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Issue Brief

AUKUS Agreement for Cooperation in Naval Nuclear Propulsion: Key Takeaways

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Summary

The US, UK and Australia have affirmed that NNP technology would be transferred to Australia in a manner that sets the highest non-proliferation standards while protecting classified information. The Australian government has downplayed criticisms relating to termination and indemnity clauses of the NNP agreement by pointing out that such clauses are standard for all legal frameworks.

On 12 August 2024, the US, UK and Australia signed an agreement for cooperation in Naval Nuclear Propulsion (NNP).[1] This agreement is a major step forward in Australia's journey to acquire conventionally armed nuclear attack submarines (SSN) for its navy as part of the AUKUS trilateral security pact. This agreement sets the terms and conditions under which the US and UK will transfer the coveted NNP technology to Australia. This includes submarine reactors along with other related materials and equipment required for the construction and operation of the SSNs.[2] This agreement has been tabled in the Australian Parliament and would come into effect once it is approved.

When AUKUS was first announced on 15 September 2021, it attracted widespread attention of the global strategic community. This is because the last time this highly-secretive military technology was shared was between the US and UK in 1958 as part of their Mutual Defence Agreement. AUKUS also involves the transfer of High Enriched Uranium (HEU) required for fuelling the submarine reactors to Australia which is a non-nuclear weapon state. Due to this, the key question that arose was whether the transfer of HEU to Australia is a violation of the existing non-proliferation regimes. The August 2024 agreement lays down the policy framework under which this transfer would take place in conformity with the international non-proliferation regimes.

AUKUS Submarine Roadmap

On 13 March 2023, the three AUKUS leaders unveiled a roadmap that was described as the optimal pathway for delivering SSN capability to Australia.[3] The first phase of this roadmap focuses on creating the industrial ecosystem and training the human resources required for the construction and operation of the SSNs by Australia. The training of the Royal Australian Navy (RAN) personnel on broad American and British SSNs has already been initiated. On 23 August 2024, the AUKUS nations announced the commencement of the Submarine Tendered Maintenance Period (STMP) at HMAS Stirling in Western Australia. This is a major milestone in the roadmap as Australian personnel will directly participate in the maintenance of SSNs in Australia. By 2027, the US and UK will maintain a sustained presence of their SSNs in the region through the establishment of Submarine Rotational Force-West (SRF-West). This is

[1] **"Agreement Strengthens AUKUS Submarines Partnership"**, Department of Defence (Australia), 12 August 2024.

[2] **"Agreement Among the Government of Australia, The Government of the United Kingdom of Great Britain and Northern Ireland, and the Government of the United States of America for Cooperation Related to Naval Nuclear Propulsion"**, Australian Submarine Agency, 12 August 2024.

[3] **"Fact Sheet: Trilateral Australia-US-UK Partnership on Nuclear Powered Submarine"**, The White House, 13 March 2023.

essentially a rotational deployment that will involve up to four US Virginia class and one UK Astute class SSNs.[4] According to the US Government, the core aim of SRF-West is to strengthen deterrence in the Indo-Pacific through the forward deployment of its SSNs.[5]

The second phase of this roadmap involves the delivery of at least three Virginia class SSNs to Australia by early 2030. As part of this plan, the US Navy will transfer two in-service submarines from its fleet and one will be delivered off the production line.[6] This phase of the roadmap is essentially a stop-gap arrangement for supplanting Australia's depleting undersea capability. This is due to the fact that the announcement of AUKUS led to the scrapping of Australia's multi-billion-dollar deal with France for the acquisition of 12 conventional attack submarines (SSK). Currently, RAN's undersea capability consists of only six aging Collin-class SSKs and the first AUKUS submarines will only be delivered in the late 2030s. The final phase of the roadmap entails the construction of an entirely new class of SSNs that has been named as SSN-AUKUS. This class of SSNs seeks to integrate the UK's design philosophy with advanced US technology for developing a state-of-the-art submarine. The first submarine of this class will be constructed in the UK, while subsequent submarines will be constructed in Australia.

NNP Agreement and AUKUS Roadmap

Soon after the announcement of AUKUS, the three nations signed an agreement called the Exchange of Naval Nuclear Propulsion Information (ENNPIA) on 22 November 2021. The core aim of this agreement was to enable Australia to have access to highly confidential information pertaining to NNP. The ENNPIA provided the policy framework for guiding AUKUS through its initial 18-month consultative phase for envisaging a roadmap for the delivery of SSNs to Australia.[7] The announcement of the AUKUS roadmap in March 2023 marked the end of the consultative phase. As the scope of ENNPIA was limited just to the exchange of information between the three nations, a need arose for a policy framework for facilitating the physical transfer of NNP and related materials. Hence, the new AUKUS agreement will supersede the ENNPIA and will set the policy framework on the basis of which Australia will acquire NNP technology.

[4] Ibid.

[5] Ibid.

[6] **"Passage of Priority AUKUS Submarine and Export Control Exemption Legislation by the United States Congress"**, Department of Defence (Australia),15 December 2023.

[7] **"UK/Australia/USA: Agreement for the Exchanged of Naval Nuclear Propulsion Information [MS No. 8/2021]"**, Foreign, Commonwealth & Development Office United Kingdom, 29 November 2021.

Modalities for the Transfer of Submarine Reactors to Australia

The HEU required for fuelling the nuclear reactors of the AUKUS-SSN will be delivered to Australia using sealed, welded reactors.[8] These reactors will be installed in the AUKUS-SSNs which will be constructed in Australia. The HEU reactors do not require refuelling over the entire life cycle of the submarines. Through this agreement, the US and UK are obligated to ensure that the quantity of HEU that is to be transferred to Australia for this purpose shall not exceed the amount required for the construction of AUKUS SSNs.[9] Apart from this, the three Virgina Class SSNs that Australia is to receive will come with installed nuclear reactors.

Compliance with the International Nuclear Non-Proliferation Regimes

As a non-nuclear-weapon state, Australia has reiterated that its pursuit to acquire NNP technology does not violate the international non-proliferation regimes. Australia has cited Article 14 of its Comprehensive Safeguard Agreement (CSA) with the International Atomic Energy Agency (IAEA). Article 14 states that the use of nuclear material in non-proscribed military activity cannot be considered as the violation of IAEA safeguards in place for preventing nuclear proliferation.[10] Although nuclear propulsion is not explicitly mentioned in the CSA agreement, Australia is associating it with non-proscribed military activity. Australia is in negotiations with the IAEA to modify Article 14 with explicit mention of the NNP as a non-proscribed military activity. Apart from this, through this agreement, Australia has committed to refrain from enriching uranium or reprocessing spent nuclear fuels from the submarine reactors. Also, the US and UK are obligated to immediately terminate the transfer of nuclear material if Australia is found violating the Nuclear Non-Proliferation Treaty (NPT) or Article 14 of CSA.

Protecting the Secrecy of NNP Technology

A large part of this agreement has been dedicated to establishing protocols and mechanisms for protecting the highly confidential information pertaining to NNP technology. This includes extensive physical security for protecting against theft, espionage and sabotage. This agreement prohibits the disclosure of sensitive information regarding NNP even to the IAEA.[11]

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[8] **"New AUKUS Agreement for Cooperation on Naval Nuclear Propulsion"**, Australian Submarine Agency, 12 August 2024.

[9] **"Agreement Among the Government of Australia, The Government of the United Kingdom of Great Britain and Northern Ireland, and the Government of the United States of America for Cooperation Related to Naval Nuclear Propulsion"**, no. 2.

[10] Article 14, **"The Text of the Agreement Between Australia and the Agency for the Application of Safeguards in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons"**, IAEA, 13 December 1974.

[11] **"Agreement Among the Government of Australia, The Government of the United Kingdom of Great Britain and Northern Ireland, and the Government of the United States of America for Cooperation Related to Naval Nuclear Propulsion"**, no. 2.

Obligations of Australia as the Recipient Party

As per this agreement, Australia is responsible for the management, disposition and storage of radioactive waste generated by the submarine reactors of all the SSNs it acquires through AUKUS. This includes the three Virgina Class SSNs Australia will receive from the US. Also, the agreement has indemnity clause according to which Australia is liable to pay compensation to the US and UK in the event of any accidents that may occur during submarine construction.[12]

Criticisms and Inferences

Since its announcement, AUKUS has come under criticism from some sections of the international community, most notably China, on the grounds that it violates the NPT. China has accused that AUKUS sets a harmful precedent of non-nuclear-weapons states such as Australia receiving weapons grade uranium under the pretext of acquiring NNP technology. As a result, in all the joint statements and factsheets of AUKUS thus far, the commitment of the trilateral grouping towards nuclear non-proliferation has been highlighted. The three nations have made it clear that NNP technology would be transferred to Australia in a manner that sets the highest non-proliferation standards while protecting classified information.[13] The agreement of cooperation on NNP technology broadly reflects this approach.

Overall, the agreement succeeds in presenting a viable legal framework under which NNP technology could be transferred to Australia. But certain sections of this agreement have led to criticism within Australia's political community. A day after this agreement was signed, Australia's third-largest political party, the Australian Greens (AG), released a press statement condemning this legal framework. The statement points out that the agreement has multiple exit clauses that allow the US and UK to withdraw from the deal with just one year's notice without paying any compensation to Australia.[14] The indemnity clause of the agreement obligates Australia to pay compensation to the US and UK for any accidents that may occur during the construction and maintenance of the SSNs. AG also highlights that the agreement allows the US and UK to determine the price of HEU that is being transferred to Australia. Former Australian Senator and RAN submariner Rex Partick also reiterated these concerns. He opines that through this agreement, Australia has relegated its own security priorities behind the strategic interests of the US and UK in the region.[15] Former Australian Prime Minister Paul Keating remarked that this agreement fully compromises Australia's strategic autonomy.[16]

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[12] Ibid.

[13] **"AUKUS and Non-Proliferation"**, Australian Submarine Agency, June 2023.

[14] **"AUKUS 2.0 Agreement All Risk No Reward"**, The Greens, 13 August 2024.

[15] **"Questions Over AUKUS Deal"**, *ABC News In-Depth*, 14 August 2024.

[16] **"Paul Keating Lashes PM and Senior Ministers Over, Defence Policy"**, *ABC News In-Depth*, 8 August 2024.

Critics have also questioned the US's ability to deliver at least three Virgina Class submarines, citing the Congressional Research Service Report released on 5 August 2024. This report has highlighted that the US submarine industrial base is experiencing critical shortfalls in fulfilling the SSN demands of its own navy. Taking this into consideration, the report has warned that the selling of Virgina Class SSNs to Australia is subjected to uncertainty and can take much longer than projected in the AUKUS roadmap.[17] However, supporters of AUKUS have downplayed these criticisms by pointing out that termination and indemnity clauses are standard for all legal frameworks. Australian Defence Minister Richard Marles stated that this is a treaty level agreement and not a commercial arrangement that can be subjected to termination easily.[18]

Despite these assurances, the likelihood of geopolitical uncertainties affecting such agreements between nations cannot be overlooked. Albert Palazzo points out how the UK had to roll back on its security commitments made to Australia under the Singapore Strategy due to the outbreak of the Second World War.[19] In 1923, the UK guaranteed to deploy a fleet of its warships in Singapore to protect Australia against any potential attack by Japan. But with the fall of France to Germany in June 1940, the UK informed Australia that it would not be able to deploy its warships in the region as it needed them for the protection of its own territory.

Conclusion

AUKUS has made tangible progress in its efforts to deliver SSNs to Australia. The critical voices against AUKUS in Australia comprise only a minor faction of its political and public discourse. The AUKUS has strong bipartisan support of the two major political parties in Australia and this is likely to continue. The AUKUS is also reflective of the strength of the US–Australia strategic relationship that has been consistent since the Cold War. Australia's conformity to the US strategic perspective has been a distinct feature of their bilateral relations and this is unlikely to change in the face of unfolding developments in the Indo-Pacific region. Hence, AUKUS can be expected to wade through the domestic criticisms and geopolitical uncertainties ahead. The AUKUS NNP agreement also presents a pathway for other non-nuclear weapon states seeking to acquire NNP technology without contravening the existing framework of the global non-proliferation regime.

[17] **"Navy Virgina-Class Submarine Program and AUKUS Submarine (Pillar 1) Project"**, Congressional Research Service, 5 August 2024.

[18] **"Questions Over AUKUS Deal"**, *ABC News In-Depth*, 14 August 2024.

[19] Albert Palazzo, **"AUKUS: The Singapore Strategy Redux"**, The Interpreter, Lowy Institute, 22 August 2024.

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