



Committee Secretary  
Joint Standing Committee on Treaties

2 September 2025

This submission regarding the Nuclear-Powered Submarine Partnership and Collaboration Agreement between the Government of Australia and the Government of the United Kingdom of Great Britain and Northern Ireland is from the Medical Association for Prevention of War (Australia) (MAPW).

MAPW is a national organisation of health professionals dedicated to the elimination of nuclear weapons, and the reduction of armed conflict. We have additional interest and expertise in nuclear power and its associated radioactive waste.

Thank you for the opportunity to comment on this proposed treaty.

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## SUMMARY

The lack of public consultation about the acquisition of nuclear-powered submarines (“SSN”) (and the Pillar II proposals) is a disgrace, given the decision was made in secrecy with extremely limited technical consultation and very clearly politically driven.

It has rightly been identified by the Defence Department as a “High Risk” project. Not only is the proposal unrealistic and prohibitively expensive, but there is also no “plan B” for Australia’s future submarine capacity, let alone a “plan A” assessment of our genuine security threats and how best to address them. This is irresponsible and a major failing in such a high-risk scenario.

This ill-advised scheme with massive expenditure has never been subject to an open and independent inquiry. It lacks the accountability which is critical in a democracy. “National security” should not be used as an excuse to proceed with secrecy.

The Preamble to the Treaty is based on multiple false premises, which are echoed unquestioningly in the National Interest Analysis. Assertions in the Treaty need thorough scrutiny, as they are deeply flawed and widely contested.

Many experienced defence analysts and expert commentators argue that the AUKUS Pillar I project will fail to deliver US submarines at all. In addition, the UK submarines will be massively delayed and over budget. These will be long range offensive weapons designed to meet UK (and US) needs and unsuited to defending Australia.

Even if all elements of AUKUS Pillar 1 are completed, the AUKUS SSNs will most likely only be first delivered in the 2040s and have a 75% chance of being obsolete by 2050.<sup>1</sup>

Acquiring nuclear submarines to be part of US war planning, particularly directed against China, is highly provocative and escalates tensions among both nuclear-armed and regional states. They make war and nuclear escalation more likely. Nuclear-powered submarines would increase the priority of targets in Australia for the AUKUS nations' adversaries, including those that are nuclear-armed.

## RECOMMENDATIONS

1. This Treaty should not be signed until we have had a full, independent and transparent review of the AUKUS submarine proposal, including whether its role in defending Australia would be both effective and cost-effective.
2. As part of that review there must be serious and transparent attention paid to the AUKUS nuclear waste problem, including the full financial cost of managing the waste for the duration of its radioactivity toxicity, and its confirmed disposal site.
3. Australia should require disclosure regarding any nuclear weapons on foreign vessels or aircraft, and prohibit any that are, or might be, carrying nuclear weapons from visiting, rotating through or being based in Australian territory, airspace or waters

## CONTESTED ASSUMPTION 1 (page 2 paragraph 4):

**That AUKUS submarines will strengthen military capabilities.**

*"Recognising that the first initiative of AUKUS is a shared ambition to support Australia in acquiring a conventionally armed, nuclear-powered submarine ("SSN") capability for the Royal Australian Navy at the earliest possible date while setting the highest nuclear non-proliferation standard, through a joint endeavour between the AUKUS partners with a focus on interoperability, commonality, and mutual benefit, which will **strengthen their combined military capabilities**, boost their collective industrial capacity, and enhance their ability to promote stability and security in the Indo-Pacific and beyond ("AUKUS Pillar I");"*

**A) US Virginia Class SSNs. The AUKUS plan relies on the US supplying submarines in the 2030s to fill Australia's submarine "capability gap".**

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<sup>1</sup> Progress in detection tech could render submarines useless by the 2050s. What does it mean for the AUKUS pact? The Conversation March 2023 <https://theconversation.com/progress-in-detection-tech-could-render-submarines-useless-by-the-2050s-what-does-it-mean-for-the-aukus-pact-201187>

The first UK SSN AUKUS is estimated to be delivered in the early 2040s.<sup>2</sup>

Delivery of US Virginia Class SSNs is highly unlikely, given US legislation, US shipyard sustainment difficulties (resulting in fewer deployable SSNs) and major build delays.

US legislation is very clear.

(US Code 10431) *Authorisation of sales of Virginia Class submarines to Australia*

*(A) the transfer of such vessels – (i) will not degrade the United States undersea capabilities;*

The US requires 66 Virginia Class submarines in its fleet. Currently it has 49. Given older SSNs will be decommissioned over time, to meet its own needs the US must build 2 submarines per year. If it is to have enough to supply Australia, it must build at a rate of 2.33 annually. The current build rate is 1.13 and has proved very resistant to increasing, despite previous major increases in infrastructure funding (by USD 9 Billion since 2018)<sup>3</sup>. There is a growing backlog of boats procured but not yet built.<sup>4 5</sup> A doubling of production is extremely unlikely.

According to the 2025 Shipbuilding Plan from the US Congressional Budget Office, after an initial decline to 47 SSNs in 2028, the SSN force would grow larger and become more capable than it is today. Under the 2025 plan, by 2054, it would have 66 in the fleet.<sup>6</sup>

In addition, the Virginia Class submarines have significant sustainment issues, reducing operational availability. Rear Adm. Jon Rucker, the program executive officer for attack submarines noted that with the “*Virginia class of attack submarines suffering from maintenance woes and low operational availability, the U.S. Navy is working to ensure its next attack submarine is easier to sustain*”.<sup>7</sup> This low operational availability makes it even less likely the Virginia class SSN can be sold to Australia.

Given the current shortfall in USN SSN numbers, the low operational availability of existing Virginia Class SSNs and the very difficult production targets, selling a submarine that is both up to date for

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<sup>2</sup> The Royal Navy’s Astute class submarines: Part 1 – development and delivery. Navy Lookout January 2023  
<https://www.navylookout.com/the-royal-navys-astute-class-submarines-part-1-development-and-delivery/>

<sup>3</sup> Navy assures lawmakers billions were well spent in sub industrial base, despite lag in production Justin Katz Breaking Defense June 2025 <https://breakingdefense.com/2025/06/navy-assures-lawmakers-billions-were-well-spent-in-sub-industrial-base-despite-lag-in-production/>

<sup>4</sup> Navy Virginia-Class Submarine Program and AUKUS Submarine (Pillar 1) Project: Background and Issues for Congress Library of Congress March 2025  
<https://www.congress.gov/crs-product/RL32418>

<sup>5</sup> As the US Rethinks AUKUS, Australia and the UK Forge Ahead Kenneth Leung The Diplomat August 2025  
<https://thediplomat.com/2025/08/as-the-us-rethinks-aukus-australia-and-the-uk-forge-ahead/>

<sup>6</sup> An Analysis of the Navy’s 2025 Shipbuilding Plan Congressional Budget Office January 2025  
<https://www.cbo.gov/system/files/2025-01/60732-shipbuilding.pdf>

<sup>7</sup> Next-generation attack subs will be designed with maintenance in mind Defence News September 2022  
<https://www.defensenews.com/naval/2022/09/22/next-generation-attack-subs-will-be-designed-with-maintenance-in-mind/>

maintenance and having at least 15 years of reactor life remaining is bound to “degrade the US undersea capability”.

Even if we did get them, these maintenance woes observed in the Virginia class SSNs make it more likely that any submarines Australia receives may themselves have limited operational availability.

How many times does Australia need to be told by the US these submarines are very unlikely to appear in the 2030s, given the legislative imperative not to degrade US capabilities? To name a few:

- The US Navy’s nominee for Chief of Operations Admiral Daryl Caudle said in July this year while testifying before the Senate Committee on Armed Services there are “no magic beans” to boosting the US’s shipbuilding capacity.<sup>8</sup>
- The current U.S. Under Secretary of Defense for Policy Elbridge Colby said in 2024 : *“It would be crazy for the United States to give away its single most important asset for a conflict with China over Taiwan when it doesn’t have enough already,” he said at the time. “Money is not the only issue – it’s also time, limits on our workforce, etc., so both sides of this vitally important alliance need to look reality in the face.”* He is currently leading the Pentagon review of AUKUS Pillar 1.<sup>9</sup>
- A report from the US Congressional Research Service in October 2024 proposed an alternative plan where Australia did not receive any US SSNs but focused on other defence capabilities. It noted **“There is little indication that, prior to announcing the AUKUS Pillar 1 project ... an analysis of alternatives (AOA) or equivalent rigorous comparative analysis was conducted to examine whether Pillar 1 would be a more cost-effective way to spend defence resources”**.<sup>10</sup>(MAPW bolding)

Politically influential groups are calling for a focus on expanding production of newer Columbia SSNs, which, if implemented, would almost certainly impact any expansion of Virginia SSN production.<sup>11</sup>

The reality is that Australia is very unlikely to ever acquire US Virginia class SSNs.

## B) United Kingdom SSNs

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<sup>8</sup> Australia won’t receive Aukus nuclear submarines unless US doubles shipbuilding, admiral warns Ben Doherty The Guardian July 2025 [Australia won’t receive Aukus nuclear submarines unless US doubles shipbuilding, admiral warns | Aukus | The Guardian](#)

<sup>9</sup> VIDEO: Trump’s former defence advisor slams ‘crazy’ AUKUS submarine deal ABC News <https://www.abc.net.au/news/2024-01-03/trumps-former-defence-advisor-slams-crazy-aukus-sub-deal/103280982>

<sup>10</sup> Navy Virginia-Class Submarine Program and AUKUS Submarine (Pillar 1) Project: Background and Issues for Congress October 2024 <https://s3.documentcloud.org/documents/25203829/r132418-13.pdf>

<sup>11</sup> Columbia Submarine Fleet Production Should Be Radically Expanded Robert Peters and Brett Sadler The Heritage Foundation June 3 2024 <https://www.heritage.org/defense/report/columbia-submarine-fleet-production-should-be-radically-expanded>

The UK's submarine reactor program has been rated as "unachievable" every year for the last three years by the UK government's watchdog, the Infrastructure and Projects Authority.<sup>12</sup>

Both the current UK SSN delivery and sustainment programmes have major problems. There are currently five Astute-class SSNs in commission, with two still to be delivered. Britain's submarine support establishment is having difficulties in getting SSNs to sea. Of the five SSNs, on a good day 2 are deployed. Currently none are deployed, due to maintenance issues. Indeed, there have been a number of periods in recent years when the RN was unable to deploy a single SSN.<sup>13</sup>

A 'hot production line' will enable faster delivery, but the Astute SSNs have taken an average of about 10 years from laying down to commissioning. The Astute class has been 57 months late and 53% over budget. Accelerating the pace of delivery will be challenging for the industrial supply chain, which must simultaneously support the demands of boats being produced for Australia.<sup>14</sup>

There are already growing indications from sources close to the UK Government and Ministry of Defence that the AUKUS successor to the Astute class submarines may be delayed due to financial and technical issues. "It's early days ... but the first boat is unlikely to arrive before the mid-2040s," Navy *Lookout* reported in 2023.<sup>15 16</sup>

It is highly likely that the SSN-AUKUS program, like the Astute program, will run late, be well over budget and deliver a first-of-class boat with many problems. The United States experience shows how hard it is to even move the production dial up at all, despite pouring additional billions into its submarine industrial base for years. Britain is well behind the United States in this effort and coming from a lower base.<sup>17</sup>

### **C) If All Goes To Plan**

Deploying three different SSN types is unworkable and ill-suited to Australian defence needs.

In the unlikely scenario of the US and then UK SSNs being delivered, Rear Admiral Peter D Briggs, who worked for 40 years as a submariner and is past President of the Submarine Institute of Australia notes:

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<sup>12</sup> The Infrastructure and Projects Authority Annual Report on Major Projects 2023-2024

[https://assets.publishing.service.gov.uk/media/678a4a9869b9b76c761d0574/IPA\\_Annual\\_Report\\_2023-24.pdf](https://assets.publishing.service.gov.uk/media/678a4a9869b9b76c761d0574/IPA_Annual_Report_2023-24.pdf)

<sup>13</sup> HMS Anson returns to Faslane – no Royal Navy attack submarines at sea Navy Lookout 18 July 2025

<https://www.navylookout.com/hms-anson-returns-to-faslane-no-royal-navy-attack-submarines-at-sea/>

<sup>14</sup> UK Government commits to building 12 SSN-AUKUS submarines Navy Lookout July 2025

<https://www.navylookout.com/government-commits-to-building-12-ssn-aukus-submarines/>

<sup>15</sup> The British experience with nuclear-powered submarines: Lessons for Australia Tim Deere-Jones Pearls and Irritations

August 2025 <https://johnmenadue.com/post/2025/08/the-british-experience-with-nuclear-powered-submarines-lessons-for-australia/>

<sup>16</sup> The Royal Navy's Astute class submarines: Part 1 – development and delivery. Navy Lookout January 2023

<https://www.navylookout.com/the-royal-navys-astute-class-submarines-part-1-development-and-delivery/>

<sup>17</sup> Australia and the United Kingdom put the AUKUS spin cycle on High Michael Shoebridge Lowy Institute The Interpreter July 2025 <https://www.lowyinstitute.org/the-interpreter/australia-united-kingdom-put-aukus-spin-cycle-high>

*“The plan proposes a mix of two versions of the Virginia class SSN and a third, new UK design. This is unworkable and impractical logistically for Australia’s small navy and limited nuclear support workforce/establishment. The submarines’ designs would be a mix of two blocks of Virginia-class submarines, more than 14 years apart in design and yet-to-be-designed SSN-AUKUS, using Britain’s yet-to-be-tested PWR3 reactor. These submarines will embody two different regulatory authorities, design standards and philosophies. The difficulty in training crews and building up experience in three designs of submarines would add to the obvious supply chain challenges in achieving an operational force.”*

*“Secondly, displacing more than 10,000 tonnes, SSN-AUKUS submarines will be too big for Australia’s needs. Their size will increase their detectability, cost and crews. The Royal Australian Navy is already unable to crew its ships and grow to meet future demands. It will have great difficulty in crewing Virginias, which need 132 people each, and SSN-AUKUS too, if their crews equal the 100-odd needed for the current British Astute class.”*<sup>18 19</sup>

Ross Babbage, an AUKUS supporter, acknowledged this with a heavily caveated statement in July 2024:

*“Personnel expansion for the Royal Australian Navy will be **one of the greatest challenges** for the AUKUS program. Nevertheless, **provided** that upskilled Australian engineers and technical specialists are supplemented by British and American experts, this task will **likely** prove manageable.”*<sup>20</sup> (MAPW bolding).

“British and American experts” are likely to be in high demand.

Australia is far too small to shape the regional balance of power via military means, and its defence investments are a rounding error in comparison to the sheer size of the Chinese and US military-industrial complexes. This is the inconvenient truth ignored by many pro-AUKUS commentators.<sup>21</sup>

It is widely acknowledged these SSNs are also too big to defend Australia’s northern littoral waters.

The important point to be made is not that any single “expert” commentator has all the answers in relation to Australia’s defence, but that there are many very experienced voices stating that AUKUS pillar 1 is a disaster. Yet they are being ignored.

A full, open and transparent review of AUKUS Pillar 1 is mandatory.

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<sup>18</sup> AUKUS SSN: A flawed plan heading for the wrong destination Peter Briggs February 2025 Pearls and irritations <https://johnmenadue.com/post/2025/02/aukus-ssn-a-flawed-plan-heading-for-the-wrong-destination/>

<sup>19</sup> It’s time to talk Navy workforce Jennifer Parker ASPI The Strategist January 2024 <https://www.aspistrategist.org.au/its-time-to-talk-navy-workforce/>

<sup>20</sup> Deterrence and alliance power: Why the AUKUS submarines matter and how they can be delivered Ross Babbage July 2024 Lowy Institute <https://www.loyyinstitute.org/publications/deterrence-alliance-power-why-aukus-submarines-matter-how-they-can-be-delivered>

<sup>21</sup> Australia should stop pretending to be a military hegemon Connor O’Brien Lowy Institute The Interpreter June 2025 <https://www.loyyinstitute.org/the-interpreter/australia-should-stop-pretending-be-military-hegemon>



#### **D) These submarines are likely to be rapidly obsolete**

Submarines without the ability to conceal themselves are of very little value, as was demonstrated in 1943 when a combination of Allied technical advances, intelligence, organisation and new tactics ended the German U Boat campaign. In the current war in Ukraine, we have seen how hugely expensive and highly sophisticated tanks can be taken out by cheap drones.

Researchers at ANU found in 2021 that the oceans are, in most circumstances, at least likely (probability 75%) – and from some perspectives very likely (probability 90%) – to become transparent by the 2050s.

<sup>22</sup> Manned submarines are nearing the end of their utility in hostile waters because of developments in smart sea mines, unmanned underwater vehicles (UUVs) and underwater sensors.<sup>23</sup>

China is currently testing a drone-mounted quantum sensor system that can detect the tiniest changes in the earth's magnetic field, such as changes caused by a large metal object moving deep across the ocean.<sup>24</sup> This raises serious questions as to whether in the (very optimistic) 7 years until the first Virginia Class SSN arrives or in the 15-20 years until we have an AUKUS SSN, the Chinese detection system would not have moved on so far as to make these very large metal platforms obsolete.<sup>25</sup>

The extremely hot water used by the nuclear reactor to heat Virginia class submarines' steam engines has to be expelled from the hull. This leaves an infrared signature that can be detected from space.<sup>26</sup>

China already has powerful listening devices in two strategic seabed locations deep in the waters near Guam, America's biggest military base in the Western Pacific.<sup>27</sup>

Currently the Chinese are building the "Great Underwater Wall" to monitor submarine movements in the seas off China. In the South China Sea, the program aims to create a monitoring system of surface and underwater sensors that include passive sonar on the seafloor and remotely controlled underwater drones and surface vessels. Hydro-acoustic sensors are to be located on the seabed at depths of up to 3000 metres, while military bases on artificial islands continue to be built in the Spratley archipelago between the Philippines and Vietnam.<sup>25</sup>

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<sup>22</sup> Progress in detection tech could render submarines useless by the 2050s. What does it mean for the AUKUS pact? The Conversation March 2023 <https://theconversation.com/progress-in-detection-tech-could-render-submarines-useless-by-the-2050s-what-does-it-mean-for-the-aukus-pact-201187>

<sup>23</sup> We've bet everything on subs that will be obsolete by the time they arrive SMH David Livingstone March 2023 <https://www.smh.com.au/politics/federal/we-ve-bet-everything-on-subs-that-will-be-obsolete-by-the-time-they-arrive-20230314-p5cs3t.html>

<sup>24</sup> China Tests Drone-Mounted Quantum Sensor That Could Reshape Submarine Detection Matt Swayne Quantum Insider April 2025 <https://thequantuminsider.com/2025/04/27/china-tests-drone-mounted-quantum-sensor-that-could-reshape-submarine-detection/>

<sup>25</sup> AUKUS submarines would be obsolete before Australia gets them Paul Malone Pearls and Irritations April 2025 <https://johnmenadue.com/post/2025/06/aukus-submarines-would-be-obsolete-before-australia-gets-them/>

<sup>26</sup> Perhaps Marles should ask the US why it is building up forces around China Brian Toohey June 2025 Pearls and Irritations <https://johnmenadue.com/post/2025/06/perhaps-marles-should-ask-the-us-why-it-is-building-up-forces-around-china/>

<sup>27</sup> Surveillance under the sea: how China is listening in near Guam Stephen Chen *South China Morning Post* April 2018 <https://www.scmp.com/news/china/society/article/2130058/surveillance-under-sea-how-china-listening-near-guam>

**E) Extraordinary cost undermines Australia's military capabilities (and critical social needs)** The colossal expense of the SSN proposal means that long-term, meaningful defence capabilities will be foregone, and Australia will be less secure for it.<sup>15</sup>

Last November Sir Angus Houston, former head of the Australian Defence Force, said the AUKUS boats *"must be a net addition to Australia's military capability. The only way they can be a net addition to Australian military capability is to increase our defense spending by 3 percent plus of GDP as we move into and through the 2030s."*

*If that does not happen, it will mean the military can only buy the subs "through the cannibalization of other military capability. So that is the challenge for us. And I don't think either side of the body politic in Australia has really come to terms with that."*<sup>28</sup>

Given the current government is not intending to increase defence spending to 3% of GDP, budget limitations imposed by the SSN purchases will undermine rather than strengthen Australia's defence capabilities.

We should be planning more effective (and much more cost effective) self-defence materiel acquisitions rather than buying these massive submarines that are designed to attack at long range. Critical social needs will also be adversely impacted by the huge cost of this proposal. They would also be damaged by increasing defence spending to 3% of GDP.

**CONTESTED ASSUMPTION 2** (paragraph 7 page 2):

**That AUKUS submarines will contribute to regional and global security and stability, and establish a sovereign SSN capability**

*"Recognising that the Optimal Pathway sets out the AUKUS partners' intentions to pursue a phased approach to deliver AUKUS Pillar I, which includes the delivery of a trilaterally developed SSN class based on the United Kingdom's next generation design and incorporating technology from all three nations, including cutting-edge United States submarine technologies, increased visits and the rotational presence of United Kingdom and United States SSNs to Australia to **contribute to regional and global security and stability**, and to develop the Australian naval personnel, workforce, infrastructure and regulatory system necessary to establish a **sovereign SSN capability**, and enhancement of all three nations' industrial capability to produce and sustain interoperable SSNs;"*

It is arguable whether increased visits and the rotational presence of United Kingdom and United States SSNs to Australia will contribute to regional and global security and stability. Being involved in US "increased rotational presence" increases the risk of Australia being dragged into an unwinnable war with China. It also unquestionably increases the risk of Australia being a target in any such conflict.

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<sup>28</sup> AUKUS will 'cannibalize' other programs with no budget boost: Former top Aussie general Breaking Defence November 2024 <https://breakingdefense.com/2024/11/former-top-aussie-general-warns-aukus-will-cannibalize-other-programs-with-no-defense-boost/>



Recent US Defence Department funded “war games” at MIT, utilising retired expert defence personnel, provide salutary insights into the appalling costs of such a conflict globally.<sup>29</sup> Nearly half the scenarios involved nuclear weapons use, and half of those ended with mass conflagration. *“No set of circumstances allowed a complete U.S. coalition or Chinese victory. All victories were partial.”*

Australia would be much better able to “contribute to regional and global security and stability” by focussing on diplomacy and working towards prevention of such a war.

In relation to establishing a sovereign SSN capability, this is very unlikely to happen, given the cost, complexity, lack of experience in establishing a suitable shipyard, and very challenging workforce requirements. We lack the required specialist submarine expertise. Creating/importing a workforce is no easy task. US and UK SSN build expertise is already insufficient for their current needs, despite very active recruitment efforts.

Even with considerable experience, existing assembled production teams and a “hot production line” in the UK, the Astute class has been 57 months late and 53% over budget.<sup>9</sup> It will be much more efficient - cheaper and faster - to build AUKUS SSNs in the UK.

**CONTESTED ASSUMPTION 3** (paragraphs 9 and 10, page 2):

**That AUKUS submarines do not present any nuclear weapons proliferation risks, and comply with both the spirit and letter of the Non-Proliferation Treaty and the Rarotonga Treaty**

*Reaffirming their respective obligations under the Treaty on the Non-Proliferation of Nuclear Weapons (“NPT”) done at Washington, London, and Moscow on 1 July 1968, as well as Australia’s obligations under the South Pacific Nuclear Free Zone Treaty (“Treaty of Rarotonga”) done at Rarotonga on 6 August 1985, and the United Kingdom’s obligations under Protocols 1, 2 and 3 (“Protocols”) to the Treaty of Rarotonga;*

*Recognising Australia’s obligations under the Agreement between Australia and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons (“Australia-IAEA Comprehensive Safeguards Agreement”) done at Vienna on 10 July 1974 and the Protocol Additional to the Agreement between Australia and the International Atomic Energy Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons (“Additional Protocol”) done at Vienna on 23 September 1997 (“Australia-IAEA Safeguards Agreements”);*

A dangerous precedent is set by our planned acquisition of nuclear weapons-grade highly-enriched uranium nuclear reactor fuel.

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<sup>29</sup> Wargaming Nuclear Deterrence and Its Failures in a U.S.–China Conflict over Taiwan A Report of the CSIS Defense and Security Department and the MIT Security Studies Program Wargaming Lab December 2024  
<https://www.csis.org/analysis/confronting-armageddon>

The submarines that Australia intends to purchase, and subsequently produce, utilise weapons-grade highly-enriched uranium (HEU) as fuel for their nuclear reactors. The acquisition of such material by a non-nuclear weapons state exploits a never-before-used section in the nuclear Non-Proliferation Treaty, making it easier and more likely other nations will follow suit. This weakens the global non-proliferation and safeguards regime by opening up the possibility of increased production, use and diversion of the fissile materials from which nuclear weapons can be made, and undermines the spirit and purpose of the NPT.

Each HEU-fuelled nuclear-powered submarine contains sufficient HEU for between 6 and 20 nuclear weapons.

Fuelling submarines with HEU is completely unnecessary. Naval nuclear propulsion in French and Chinese vessels uses low-enriched uranium (LEU), which cannot be directly used to make nuclear weapons.

Despite assurances that the “highest non-proliferation standards” will be applied, the AUKUS nuclear propulsion system requires the transfer of nuclear weapons-grade HEU to a non-nuclear weapons state. Specifically, it will create a new double standard—or, at least, severely exacerbate an existing one—that a would-be proliferator, now or in the future, could exploit to build nuclear weapons.

The NPT does not prohibit non-nuclear-weapon states from building or operating nuclear-powered vessels. The Comprehensive Safeguards Agreement (the IAEA’s basic safeguards agreement), in paragraph 14, permits non-nuclear-weapon states to withdraw nuclear material from safeguards for use in a “non-proscribed military activity,” that is, naval reactors.<sup>30</sup> The IAEA is to be kept informed of the total quantity and composition of such nuclear material. Safeguards apply again as soon as the nuclear material is reintroduced into a peaceful nuclear activity. However, for practical reasons, the IAEA cannot effectively safeguard naval reactors (especially on a mobile stealth platform whose locations may be very widely dispersed and are kept secret, that can ‘disappear’ and be inaccessible for six months at a time).

No matter what safeguard commitments are made by Australia, the precedent of a non-nuclear weapons state acquiring large quantities of weapons-grade HEU would be established. This is likely to weaken the deterrence value of safeguards and make proliferation more likely.

Even without current intent to build nuclear weapons, the presence of weapons-usable amounts of HEU dramatically shortens the path and time to possible future nuclear weapons. Such stocks risk diversion and theft and regional concerns that may encourage nuclear weapons proliferation elsewhere.

These risks are exacerbated by the fact that at the end of a HEU-powered submarine’s operational life, its spent HEU reactor fuel not only has been transformed into extremely hazardous high-level, long-lived radioactive waste, it is also still weapons-usable. Thus this spent fuel waste requires not only strict isolation from the biosphere and groundwater for geological periods of time for health and environmental

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<sup>30</sup> Why the AUKUS Submarine Deal Is Bad for Nonproliferation—And What to Do About It James Acton Carnegie Endowment Nuclear Policy Program September 2021 <https://carnegieendowment.org/posts/2021/09/why-the-aukus-submarine-deal-is-bad-for-nonproliferationand-what-to-do-about-it?lang=en>

protection, it also demands military levels of security over time periods far longer than recorded human history.

No state has previously triggered the implementation of paragraph 14, so we are in unknown territory. There is no model for Australia to follow. Canada did begin discussions with the IAEA in the 1980s before abandoning its nuclear-powered submarine plans, but safeguards have become more complex to implement since then. South Korea, Japan and Pakistan have all expressed interest in nuclear-powered submarines. Worryingly, Iran has informed the IAEA that it intends at some unspecified time to acquire them – another reason for its enrichment activities.<sup>31</sup>

Brazil is developing an SSN capability, but these submarines will be fuelled by low-enriched uranium (LEU), which is not weapons-grade material.

In addition, acquisition of HEU-fuelled submarines will also contradict and undermine Australia's own efforts to reduce HEU use and stocks and achieve a fissile material cutoff treaty.

Compliance with Australia's obligations under the Treaty of Rarotonga (South Pacific Nuclear Free Zone Treaty) is also brought into question, if nuclear armed submarines are (de facto) based in any Australian ports. Whether or not the latter development complies with the Rarotonga Treaty hinges on the technicality of whether submarines will be deemed to be "stationed" or merely "visiting". It is difficult to envision how a permanent presence of submarines on "permanent rotation", associated with substantial operational, repair and maintenance facilities and resident foreign personnel could be considered as anything other than stationing.<sup>32</sup>

While currently US and UK attack submarines do not carry nuclear weapons, this could change in coming years. The Trump administration has reactivated development of a new sea-launched cruise missile, and may deploy these on attack submarines and/or surface ships.

The Rarotonga Treaty also requires each Party "to support the continued effectiveness of the international non-proliferation system based on the NPT and the IAEA safeguards system" (Article 4).

Given Australia is a signatory to the Treaty of Rarotonga and in order to contribute to the prevention of nuclear war, promote nuclear disarmament, and avoid actions inconsistent with the Treaty on the Prohibition of Nuclear Weapons (which Labor's national policy platform commits Australia to join), we should require disclosure and disallow any foreign military aircraft or vessel that is carrying nuclear

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<sup>31</sup>Troubled Waters Nuclear Submarines, AUKUS and the NPT <https://www.icanw.org.au/wp-content/uploads/Troubled-Waters-nuclear-submarines-AUKUS-NPT.pdf>

<sup>32</sup> In the South Pacific Nuclear Free Zone Treaty, stationing is defined in Article 1 as follows: "stationing" means emplantation, emplacement, transportation on land or inland waters, stockpiling, storage, installation and deployment. <https://treaties.un.org/doc/Publication/UNTS/Volume%201445/volume-1445-I-24592-English.pdf/>

weapons, or is nuclear-capable, to transit, visit, rotate through or be based in Australian territory, airspace or waters, as the Fraser government did in the 1980s.<sup>33</sup>

**CONTESTED ASSUMPTION 4** (final paragraph of preamble, page 3):  
**That AUKUS submarines bring economic benefit to Australia**

*“Recognising that the enhancement of the United Kingdom’s and Australia’s infrastructure and industrial capability and capacity which is necessary for the successful delivery of AUKUS Pillar I provides economic benefits to each Party and from which the Parties derive mutual defence and security benefits.”*

The massive expenditure by Australia will clearly have significant economic benefits for UK (and US) shipyards. This program is an open-ended defence spend. It is effectively a blank cheque to the US and the UK, given there is no alternative proposal whatsoever.

There is a further uncoded and open-ended liability (seldom mentioned) in dealing with and keeping secure the weapons grade nuclear waste for millennia.

AUKUS represents a major distortion in defence spending, that in all likelihood will mean Australia is less well equipped to defend itself. A report published by the US Congressional Research Service in October 2024 found there is "little indication" that "rigorous" analysis was conducted on whether there were more cost-effective options.

However, the economic impact for Australians of redirecting hundreds of billions of dollars to AUKUS Pillar 1 needs to be seen in the context of the whole of the community.

There are self-evidently massive opportunity costs, not just in choices for military defence equipment, but also with loss of funding and focus on many other critical priorities, e.g. homelessness, mental and other health programs, education and addressing climate change.

These are priorities that would make Australians “more secure” right now in a very tangible way.

Pacific people, for whom climate change remains the “single greatest threat to the livelihoods, security and wellbeing” are quick to point out that Australia has committed upwards of A\$368 billion to nuclear submarines through AUKUS but will not finance its transition away from fossil fuels, or commit to a fair share of climate finance and overseas aid, for example.

## IN CONCLUSION

It is very poor policy to spend hundreds of billions on submarines that may never appear and, even if they are delivered, are likely to be very delayed, extremely difficult to man, maintain and deploy, ill-suited to defending Australia and soon obsolete.

<sup>33</sup> Vince Scappatura and Richard Tanter, "B-52S IN AUSTRALIA IN 1979-1991 AND THE NUCLEAR HETERODOXY OF MALCOLM FRASER", NAPSNet Special Reports, August 04, 2025, <https://nautilus.org/napsnet/napsnet-special-reports/b-52s-in-australia-in-1979-19-1-and-the-nuclear-heterodoxy-of-malcolm-fraser/>

AUKUS Pillar 1 will leave Australia less able to defend itself, and Australians less secure in both the short and long term. These submarines commit Australia to United States-led military competition with China. They also further increase our military dependence on the US and increase the likelihood of Australia being drawn into the next US war.

This treaty should not be accepted until a full open and independent inquiry into AUKUS Pillar 1 has been completed.