of Critical Technologies in the National Interest’ focusses on the key areas of; advanced manufacturing and material technologies, AI technologies, information and communication technologies, quantum technologies, autonomous systems, robotics, positioning, timing and sensing, as well as biotechnologies and clean energy generation and storage technologies (in a little role reversal).



The primary five critical technologies listed here align directly with the Government's Defence innovation, science and technology priorities outlined in the 2024 Defence Strategic Review, and the 2024 Integrated Investment Program, which will be delivered through the Advanced Strategic Capabilities Accelerator (ASCA) and AUKUS Pillar II – Advanced Capabilities. It's pretty easy to see the centrality of these technologies in major announcements from Land Forces 2024 and piss-in-your-pocket conferences like Australian Defence, Science, Technology and Research Summit (ADSTAR).

To date, the Australian Government has invested \$6 billion into streamlining the critical minerals mining boom through the development of the Australian Government Critical Minerals Facility. An additional \$7 billion will be made available over the next decade through the Critical Minerals Production Tax Incentive (CMiPTI), which will give a 10% refundable tax offset for the costs of processing.

The usual suspects have been approached by the Government to make submissions on the CMiPTI; Arafura Resources, Australian Rare Earths, Li-S Energy and Tesla, in total 47 submissions with a further 18 submissions that remain confidential. The CMiPTI is set to start in 2027, however unsurprisingly, Tesla in their submission suggested it be moved forward to the 25/26 financial year, and with Elon Musk at the helm of the Trump regime who knows what could happen. The figures for Government expenditure on the critical minerals sector is laid out the 24/25 May Budget.



In February 2025, the Government announced a joint \$3 million investment to support a feasibility study for a Critical Minerals Advanced Processing (CMAP) facility in WA under the Critical Minerals National Productivity Initiative.

Furthermore, the Government is tripping over its feet to promise cash to investors and mining companies to develop the critical minerals sector, even laying out 55 eligible and investment-ready projects in its 2024 Critical Minerals Prospectus to try and entice those with deep pockets, essentially to make the extraction and processing of critical minerals 'risk-proof'.

The investment incentives from the Australian Government coincide with a Critical Minerals Partnership between Japan and Australia in 2022. Not only is this partnership to shore up the supply chain between Australia and Japan, but as Madeline King, Minister for Resources and Northern Australia puts it:

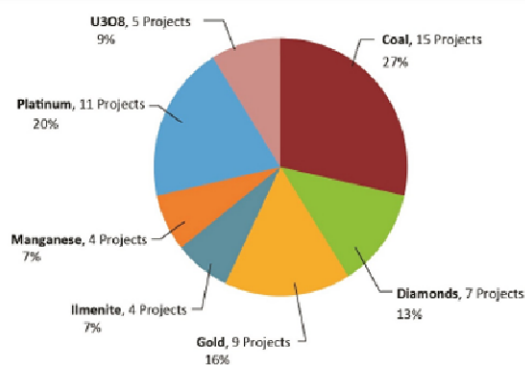
"The new partnership will help drive the development of Australia's critical minerals sector and promote more foreign investment into crucial projects which will mine, develop and process these essential minerals,"

Australian companies, with foreign investment, already have critical minerals mines and processing overseas, which allows them to remain listed on the ASX and trade as such, extracting wealth from the Global South.

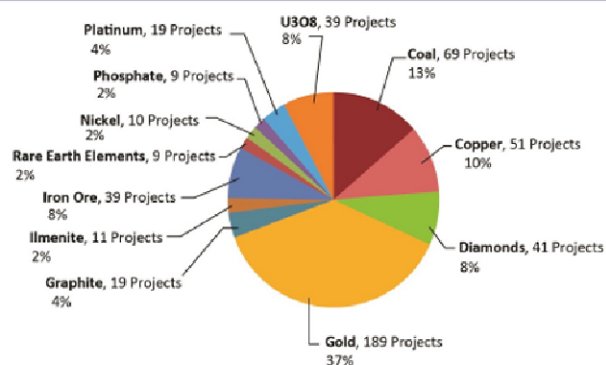


Source: AAMEG, *Submission 4*, p. 4.

Operating Mines



Exploration





In 2023, Albanese and Biden announced the US Australian Innovation Alliance. The 2023 US-Australia Joint Leaders' Statement – Building an Innovation Alliance states:

"Prime Minister Albanese reiterated his support for President Biden's request of Congress to add Australia as a "domestic source" within the meaning of Title III of the US Defense Production Act, which would streamline technological and industrial base collaboration and build new opportunities for United States investment in the production and purchase of Australian critical minerals, critical technologies, and other strategic sectors. Taken together, these initiatives will further our efforts to build more diverse and resilient supply chains."

The overarching emphasis of the Innovation Alliance is to strengthen the relationships in building industrial capability, fostering trade, and working towards a 'free and open Indo-Pacific' under the 'International Rules Based Order'. As Richard Marles highlighted in his recent discussions with US Secretary of Defence Pete Hegseth, the 'free and open Indo-Pacific' really emerged out of the first Trump regime. However, the Innovation Alliance focusses on Defence capability, emerging technologies, new frontiers in space and cyber capacity, among others.

In January 2024, the addition of Australia and the United Kingdom as "domestic sources" in Title III of the US Defence Production Act passed through the US Senate under the FY2024 NDAA: Defense Industrial Base Policy:



“The enacted FY2024 NDAA designates businesses performing under a U.S. contract in Australia and the United Kingdom as domestic sources for the purposes of Title III of the Defense Production Act of 1950 (DPA). This makes them eligible to receive loans, loan guarantees, purchase commitments, equipment, and related U.S. government assistance intended to expand defense production capacity (Sec. 1080; previously, such assistance had been limited to businesses located in the United States and Canada).”

FY2024 NDAA: Defense Industrial Base Policy

Updated January 8, 2024

House-passed (H.R. 2670)	Senate-passed (S. 2226)	Enacted (P.L. 118-31)
No similar provision.	Sec. 1080 would amend 50 U.S.C. §4552(7) to include businesses in Australia and the United Kingdom as domestic sources for the purposes of Title III of the Defense Production Act of 1950. This provision would also create new reporting requirements related to the use of Title III authorities.	Sec. 1080 adopts the Senate provision.

Investments and Incentives

The enacted FY2024 NDAA designates businesses performing under a U.S. contract in Australia and the United Kingdom as domestic sources for the purposes of Title III of [the Defense Production Act of 1950 \(DPA\)](#). This makes them eligible to receive loans, loan guarantees, purchase commitments, equipment, and related U.S. government assistance intended to expand defense production capacity ([Sec. 1080](#); previously, such assistance had been limited to businesses located in the United States and Canada).



Alongside this, the two countries have established the US-Australia Critical Minerals Taskforce, led by the US National Security Council in partnership with the US Department of Commerce, and Australia's Department of Industry, Science and Resources:

"This Taskforce should report to our leaders, signalling our intent to deepen bilateral collaboration on the critical minerals and materials that are vital to clean energy as well as defence supply chains."

At the 2024 AUSMIN consultations, his gormlessness Richard Marles and Minister for Foreign Affairs Penny Wong discussed the ongoing work of the Critical Minerals Taskforce. Then Secretary of State, Anthony Blinken reiterated this, adding that over the last two and a half years, the US has invested over \$5 billion into Australia for critical minerals.

In the subservient alliance in which Australia positions itself, it is not surprising that the Defence Department is publicly quiet about critical minerals and their strategic importance for defence. However, Minister for Defence Richard Marles is at the White House now meeting with new US Secretary of Defense Pete Hegseth. Marles waxed lyrical about AUKUS as a *"significant increase of the American footprint on the Australian continent... but what comes with that is it also represents an increase in Australian defence spending."*



Minister for Resources Madeline King highlighted that these talks are a matter of urgency, reiterating Australia's position as a lap dog:

"It is a strong link with the Americans. It is a pro-American policy. We want to diversify our supply chain, and the way we will do it is with the assistance of the US and their investment."

In January 2025, Penny Wong met with US Secretary of State Marco Rubio and critical minerals and shoring up the supply chains was on the agenda. Alongside strengthening bilateral relationships through AUKUS, defence initiatives and both *"agreed on the importance of utilizing the U.S.-Australia Alliance to its full extent to maximise opportunities in the Indo-Pacific."*

While the US can do the heavy lifting on defence, critical minerals fall under the umbrella of industry. However, this is a performative sleight of hand which deliberately obfuscates the defence industry and the governmental military industrial complex as a centrifugal point in the economy, and from the reality of war.

This is a very deliberate omission, and one of political expediency for the Albanese Government. In her address to the Indian Ocean and Defence Summit 2024, Madeline King, Minister for Resources and Northern Australia had this to say:

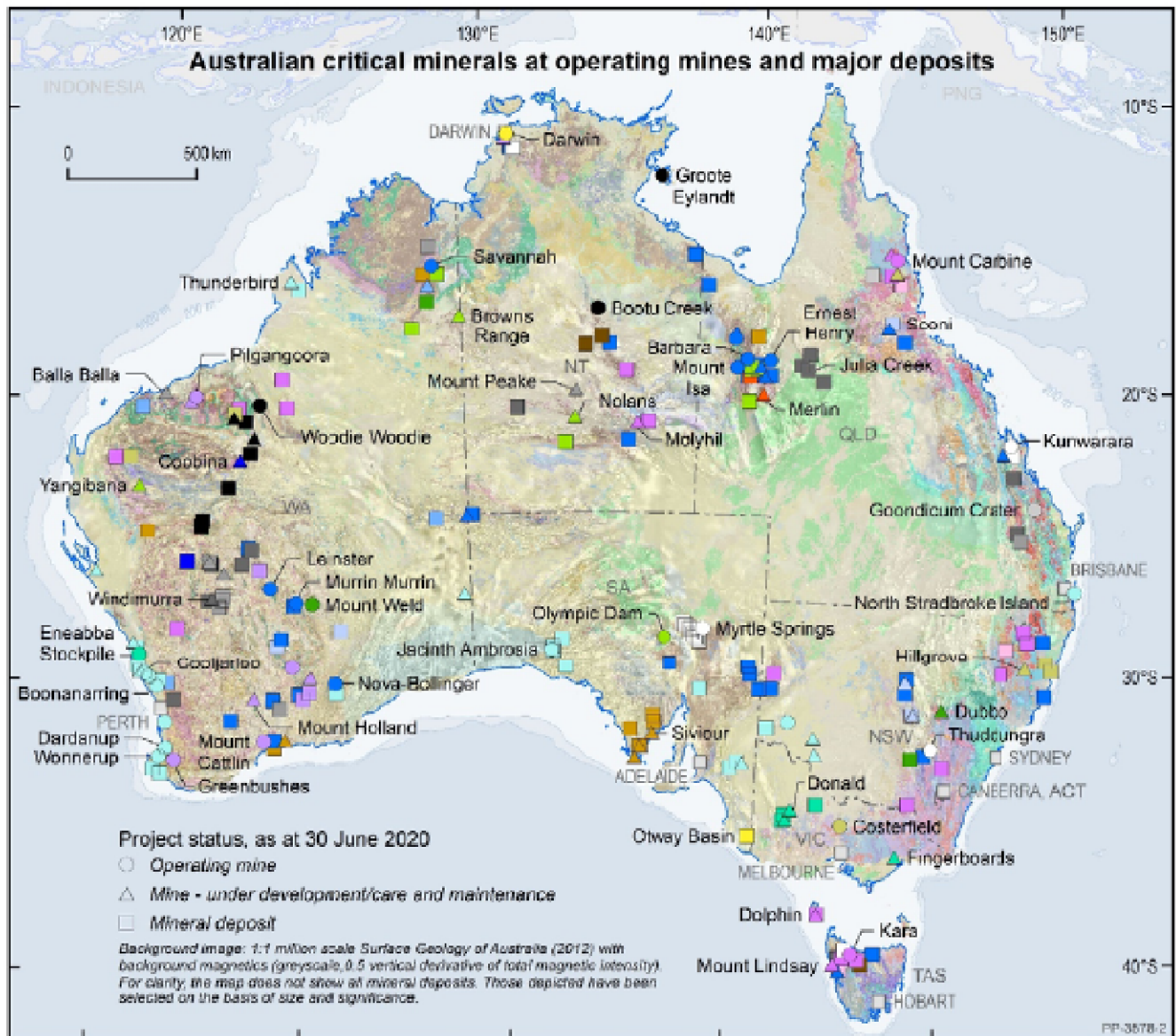


“Ensuring there is diversity in global supply chains of critical minerals is not simply “nice to have”. Of course, it is of enormous benefit because of the jobs and industry it creates; but it is much more than that. Indeed, it is about more than growing our economy and the energy transition – it is a crucial matter of national security.

Facing the Indian Ocean, Western Australia holds reserves of almost all the critical mineral and rare earths elements that are essential inputs to the advanced manufacturing, aerospace and defence industries of our allies and partners.

Industrialised nations are all seeking secure access to sources of critical minerals and rare earths from trusted providers like Australia to provide for their defence.

The demand for our critical minerals and rare earths will only grow as defence technology becomes more networked and automated and reliant on technologies such as drones and robotics.”



Commodity type

- | | |
|---|--|
| ● Antimony | ● Manganese ore |
| ● Bismuth, +/- Cobalt, +/- Indium | ● Heavy Mineral Sands (HMS) - Titanium, Zirconium |
| ● Chromium, +/- Cobalt, +/- PGE | ● HMS - Titanium, Zirconium, REE |
| ● Cobalt | ● Rare Earth Elements (REE) |
| ● Platinum Group Elements (PGE), +/- Cobalt | ● REE, Zirconium, Niobium, +/- Hafnium, Lithium, Tantalum, Gallium |
| ● Scandium, +/- Cobalt, +/- PGE | ● Rhenium |
| ● Graphite | ● Tungsten |
| ● Helium | ● Titanium |
| ● Indium | ● Titanium, Vanadium |
| ● Lithium, +/- Tantalum, +/- Niobium | ● Vanadium |
| ○ Magnesium | |



INDUSTRIAL BASE POLICY

ASSISTANT SECRETARY OF DEFENSE



In March 2024, the US Department of Defense announced its intention to establish its Mine to Magnet supply chain to ensure supply of the rare earth elements necessary for permanent magnets for US weapons systems. This is all part of the US DoD's National Defense Industrial Strategy (NDIS)((you've gotta be fucking joking)), of which the Australian counterpart is the National Defence Strategy and the Integrated Investment Strategy.

On the mine to magnet supply chain, Danielle Miller, acting deputy assistant secretary of defense for industrial base resilience:

"DOD's strategic investments are building capability at multiple stages of the rare earth supply chain and will provide a clear signal to private capital that the time is right to build additional resiliency... We are on track to meet our goal of a sustainable, mine-to-magnet supply chain capable of supporting all U.S. defense requirements by 2027."



Rare earth and critical minerals are nothing new, ravaging Indigenous lands and exploiting workers in the Global South for decades. Many projects in so-called Australia have been underway for decades, as have the policies regarding strategic and critical mineral supply.

However, the efflorescence of critical minerals in the political landscape began around 2017 with a shifting geopolitical context, Australian Policy has followed suit.

On December 20 2017, the incumbent Trump regime signed *Executive Order 13817: A Federal Strategy To Ensure Secure and Reliable Supplies*, which ordered a list of critical minerals and a report outlining a strategy to reduce the US' reliance on critical mineral exports, highlighting that *"this dependency of the United States on foreign sources creates a strategic vulnerability for both its economy and military"* and the necessity as such to *"enhance the technological superiority and readiness of our Armed Forces, which are among the Nation's most significant consumers of critical minerals."*

In November 2019, then Coalition Ministers for Defence Linda Reynolds, and for Trade, Tourism and Investment Simon Birmingham, announced that *"the Australian Government will secure the future of rare earth and critical mineral projects, including those strategically important to defence end-use"*.

This came following Scott Morrison's visit to the White House where he and Trump inked the 'US-Australia Action Plan for Critical Minerals Cooperation'.



A subsequent Executive Order 13953: Addressing the Threat to the Domestic Supply Chain From Reliance on Critical Minerals From Foreign Adversaries and Supporting the Domestic Mining and Processing Industries signed by Trump in September 2020 (at the height of the COVID-19 pandemic) takes it up a notch in declaring a “*national emergency*” of critical minerals supply, and outlines the reliance on “*foreign adversaries*”, namely, China. Successive governments in both the US and Australia, have both gone hammer and tong in bringing critical minerals to the fore. Strengthened alliances and partnerships like the Innovation Alliance and the Critical Minerals Taskforce mentioned earlier, all wrap up within the AUKUS Pact signed in 2021.

Simultaneously, Australia has strengthened other alliances. In 2021, Australia and South Korea signed a Memorandum of Understanding on Cooperation in Critical Mineral Supply Chains. In April 2023, Australia and the UK issued a Joint Statement of Intent between Australia and the United Kingdom on collaboration on critical minerals. In May 2024, Australia and the EU signed a Memorandum of Understanding with the EU and intend to develop a Partnership on Sustainable Critical and Strategic Minerals.

So offtake and the supply chains are being ironed out, which means that Australia is ready to dive head first into a mining boom. We are starting to see the first new projects to come from this trajectory now.

A SNAPSHOT OF SOME CURRENT RARE EARTHS PROJECTS

LYNAS RARE EARTHS PROCESSING FACILITY, KALGOORLIE, WESTERN AUSTRALIA

On the 8th of November 2024, Lynas Rare Earths Ltd officially opened its Kalgoorlie Rare Earths Processing facility in Kalgoorlie on Wangai country.

The raw Neodymium and Praseodymium (NdPr) is extracted from Lyans' Mt Weld Tier 1 Rare Earths deposit, Concentration Plant near Laverton. The new processing facility is primarily focussed on processing neodymium and praseodymium (NdPr) into Mixed Rare Earth Carbonate (MREC). The MREC is then shipped to Lynas Malaysian Facility to undergo leaching and cracking, which separates the elements.

From there, the separated rare earths will be sent to a US Department of Defense (DoD) funded facility in Texas for its production into magnets and other necessary defence components.

In August 2024, Lynas signed an approx. US\$258m follow on contract with the US DoD for the construction of a US Heavy Rare Earths processing facility. The Texas facility is still in its planning phase.



The Kalgoorlie Rare Earths Processing Facility is a key part of the Lynas 2025 growth plan that was first announced in May 2019. The \$800 million large-scale Facility was delivered in less than two and a half years from the receipt of full construction approvals.

Just to add, that initially the plan was for this facility to get sulphuric acid from BHP's nearby nickel mine, but with the collapse of the nickel industry and subsequent closure of the mine, Lynas are now getting sulphuric acid shipped from BHP facilities overseas for its production facility... just to rub some salt in the wounds of the land.

The Federal Government have forked out just under \$38 million for Lynas for its rare earth production. Lynas is the world's only significant producer of these materials outside of China... which is a big part of the strategy of destabilising the monopoly that China has over rare earth production.





ARAFURA RESOURCES NOLANS BORE NDPR MINE, NORTHERN TERRITORY

In March 2024 the Albanese Government gave Arafura Resources \$840 million of tax payer money for its Nolans Bore NdPr mine and processing facility on Kwaty and Tywerl country 135kms north west of Mpwartwe Alice Springs. In January 2025, the Government forked out an additional \$200 million through the Australian Government's National Reconstruction Fund Corporation (NRFC).

Additional funding includes US\$300 million of debt from Export Development in Canada and up to US\$150 million of debt from the Export-Import Bank of Korea and up to US\$115 million from German export credit agency Euler Hermes.

Arafura Resources and Nolans Bore, is 10% owned by Gina Rineheart, and has been in development for 25 years. The Nolans Bore Project has come under necessary scrutiny for the impacts on groundwater and detrimental environmental impacts, already with three communities close to the mine all experiencing elevated levels of uranium in the water that exceeds those laid out in the Australian Drinking Water Guidelines.

In 2019, Arafura Resources signed a Letter of Intent with USA Rare Earths LLC in which Arafura will send Heavy Rare Earth (HREE) concentrate from Nolans for processing at USA Rare Earth's Colorado pilot plant. By 2020, the first samples had been sent.



In 2019, USA Rare Earth and its joint venture partner Texas Mineral Resources Corp submitted a tender for the U.S. Department of Defense to build a heavy rare earths separation plant in the United States.

ILUKA RESOURCES' ENEABBA RARE EARTH REFINERY, WESTERN AUSTRALIA

Iluka Resources' rare earth bearing monazite mine at Eneabba has been stockpiling monazite since the 1990s, laying in wait for the capability to process, refine and produce separated rare earth oxides. 80% of the rare earth elements derived from the monazite are neodymium, praseodymium, dysprosium and terbium.

In December 2024, Anthony Albanese and Minister for Trade and Tourism Don Farrell announced Labor would be providing an additional \$475 million to Iluka for the development of the Eneabba Refinery. The funding will be provided through Export Finance Australia (EFA) and the Australian Government's Critical Minerals Facility (CMF). In total, Iluka Resources has been floated \$1.65 billion from the Government to undertake its extraction at 3 sites and to develop the facility. The extra boost from the Government comes as Iluka cut 130 jobs across its operations as it suffered an annual loss of \$319 million.

The refinery is planned to be operating by 2027, will account for 10 per cent of the world's rare earth oxide supply and refine more than a third of the globe's strategically important heavy rare earth oxides, Iluka claims.



ASTRON CORPORATION DONALD RARE EARTH AND MINERAL SANDS PROJECT, MINYIP, VICTORIA

In June 2024, Astron Corporation signed a joint venture with US Uranium mining company Energy Fuels Inc. (EFI) for the aptly named Donald rare earth mine near Minyip in Western Victoria. The Donald Project is the fourth largest rare earth project in the world outside of China.

Energy Fuels Inc. have fully funded Phase 1 of the rare earth project with \$183 million, earning Energy Fuels a 49% stake in the project. As part of the joint venture, Energy Fuels will receive 100% of the offtake of rare earth element concentrate (REEC) in Phase 1 & 2, which will be processed at EFI's White Mesa Mill in Utah to extract rare earth oxides and uranium, for the next 58 years. Yep, that's right.... Uranium. The REEC also contains radioactive thorium. With the investment finalised, first production is due to start in 2026.

Energy Fuels Inc. is the leading producer of uranium in the US. In 2024, EFI finalised its acquisition of ASX-listed company Base Resources Limited, which operates projects in Kenya, Madagascar and Brazil. President and CEO of Energy Fuels Inc. Mark Chalmers said on the acquisition and the Astron joint venture:

The 'common thread' connecting these products is that they are produced from, or associated with, ores that contain uranium... We are able to process these ores at our facility in Utah and recover these elements in addition to the contained uranium."

SO NOW WHAT?

This is a brief overview of where we are now, and hopefully paints a bit of a picture about how the push for critical minerals isn't the white-washed, renewable energy propaganda as the Government would like us to think. The global demand for critical minerals will need to increase by around 350 per cent by 2040, which means that we are entering a new mining boom, that will still take place on stolen Aboriginal Land and continue to extract water from the Great Artesian Basin, to build up a global supply chain network in an attempt to oust China as the monopoly exporter of critical minerals.

The Australian Government is poised and ready to take up the slack, highlighting that 80% of Australia's land mass remains "unexplored". Legal mechanisms that have historically set a precedent for resource extraction in the form of State and Territory Indenture Acts, like that for Roxby Downs, may well be used to gain access to land, pillage resources, avoid land title claims and cut environmental red tape.

A study published in May 2024 calculated intersections of critical minerals projects across 14 commodities found that in only 57.8% of these projects did First Nations people have the 'right to negotiate'. Despite all the projects taking place on stolen Aboriginal Land. In contrast, in 41.1% of operating mines outside of the critical minerals sphere does the same 'right to negotiate' 'exist'.... We are all aware of the pervasiveness of bullshit the layers of bureaucratic legislation and land swindles that the resource extraction industry is built upon, or any industry for that matter.



Where this so-called ‘right to negotiate’ does allegedly exist, it amounts to “nothing more than lipstick on a pig”, with no free, prior and informed consent, let alone any veto power.

The bypassing of any actual Land Rights is cast aside in favour of ‘ESG’ (environmental, social and governance as ‘principled investment’) is used in these instances to get an upper hand in the global market, and indeed has bolstered a market in ‘green’ and ‘ethical’ consultancy in and of itself.

The commission of public funds to develop a critical minerals processing industry maintains the centrality of private capital above all else.

The guise of ‘national security’ is synonymous with carte blanche, and so we must get organised.

Mercedes Zanker
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