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“Geopolitics, militarisation and risk - a new case for Confidence Building Measures in the Indo-Pacific”

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Session 1: The impact of military modernisation, including new arms technologies, on Indo-Pacific stability

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BRIEF: AUSTRALIA'S FORAY INTO UNMANNED, MISSILE AND NUCLEAR SYSTEMS AND THE OPERATIVE, TECHNICAL AND SECURITY RISKS

Australia's unique strategic geography – characterised by its status as the only island continent, vast maritime domain and proximity to the Indo-Pacific region – is of paramount importance to the development of modern military technology and regional stability. Its extensive coastline and access to critical trade routes make it a strategic linchpin in the Indo-Pacific. As a result, Australia's defence policies and technologies are inherently tied to securing its maritime interests and contributing to regional stability. Advanced technologies such as uncrewed assets and missile systems are crucial in safeguarding these vast maritime spaces. By fostering a secure and stable environment, Australia can play a constructive role in promoting a balanced power dynamic in the region, thereby reducing the likelihood of conflicts and ensuring the safe passage of maritime trade, which remains at the heart of the global economy.

Technology Adoption

Australia's military-technical renewal is marked by substantial progress in uncrewed systems, missile and anti-missile systems, and nuclear advancements. The Australian Defence Force (ADF) is actively pursuing an assortment of uncrewed technologies across air, surface, and undersea domains to address capability gaps and exploit emerging technological opportunities. For instance, the Royal Australian Navy collaborated with the defence industry to test autonomous and uncrewed systems during an exercise named Autonomous Warrior at Jervis Bay, aiming to transform maritime warfare methodologies. Furthermore, a new uncrewed aerial vehicle dubbed 'STRIX', capable of vertical take-off and landing, was unveiled by BAE Systems' Australian subsidiary. Another significant project is the 'Loyal Wingman', supposedly a natively developed uncrewed craft designed for team operations with other crewed and uncrewed aircraft, providing surveillance, reconnaissance support, and potential weapon capabilities.

The world's largest island nation has also been formulating plans to domestically develop missile and anti-missile capabilities as part of a broader sovereign guided weapons manufacturing strategy to bolster its defence infrastructure in response to evolving global security dynamics. Prime Minister Scott Morrison disclosed a plan to manufacture guided missiles within Australia, under a fast-tracked initiative with an investment of \$1 billion harnessing its existing capabilities including the Nulka decoy missile and the Government Owned Contractor Operated explosive factories at Benalla and Mulawa. This move to re-establish a domestic missile manufacturing base is slated to develop an industrial capability for creating missiles and guided weapons not only for domestic military use but also for export purposes.

Furthermore, under Australia's Defence Strategic Review, plans are being developed to manufacture HIMARS-compatible missiles in Australia from 2025. This ambition aligns with the Australian government's recognition of a 'missile age' in modern warfare, which necessitates an 'enhanced, all-domain, integrated air and missile defence capability' to maintain a robust defence posture. Through these initiatives, Australia aims to build a formidable defence capability that can address contemporary and emerging threats, leveraging domestic manufacturing to achieve these strategic objectives.

Australia's modern nuclear pursuits are encapsulated in and can only be feasibly achieved through the historic AUKUS pact with the US and the UK. This pact marked an internationally embarrassing shift from a previous deal with a French shipbuilder for diesel-electric submarines, for which the government is to pay an \$830 million penalty, to acquiring at least eight nuclear-powered submarines with technical backing from the UK and the US, reflecting a broader AUKUS security partnership vision. This collaborative initiative is aimed at transitioning Australia to nuclear-powered vessels, with the US sharing crucial nuclear technology to aid this transition. Moreover, the AUKUS pact outlines a roadmap for Australia to construct its own nuclear-powered submarines, leveraging a predominantly British design, and buying up to five U.S. nuclear-powered submarines starting early next decade. This nuclear thrust is the crux of a comprehensive plan to revamp Australia's defence capabilities, envisioning the construction of more modern missiles and nuclear-powered technologies to navigate a 'radically different' global threat landscape.

The AUKUS trilateral security deal, a significant commitment by Australia, the United Kingdom, and the United States, and indeed Australia's foray into indigenous uncrewed and missile technologies as part of its overall military-technical revamp, carries profound operative, technological, and security risks and corresponding implications for Australia's maritime defence landscape, the wider Indo-Pacific region and global security writ large.

Operative Implications

The Australian defence, especially that element related to AUKUS, has immediate and long-term operative implications for Australia and hence its allies and the region in which it rests. It fundamentally transforms the country's maritime strategy and defence posture. By integrating advanced uncrewed technologies and enhancing missile systems, Australia aims to bolster its maritime presence and deter potential adversaries.

The operative benefits include:

- **Enhanced Deterrence:** Australia's potential capability to deploy state-of-the-art missile systems and uncrewed assets significantly raises the stakes for any potential aggressor, serving as a powerful deterrent.
- **Extended Reach:** The integration of long-range uncrewed platforms allows Australia to project its maritime influence further into the region, potentially contributing to regional stability.
- **Rapid Response:** Uncrewed technologies enable faster response times, as they are not subject to the limitations of human endurance, potentially improving the nation's readiness in critical situations.

However, these operative advantages come with substantial operational challenges:

- **Resource Intensiveness:** Implementing the AUKUS agreement necessitates significant resources. But acquiring, operating, and maintaining advanced

military technologies more generally is resource intensive. Australia must invest heavily in research and development, training, infrastructure, and sustainment to harness these capabilities effectively.

- **Complexity:** Operating cutting-edge military technologies entails dealing with complexities. Maintaining and managing nuclear-powered submarines, for example, demands a high level of technical expertise, compliance with safety protocols, and strict adherence to international norms on a level to which the Australian defence industry is not accustomed.
- **Operational Coordination:** Collaboration between the three AUKUS partners is key. Ensuring seamless operational coordination among Australia, the UK, and the US is essential to maximising the benefits of the alliance. This involves joint training, interoperability, and information sharing, each with its concomitant costs and difficulties.

Technological Implications

Australia's modern foray into unmanned, missile and nuclear technologies necessitates a significant technological leap for the Australian Defence Organisation. The country will be required to develop, adapt, and acquire cutting-edge technology to realise the objectives of the agreement. Technological implications include:

- **Research and Development:** Australia's defence enterprise will need to invest an unprecedented sum in research, development and related R&D structures to create and adapt uncrewed technologies and missile systems that align with the nation's strategic goals and will at a rapid pace need to develop a native nuclear workforce from the ground-up whilst leveraging US & UK skills bases for core nuclear engineering requirements.
- **Cybersecurity:** Ensuring the security of these new and advanced systems is paramount. Australia must be prepared to defend against cyber threats that could compromise critical defence assets and overcome its reputation as a physical and cyber security weak link, the latter due to reported instances of cyberattacks and data breaches, inadequate cybersecurity infrastructure, and a skills shortage in the cybersecurity sector. Its geopolitical position also makes it a target for cyber espionage and attacks, heightening the necessity for robust cyber defence mechanisms to protect national interests and secure its digital infrastructure against evolving cyber threats.
- **Technological Collaboration:** Collaborative efforts with the UK and the US will bring substantial benefits on the nuclear element of Australia's military-technical renewal, but the successful exchange of expertise and navigating the demands of technology-sharing will be crucial to the successful implementation of the agreement and this will require the three players to overcome complicated trust issues, resolve differing strategic interests, and deal with concerns about protecting proprietary technology.
- **Political Sustainability:** Sustaining these technologies will require long-term investment in research, development, maintenance, and training that is

somewhat at odds with Australia's short-cycle political system and form of government administration that is characterised by frequent elections, often prioritising short-term policy gains over long-term transformative change, given that politicians tend to focus on populist measures to secure immediate voter approval, leading to a lack of continuity in strategic, transformative policies and reforms necessary for lasting change and stability.

Security Implications

From a security perspective, Australia's renewed focus on uncrewed systems, missile technologies and the new AUKUS deal brings both regional and global challenges that if inappropriately managed, may offset any potential strategic or operational gains.

Key security aspects include:

- **Global Standoff:** At the most fundamental level, Australia's significant investment in native uncrewed and missile technology systems, and even greater investment in the AUKUS project, represents its desire to hedge its bets while at the same time underscoring broader global strategic competition, principally between the US and China. In this respect, Australia's actions are best viewed in the context of the broader trend of increasing competition between major powers, which has ramifications for global security.
- **Regional Response:** Australia's new technological posture, particularly its proposed acquisition of nuclear submarines, has already prompted responses from neighbouring nations, influencing and indeed intensifying regional security dynamics. Nations including China, Australia's greatest two-way trading partner, have expressed concerns, and these concerns could lead to shifts in regional alliances, with much uncertainty linked to the 2024 presidential election. At the same time, Australia has notably been able to wind back Chinese tariffs/import bans on key Australian imports.
- **Non-Proliferation Concerns:** The acquisition of advanced technologies and nuclear propulsion capabilities has raised concerns about nuclear non-proliferation in the Indo-Pacific region. Australia's commitment to nuclear-powered submarines is seen by some as a potential trigger for a nuclear arms race and indeed a growing number of Australians believe that the nuclear submarine equation is only in the national interest if nuclear energy and weapons follow.
- **Alliance Dynamics:** The AUKUS deal has implications for Australia's alliance dynamics and may even counteract its efforts to introduce a greater level of indigenous capability in the missile and uncrewed space. While strengthening ties with the US and the UK is significant, it also remains unclear whether it can be managed so delicately as to avoid alienating other important partners in the region, particularly with China seeking to gain influence to Five-Eyes detriment across the Indo-Pacific.
- **Maritime Security:** Enhanced maritime capabilities, including uncrewed technologies, could contribute to more secure trade routes, which are vital to

Australia's economic well-being. However, it remains to be seen how uncrewed vessels will be treated in terms of the conduct of freedom of navigation exercises and other more hostile encounters in Australia territorial waters or regional seas.

Addressing these risks requires diplomacy, crisis management, and international cooperation tailored specifically to them in order to maintain stability and prevent the escalation of hostilities.

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