

PROPULSION AND DETERRENCE: THE NUCLEAR DIMENSIONS OF AUKUS AND THE BRIDGING OF ALLIANCES

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TABLE OF CONTENTS

INTRODUCTION	5
AUKUS, THE NPT AND SPNFZ	6
REGIONAL STRATEGIC ALIGNMENTS AND NUCLEAR ANXIETIES	8
ASSESSING NOTIONAL NUCLEAR-SHARING OPTIONS UNDER AUKUS	12
CONCLUSION	13

Abstract

AUKUS promises to contribute significant enhancements to allies' conventional defence capabilities in the Indo-Pacific region and to do so in a manner that complies with the Nuclear Non-Proliferation Treaty and South Pacific Nuclear Free Zone. Deterring an adversary's aggression during the interim period before AUKUS is fully realised will continue to require an appropriate balance of nuclear, conventional and missile defence capabilities, coupled, in the case of China, with a coordinated strategy of diplomatic engagement. US strategy should therefore prioritise completing the modernisation of the US Strategic Triad. The United States, United Kingdom and Australia should concentrate on fully implementing AUKUS "Pillar 1" and "Pillar 2" plans while continuing to encourage and expand other critical cross-alliance "bridging" activities. Trying to evolve AUKUS into a notional "Pillar 3" nuclear-sharing posture would, however, raise daunting political and military hurdles and under current circumstances would not therefore be an advisable goal.

Introduction

On 13 March 2023, United States' (US) President Joseph R. Biden met in San Diego, US, with the leaders of two of the US' strongest allies in Europe and the Indo-Pacific to announce major new steps towards a deepening of the security partnership their three nations had originally launched, somewhat clumsily, a year and a half before. At this Australian-UK-US (AUKUS) follow-on summit, Australian Prime Minister Anthony Albanese, UK Prime Minister Rishi Sunak and President Biden gave final agreement to an ambitious plan under which the US and UK will, over the course of the next few decades, provide Australia with a conventionally-armed but nuclear-powered attack submarine (SSN) capability. Under "Pillar 2", AUKUS will expand to include cooperation on advanced military technologies, such as hypersonic missiles, assuming the necessary exemptions to the US International Traffic in Arms Regulations (ITAR) are enacted by Congress.¹ AUKUS' substantial enhancement of Australia's submarine capabilities will not come cheaply: the total cost is estimated over the life of the programme at AUS\$368 billion – seven times Australia's current annual defence budget.²

Australia's SSN blueprint will be implemented in three stages. First, Australian naval officers will immediately begin training and orientation on US and UK SSNs, and within a few years, US and UK SSNs will conduct extended rotational deployments to an Australian Royal Navy (RNA) base in Perth. Second, starting in 2033 Australia will acquire three-to-five US Virginia-class SSNs for operations with mixed Australian and US Navy crews. And last, beginning in the late 2030s, the plan calls for Australia and the UK through a joint development project to begin producing a bespoke SSN for deployment by both allies well into this century.

AUKUS is clearly focused on creating synergies between the three allies to help counter China's growing military strength and assertive policies in the South China Sea. In this sense, AUKUS underscores what NATO Secretary General, Jens Stoltenberg, in Tokyo called the new "global" and "interconnected" security reality.³ Cross-alliance partnerships are playing an increasing role in the face of growing Chinese and Russian security challenges, as well as the ever-closer – if not "no limits" – China-Russia security relationship itself. As President Biden's National Security Adviser, Jake Sullivan, explained in San Diego, AUKUS is 'a manifestation of a broader encouragement that the President has offered to European allies to be more engaged in Asia, and Asian allies like Japan and Korea to be more involved in Europe'.⁴ This growing pattern of cross-regional cooperation has included Japanese naval assets participating in NATO exercises; deployments of European allies' surface combatant ships to the South China Sea; plans by the European Union (EU) to provide satellite surveillance data to Indo-Pacific nations such as the Philippines; France's participation with US, Australian and Japanese forces in the recent

¹ Harris, B., "Congress Lays Groundwork for AUKUS Export Control Reform", *Defense News*, 22 March 2023, <https://www.defensenews.com/congress/2023/03/22/congress-lays-groundwork-for-aukus-export-control-reform/>.

² Ryan, M., "AUKUS Submarine Agreement: Historic but Not Yet Smooth Sailing", Center for Strategic and International Studies, *Commentary*, 17 March 2023, <https://www.csis.org/analysis/aukus-submarine-agreement-historic-not-yet-smooth-sailing>.

³ Stoltenberg, J., "Speech by NATO Secretary General Jens Stoltenberg at Keio University", NATO, 1 February 2023, https://www.nato.int/cps/en/natohq/opinions_211398.htm.

⁴ Shear, M.D. and Wong, E., "Biden Unveils Landmark Submarine Deal with Australia and Britain", *The New York Times*, 13 March 2023, <https://www.nytimes.com/2023/03/13/us/politics/nuclear-submarine-deal-australia-britain.html#:~:text=SAN%20DIEGO%20-%20President%20Biden%20took,deploy%20nuclear%2Dpowered%20attack%20submarines>.

Cope North airpower projection exercise in the North Pacific; and attendance at NATO's Madrid Summit in June 2022 by the leaders of the so-called "AP4" (Australia, Japan, South Korea and New Zealand).

Unlike these other "bridging" activities, though, AUKUS has a *nuclear* dimension. Australia has made clear that it does not and will not seek nuclear weapons, but concerns have been raised as to whether the operation of the nuclear propulsion reactors on the AUKUS SSNs will comply with the nuclear materials safeguards provisions of the 1968 Nuclear Non-Proliferation Treaty (NPT) and the 1985 Treaty of Rarotonga, which established the South Pacific Nuclear-Free Zone (SPNFZ). In this In-Depth Paper, I argue that it should be possible to address these concerns in the course of Australia's on-going negotiations with the International Atomic Energy Agency (IAEA). Beyond addressing the non-proliferation issue, this In-Depth Paper is organised in two main sections. First, it explores the strategic context within which AUKUS is being pursued, including how mounting nuclear anxieties concerning China, North Korea and Russia are affecting alliance alignments more broadly within the Indo-Pacific region. Second, it assesses how these developments could affect the future course and focus of the AUKUS programme itself, including notional options for evolving AUKUS into a nuclear-sharing arrangement similar to that which the US maintains with its allies in NATO.

AUKUS, the NPT and SPNFZ

Nuclear Non-Proliferation Treaty

The NPT constitutes a "grand bargain" between the nuclear powers of the world and all other countries that accede to the Treaty. The latter forswear any nuclear weapons capability and in return the nuclear weapons states party to the Treaty pledge, in Article 6, 'to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control'⁵. The nuclear weapons states also agree to assist the Non-Nuclear Weapons States (NNWS) party to the Treaty to acquire and operate nuclear power reactors for "peaceful" purposes under IAEA safeguards and verification inspections regimes. These "peaceful" purposes include nuclear reactors to meet nations' energy requirements and smaller nuclear reactors for academic research.

As emphasised by the three leaders in San Diego, the AUKUS SSN programme is focused on Australia's naval nuclear *propulsion* capabilities. The plan does not provide for any deployment of nuclear *weapons* by Australia, and the three AUKUS parties insist it meets 'the highest nuclear non-proliferation standard'⁶:

- Australia will remain a NNWS for the purposes of the NPT and will not acquire nuclear weapons;
- Australia will not enrich any naval nuclear reactor uranium or reprocess any spent fuel; and

⁵ "The Treaty on the Non-Proliferation of Nuclear Weapons", 27 May 2005, <https://www.un.org/en/conf/npt/2005/npttreaty.html>.

⁶ White House, "Trilateral Australia-UK-US Partnership on Nuclear-Powered Submarines", fact sheet, 13 March 2023, <https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/13/fact-sheet-trilateral-australia-uk-us-partnership-on-nuclear-powered-submarines/#:~:text=SSN%2DAUKUS%20will%20be%20the,Navy%20in%20the%20late%202030s>.

- Australia will not produce any nuclear fuel for its SSNs and will receive the required nuclear material for its SSNs from the US and UK in 'complete, welded power units' that will not require any refuelling during their lifetime.⁷

That said, this will be the first instance since entry into force of the NPT in 1968 that a NNWS party to the NPT will possess and operate nuclear-powered submarines. Moreover, the fuel for the SSNs is intended to be Highly Enriched Uranium, and not nuclear material of lower enrichment levels not suitable for nuclear weapons applications. In addition, Australia clearly does not want to have IAEA inspectors on board its future SSNs with access to the submarines' nuclear reactors. Taken together, this phase of AUKUS places unique stress on the ability of the associated IAEA verification regime to ensure compliance.

As a NNWS party to the NPT, Australia is subject to Article III, which requires IAEA inspection of all 'source or special fissionable materials' in a state's possession to ensure there is no diversion for nuclear weapons development. Australia is also subject to the Additional Inspection Protocol of the IAEA, as well as a Comprehensive Safeguards Agreement (CSA) that all NNWSs negotiate with the Agency. Because Australia does not want the IAEA to have inspection rights for the reactors on its SSNs, it has elected to invoke Paragraph 14 of the CSA – an exception to normal rules, which critics call a "loophole"⁸, that applies to certain 'non-prohibited military purposes', including providing nuclear propulsion for naval vessels. Paragraph 14 is contingent, though, on reaching agreement with the IAEA on a special arrangement for this use.⁹ Australia has begun discussions and preliminary information exchanges with the IAEA on this supplementary agreement – a process that the Director General of the IAEA has welcomed but has also described as involving 'serious legal and complex technical matters'.¹⁰

Once concluded, that agreement will need to be submitted for approval to the 35-member IAEA Board of Governors, which includes Russia and China. One can reasonably expect strong objections from them when the Board next convenes in June 2023 in Vienna. Given the unprecedented nature of the AUKUS case, China claims that the plan constitutes 'a textbook case of double standards [that] will damage the authority and effectiveness of the international non-proliferation system'.¹¹ However, neither China nor Russia has a veto power. The three AUKUS nations – all are Board members – should therefore be able to secure a majority vote of approval for any arrangement under Paragraph 14 that the Director General and his staff have deemed sufficient to maintain the integrity of the NPT regime. Holding any future NNWS to this

⁷ White House, "Trilateral Australia-UK-US Partnership on Nuclear-Powered Submarines", fact sheet, 13 March 2023, <https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/13/fact-sheet-trilateral-australia-uk-us-partnership-on-nuclear-powered-submarines/#:~:text=SSN%2DAUKUS%20will%20be%20the,Navy%20in%20the%20late%202030s>.

⁸ See, for example, Acton, J.M., "Why the AUKUS Submarine Deal is Bad for Nonproliferation – And What to Do About It", *Carnegie Endowment for International Peace*, 21 September 2021, <https://carnegieendowment.org/2021/09/21/why-aukus-submarine-deal-is-bad-for-nonproliferation-and-what-to-do-about-it-pub-85399#:~:text=The%20Naval%20Propulsion%20Loophole&text=Specifically%2C%20it%20will%20create%20a,or%20operating%20nuclear%2Dpowered%20ships>.

⁹ US Mission UNVIE, "Non-Paper on Nuclear Propulsion Cooperation Under AUKUS", US Mission to International Organizations in Vienna, 13 September 2022, <https://vienna.usmission.gov/non-paper-nuclear-propulsion-cooperation-aukus-sept-2022/>.

¹⁰ International Atomic Energy Agency, "Director General Statement in Relation to AUKUS Announcement", 14 March 2023, <https://www.iaea.org/newscenter/pressreleases/director-general-statement-in-relation-to-aukus-announcement>.

¹¹ Borger, J., "AUKUS Nuclear Submarine Deal Loophole Prompts Proliferation Fears", *The Guardian*, 13 March 2023, <https://www.theguardian.com/world/2023/mar/13/aukus-australian-submarine-nuclear-loophole-proliferation-fears#:~:text=The%20Aukus%20scheme%20announced%20on,to%20a%20non%2Dweapons%20state>.

high standard will be essential, especially if “less trustworthy” nations might seek to exploit Paragraph 14. For example, if Iran were to propose, as it briefly did in 2018, to remove nuclear materials from IAEA safeguards oversight in order to ‘construct naval nuclear propulsion in [the] future’, the Paragraph 14 verification measures would need to be extremely strict.¹²

South Pacific Nuclear-Free Zone

A second relevant arms control accord is the 1985 Treaty of Rarotonga. Australia is a party to this treaty, and the UK and the US subscribed via their ratifications of a subsequent Protocol. This treaty establishes a nuclear-free zone extending from Australia’s west coast eastward across the sub-continent and New Zealand to encompass most of the South Pacific Ocean (the “SPNFZ”). The manufacture, possession or stationing of any nuclear weapons is banned within this vast area. SPNFZ also prohibits any party from providing ‘source or special fissionable material, or equipment or material especially designed or prepared for the processing, use or production of special fissionable material for peaceful purposes to any non-nuclear-weapon State unless subject to the safeguards required by Article III.1 of the NPT’¹³. These safeguards include the requirements related to any invocation of Paragraph 14 of the CSA by Australia for the ‘non-prohibited military purpose’ of acquiring a naval nuclear propulsion capability for its submarine fleet. The Treaty does not ban the transit of nuclear-armed or nuclear-powered ships or boats in these waters or the airspace above, but instead accepts all states’ rights of “freedom of navigation”.

Regional Strategic Alignments and Nuclear Anxieties

In the new era of great power competition, US-led alliances in both the Indo-Pacific and Euro-Atlantic regions are increasingly being challenged by the nuclear weapons programmes and policies of peer competitors and regional rogue states:

- China: President Biden’s National Security Strategy describes China as ‘the only country with both the intent to reshape the international order and, increasingly, the economic, diplomatic, military and technological power to advance that objective’.¹⁴ In its 2023 Annual Threat Assessment Report, the US intelligence community warns that ‘Beijing is working to meet its goal of fielding a military by 2027 designed to deter U.S. intervention in a future cross-Strait crisis’ and that as part of this programme ‘China is building hundreds of new ICBM silos’.¹⁵ Late last year, the US intelligence community estimated that China’s on-going nuclear modernisation programmes could result in 1,500 deliverable nuclear warheads being fielded within the next decade.¹⁶ US intelligence also remains deeply concerned about Russia’s provision of nuclear fuel to China’s soon-to-be operational fast-

¹² *Op.cit.* Acton, “Why the AUKUS Submarine Deal is Bad for Nonproliferation”.

¹³ “The Treaty on the Non-Proliferation of Nuclear Weapons”, 27 May 2005, <https://www.un.org/en/conf/npt/2005/npttreaty.html>.

¹⁴ White House, “National Security Strategy of the United States”, 12 October 2022, <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>.

¹⁵ Office of the Director of National Intelligence, “Annual Threat Assessment of the U.S. Intelligence Community”, 6 February 2023, <https://www.dni.gov/files/ODNI/documents/assessments/ATA-2023-Unclassified-Report.pdf>.

¹⁶ Demirjian, K., “Pentagon Warns of China’s Plans for Dominance in Taiwan and Beyond”, *The Washington Post*, 29 November 2022, <https://www.washingtonpost.com/national-security/2022/11/29/pentagon-china-military-report-taiwan/>.

breeder reactor on an island just over 100 miles north of Taiwan.¹⁷ By its estimates, this might permit production by China of sufficient weapons-grade plutonium to increase its inventory four-fold to levels approaching those of current US and Russian arsenals.

- North Korea: The Democratic Peoples' Republic of Korea (DPRK) continues to expand its nuclear arsenal and carry out high-profile testing of related systems. The flight paths of many of the DPRK's missile launches have been particularly provocative, including direct overflights of Japan. In March, the DPRK conducted the first test of a nuclear-armed submersible drone designed to destroy an adversary's seaports. As stated in the 2023 Annual Threat Assessment, 'North Korea is using its nuclear-capable missile program to try to establish strategic dominance over South Korea and U.S. forces in the region by pursuing missiles probably aimed at defeating missile defences on the peninsula and the region and issuing threats to militarily respond to any perceived attacks against its sovereignty'.¹⁸
- Russia: Russia's nuclear threats and sabre-rattling have continued apace in the context of its brutal and unprovoked invasion of Ukraine. Most recently, these have included Putin's 26 March 2023 announcement of plans to store tactical nuclear weapons in Belarus for delivery in a conflict by Belarussian fighter aircraft. Putin claims that Belarussian aircraft have already been "hardwired" for such nuclear capabilities and that this is no different than NATO's "Dual Capable Aircraft" (DCA) nuclear posture – a posture Russia has repeatedly claimed violates the NPT. Coupled with its violation of the Intermediate-Range Nuclear Forces (INF) Treaty and its recent "suspension" of the New START Treaty, Russia's rhetoric has fuelled doubts as to whether former assumptions about the inviolability of the post-Second World War "nuclear taboo" still holds. More fundamentally, though, should Russia succeed in defeating and occupying Ukraine despite the West's substantial military, economic and political support, China might draw the lesson that aggression by a nuclear-armed power against a non-nuclear state (e.g. Taiwan) can pay.¹⁹

These developments have contributed to what US Ambassador to Japan, Rahm Emanuel, has called 'an unprecedented pace of strategic realignment' in the Indo-Pacific region.²⁰ Japan has doubled its defence budget and is acquiring long-range, precision-strike weaponry, including conventionally-armed sea-launched cruise missiles (SLCMs) for deployment on its frigates. South Korea has resumed live exercises with its security alliance partner, the US. During President Yoon Suk Yeol's 27 April 2023 state visit to the US, the two allies established a new bilateral Nuclear Consultative Group (NCG) for joint discussions concerning North Korea's nuclear threats and the alliance's extended deterrence requirements, and President Biden announced that US nuclear ballistic missile submarines (SSBNs) will begin making port calls on a regular basis in South Korea.²¹ Lastly, the Philippines has granted the US expanded basing rights in that country.

¹⁷ Tirone, J., "China's Imports of Russian Uranium Spark Fear of New Arms Race", *Bloomberg*, 1 March 2023, <https://www.bloomberg.com/news/articles/2023-03-01/china-nuclear-trade-with-russia-risks-tipping-military-balance#xj4y7vzkg?leadSource=uverify%20wall>.

¹⁸ *Op.cit.*, "Annual Threat Assessment of the U.S. Intelligence Community".

¹⁹ See, for example, Simón, L., "America's Indo-Pacific Strategy Runs Through Ukraine", *War on the Rocks*, 16 December 2022, <https://warontherocks.com/2022/12/americas-indo-pacific-strategy-runs-through-ukraine/>.

²⁰ Landers, P., "China, Like Russia, Is Pressured by Reinvented U.S. Alliances", *The Wall Street Journal*, 7 March 2023, <https://www.wsj.com/articles/china-like-russia-is-pressured-by-reinvigorated-u-s-alliances-87b28ec3>.

²¹ White House, "Republic of Korea State Visit to the United States", fact sheet, 26 April 2023, <https://www.whitehouse.gov/briefing-room/statements-releases/2023/04/26/fact-sheet-republic-of-korea-state-visit-to-the-united-states/>.

Beyond these realignments, some officials have argued that more nuclear enhancements are needed to ensure (or even restore) US extended nuclear deterrence. Most prominently, the US Strategic Command (USSTRATCOM), under both its former and current Commanders – Admiral Richards and General Cotton –, has stated in Congressional testimony last year and again this year that as a result of China’s and Russia’s nuclear modernisation programmes, a ‘deterrence and assurance’ gap now exists in both the Indo-Pacific region and in Europe.²² STRATCOM insists that this “gap” can only be filled by a ‘low-yield, non-ballistic nuclear system’ that ‘does not require visible force generation’; specifically, the new nuclear-armed SLCM (SLCM-N) proposed by President Trump but opposed by President Biden. In last year’s National Defense Authorization Act for FY2023, Congress agreed with USSTRATCOM and included US\$25 million in initial Research and Development funding for this weapon. President Biden has again omitted any further funding for the SLCM-N in his FY2024 Department of Defense (DoD) budget proposal, but there is no indication congressional attitudes have changed. If fielded, the SLCM-N would be deployed on US SSNs such as the Virginia-class boats that the US will sell Australia under the AUKUS programme.

Throughout the atomic age, experts and pundits have debated “how much is enough” to ensure deterrence. Deterrence and assurance of allies are as much functions of political will, mutual trust, consistency in policy and the resolve needed to hold one’s nerve in a nuclear crisis as they are of the numbers and types of weapons in one’s arsenals. If measured by the official statements and policies by allied governments in the Indo-Pacific and in Europe, it is not clear on what basis USSTRATCOM claims that US allies do not feel “assured” that they can rely on US extended deterrence. To be sure, former Japanese Prime Minister Shinzo Abe stated before his assassination last year that Japan should host US nuclear weapons on its soil and establish nuclear-sharing arrangements with Japan similar to those in place in NATO. But that proposition was strongly rejected by the current Japanese government²³. Similarly, while public opinion polls in South Korea indicate a strong majority in favour of the country acquiring its own nuclear weapons capability, such an action was renounced by the South Korean President before his state visit to Washington in April 2023 and made formal in the “Washington Declaration” that was signed by the two Presidents after those meetings.²⁴ Australia has never, under either the current or previous government, suggested that it finds US extended deterrence lacking. Lastly, there is no discussion within NATO of retiring the DCA posture – which relies on force generation in a crisis – and turning instead to an offshore SSN-based SLCM-N theatre nuclear deterrent.

For its part, the Biden Administration insists that deterrence in the region remain fully effective and credible. As Deputy Secretary of Defense Kathleen Hicks stated in unveiling the Administration’s FY2024 DoD budget request: ‘Our greatest measure of success – and the one we use around here most often – is to make sure [Chinese] leadership wakes up every day, considers the risks of aggression and concludes “today is not the day”’, whether that is in 2027 or 2035 or 2049 or beyond.²⁵ The Administration points to such major investments in new strategic

²² Senate Armed Services Committee, “Hearing to Receive Testimony on the Nuclear Weapons Council”, 4 May 2022, <https://www.armed-services.senate.gov/hearings/to-receive-testimony-on-the-nuclear-weapons-council>.

²³ McCurry, J., “China Rattled by Calls for Japan to Host U.S. Nuclear Weapons”, *The Guardian*, 1 March 2022, <https://www.theguardian.com/world/2022/mar/01/china-rattled-by-calls-for-japan-to-host-us-nuclear-weapons>.

²⁴ Yeung, J. and Quest, R., “CNN Exclusive: South Korea Doesn’t Need Nuclear Weapons to Face the North, Prime Minister Says”, *CNN*, 5 March 2023, <https://edition.cnn.com/2023/03/03/asia/south-korea-prime-minister-han-duck-soo-intl-hnk/index.html#:~:text=South%20Korea%20doesn%27t%20need%20nuclear%20arms%20to%20deter%20the,amid%20Asia%27s%20accelerating%20arms%20race> and White House, “Washington Declaration”, 26 April 2023, <https://www.whitehouse.gov/briefing-room/statements-releases/2023/04/26/washington-declaration-2/>.

²⁵ US Department of Defense, “Deputy Secretary Hicks and Vice Chairman Admiral Grady Hold a Press Briefing

and conventional capabilities as the on-going US\$1.6 trillion modernisation of all three legs of the strategic nuclear triad. Its conventional force enhancements under the Pacific Deterrence Initiative, which prioritises weapons systems increasingly seen as needed to prevail in any US-China conventional war over Taiwan (e.g. stand-off range bombers, long-range precision strike and SSNs), and the US Marine Corp's "Force Design 2030", which is intended to increase Marine units' survivability and effectiveness in Taiwan scenarios.

Allied capabilities in the region also play a pivotal role in the deterrence equation. Under its new "integrated deterrence" strategy, the US DoD emphasises 'weaving together cutting-edge capabilities, operational concepts, and the comparative advantages of our interagency partners *and international partners* to seamlessly dissuade aggression in any domain, or theatre' (emphasis added).²⁶ Indeed, the 2022 US National Defense Strategy describes as the US' 'greatest strategic advantage' its ability to 'work across theatres' within its 'unmatched network of allies and partners around the world' to ensure each ally or partner 'contributes its comparative advantage in deterring threats', with AUKUS considered as a prime example.

It must also be emphasised that it is neither probable nor inevitable that armed conflict with China will occur in the years ahead. US Secretary of State Antony Blinken has emphasised that 'we are not looking for conflict or a new Cold War; to the contrary, we're determined to avoid both'.²⁷ The new Strategic Concept approved by NATO's leaders at its summit in Madrid in June 2022 warns that China's 'stated ambitions and coercive policies challenge our interests, security and values', but it also emphasises that '[w]e remain open to constructive engagement'.²⁸ The EU's March 2022 "Strategic Compass" is even more measured, describing China as 'a partner for cooperation, an economic competitor and a systemic rival'.²⁹ In the last few months, EU Heads of State and Government from France, Germany and Spain have travelled to Beijing to try to establish more balance in their relations, as have the Presidents of the European Commission and European Council. It should be noted that Australian defence officials have also met with their Peoples' Republic of China (PRC) counterparts since the San Diego summit – the first such engagement since 2019.³⁰

However, restraint on China's part is not guaranteed. China has unequivocally rejected all proposals for it to join with the US and Russia in arms control accords that could restrict or cap its build-up of nuclear arms, and the US has concluded that President Xi's timetable for reunifying Taiwan with mainland China has recently been advanced.³¹ As emphasised in the

on President Biden's Fiscal 2024 Defense Budget", Press Conference, 13 March 2023, <https://www.defense.gov/News/Transcripts/Transcript/Article/3327914/deputy-secretary-hicks-and-vice-chairman-adm-grady-hold-a-press-briefing-on-pre/>.

²⁶ *Op.cit.*, "US National Defense Strategy 2022".

²⁷ US Department of State, "The Administration's Approach to the People's Republic of China", speech by Antony J. Blinken, Secretary of State, at George Washington University, Washington, DC, 26 May 2022, <https://www.state.gov/the-administrations-approach-to-the-peoples-republic-of-china/>, p. 5.

²⁸ NATO, "NATO 2022 Strategic Concept", <https://www.nato.int/strategic-concept/>, p. 5.

²⁹ Council of the European Union, "A Strategic Compass for Security and Defence: For a European Union that Protects its Citizens, Values and Interests and Contributes to International Peace and Security", 7371/22, Brussels, 21 March 2022, <https://data.consilium.europa.eu/doc/document/ST-7371-2022-INIT/en/pdf>.

³⁰ Zhang, A. *et al.*, "China, Australia Defense Officials Hold First Formal Meeting Since 2019", *Reuters*, 22 March 2023, [https://www.reuters.com/world/asia-pacific/china-australia-defence-officials-hold-first-formal-meeting-since-2019-2023-03-22/#:~:text=China%2C%20Australia%20defence%20officials%20hold%20first%20formal%20meeting%20since%202019,-Reuters&text=BEIJING%2C%20March%202022%20\(Reuters\),first%20formal%20meeting%20since%202019](https://www.reuters.com/world/asia-pacific/china-australia-defence-officials-hold-first-formal-meeting-since-2019-2023-03-22/#:~:text=China%2C%20Australia%20defence%20officials%20hold%20first%20formal%20meeting%20since%202019,-Reuters&text=BEIJING%2C%20March%202022%20(Reuters),first%20formal%20meeting%20since%202019).

³¹ Francis, E., "China Plans to Seize Taiwan on 'much faster timeline', Blinken Says", *The Washington Post*, 18 October 2022, [https://www.washingtonpost.com/world/2022/10/18/china-seize-taiwan-plan-blinken/#:~:text=There%20has%20been%20a%20change,faster%20timeline%2C"%20he%20said](https://www.washingtonpost.com/world/2022/10/18/china-seize-taiwan-plan-blinken/#:~:text=There%20has%20been%20a%20change,faster%20timeline%2C).

2023 Annual Threat Assessment, 'Beijing's heightened confidence in its nuclear deterrent is likely to bolster its resolve and intensify conventional conflicts'.³² Indeed, PRC Foreign Minister Qin Gang on 7 March 2023 warned that 'if the United States does not hit the break but continues to speed down the wrong path, no amount of "guard rails" can prevent derailing, and there will be conflict and confrontation'.³³

Could current strategic anxieties increase to the degree that Australia – despite its current views firmly to the contrary – might come to believe that AUKUS required a "Pillar 3": a nuclear-sharing arrangement with the US and the UK, under which it actually takes on a direct nuclear role? If so, could such a hypothetical arrangement be designed so as not to violate the NPT or the Treaty of Rarotonga? And if so, would the arrangement be viable, either militarily or politically?

Assessing Notional Nuclear-Sharing Options under AUKUS

Under the nuclear-sharing arrangements in place in NATO since the end of the Cold War, certain allies store US nuclear bombs on their soil and/or provide DCA that would, if ordered by a unanimous decision of the North Atlantic Council (NAC), deliver these nuclear weapons against targets recommended by the Supreme Allied Commander Europe (SACEUR). Other allies contribute to this nuclear mission by providing aircraft in supporting roles, including air cover and suppression of enemy air defences, under a programme known as "SNOWCAT" (Support for Nuclear Operations with Conventional Air Tactics). In the new Strategic Concept that Alliance leaders approved in Madrid in June 2022, allies emphasised the priority they attach to this mission, declaring that together with the US, UK and French independent strategic nuclear forces, 'NATO's nuclear deterrence posture also relies on the United States' nuclear weapons forward-deployed in Europe and the contributions of Allies concerned' (i.e. the DCA nations).³⁴ NATO's DCA posture is currently being modernised through the deployment by multiple allies of the F-35 aircraft and the replacement of older nuclear bombs with the new B61-12 bombs. No such arrangement exists in the Indo-Pacific.

NATO takes the firm view that its DCA posture is fully consistent with the NPT, since the custodianship of the B61 bombs remain under exclusive US control unless released for use in a war. In fact, the US insists that the then-USSR gave its explicit consent to this interpretation when the NPT was being negotiated. Since Putin came to power, though, Russia has claimed that the DCA arrangements do violate the NPT. However, this argument has now been undermined by Putin's announcement in late March 2023 that Russia will store nuclear bombs in Belarus – a NNWS under the NPT – for delivery in war by Belarussian fighter aircraft that have, he revealed, already been "hardwired" to carry nuclear ordnance.

In theory, a similar nuclear-sharing arrangement under AUKUS could also be designed to be consistent with the NPT. Australia's F-35 fleet of 100 aircraft – which attains Full Operational Capability in 2023 – or its future SSNs could provide the delivery platform for US-produced and maintained tactical nuclear weapons that would only be released to Australia in time of war. Unlike the case with NATO, though, where the nuclear weapons are stored at bases on the territory of the host DCA nations, storage of nuclear weapons on Australian soil would be

³² *Op.cit.*, "Annual Threat Assessment of the U.S. Intelligence Community".

³³ Yen Zhi Yi, "China foreign minister Qin Gang says Taiwan is a 'red line' for China that must not be crossed", *Mothership*, 7 March 2023, <https://mothership.sg/2023/03/china-foreign-minister-press-conference/>.

³⁴ *Op.cit.*, "2022 NATO Strategic Concept".

prohibited by the Treaty of Rarotonga. To avoid violating the terms of SPNFZ, the US weapons would have to be permanently stored outside this zone, for example, at bases on US territories in the Pacific (e.g. Guam). But given the distances involved in any nuclear strike option against China, using tactical fighter aircraft such as Australian F-35s from these bases for this mission would require multiple aerial refuellings.

Using “dual capable” Australian SSNs could presumably provide a more survivable nuclear weapons delivery platform. These submarines could transit to US bases outside SPNFZ for uploading of US SLCM-Ns stored there in a crisis. However, the nuclear command and control (C2) challenges would be daunting, even if the SSN had mixed US/Australian crews. It is hard to imagine any American President releasing nuclear weapons to Australia’s C2 if that meant that the SSNs would then put out to sea to stand nuclear alert for some period of time in a crisis pending a decision on actual weapons delivery. During the “Multi-Lateral Force” (MLF) era in the 1960’s, NATO tried but failed to identify acceptable C2 arrangements for equipping multi-nationally crewed submarines or surface combatants with US nuclear weapons. Seven different MLF variations were proposed, and all seven were found wanting. More fundamentally, though, basing the weapons outside the territory of the nuclear-sharing partner would contravene the central premise of such “burden-sharing” arrangements: allies strengthen deterrence by accepting the shared risks of nuclear war by having US nuclear weapons on their soil for delivery in wartime by their own air forces.

Other military and political factors would also militate against any such arrangement. AUKUS lacks any integrated command structure similar to that in NATO, and it has no SACEUR equivalent. There is no headquarters, such as the Supreme Headquarters Allied Powers Europe (SHAPE), with a staff that could conduct nuclear planning. There is no equivalent of NATO’s Crisis Response System, with agreed decision-points for delegating authority to SACEUR to exercise specified nuclear response actions. There is no standing political apparatus like the NAC with permanent representation for timely decision-making. Lastly, unlike NATO DCA’s posture, which is a legacy of the Cold War and hence “baked in” to political realities in Europe, an AUKUS nuclear-sharing arrangement would be an entirely new geostrategic development – one that would inevitably provoke significant opposition, not only domestically within Australia but also from other allied and partner nations in the region.

Conclusion

AUKUS promises to contribute significant enhancements to allies’ conventional defence capabilities in the Indo-Pacific region and to do so in a manner that complies with the NPT and SPNFZ. Australia must take care, though, to ensure the huge expense of this programme does not drain funding from other equally important conventional force improvements, particularly in the coming years, when it is quite possible that nuclear anxieties concerning China, North Korea and/or Russia will grow. The “Defence Strategic Review 2023” released publicly by the Australian Government on 24 April 2023 provides an important roadmap in that direction.³⁵ Deterring an adversary’s aggression during the interim period before AUKUS is fully realised will continue to require an appropriate balance of nuclear, conventional and missile defence capabilities, coupled, in the case of China, with a coordinated strategy of diplomatic engagement. US strategy should therefore prioritise completing the modernisation of the US Strategic Triad,

³⁵ Australian Government, “National Defence: Defence Strategic Review 2023”, <https://www.defence.gov.au/about/reviews-inquiries/defence-strategic-review>.

augmenting its ability to forward deploy non-strategic nuclear forces to the region if required by acute crises, and bolstering its conventional warfighting-oriented Pacific Deterrence Initiative. In addition, the US, UK and Australia should concentrate on fully implementing AUKUS “Pillar 1” and “Pillar 2” plans while continuing to encourage and expand other critical cross-alliance “bridging” activities.³⁶ Trying to evolve AUKUS into a future “Pillar 3” nuclear-sharing posture similar to NATO’s DCA programme would, however, raise daunting political and military hurdles and under current circumstances would not therefore be an advisable goal.

³⁶ A January 2023 Center for Strategic and International Studies report presents a cogent argument for what steps the US could take in tandem with South Korea to put in place ‘pre-decisional groundwork for possible redeployment of U.S. low-yield nuclear weapons at some point in the future’. Under current circumstances, the report recommends against either a redeployment of such weapons or the acquisition of nuclear weapons by South Korea in its own right. See: Hamre, J.J. et al., “Recommendations on North Korea Policy and Extended Deterrence”, CSIS Report, 19 January 2023, <https://www.csis.org/analysis/recommendations-north-korea-policy-and-extended-deterrence>.



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