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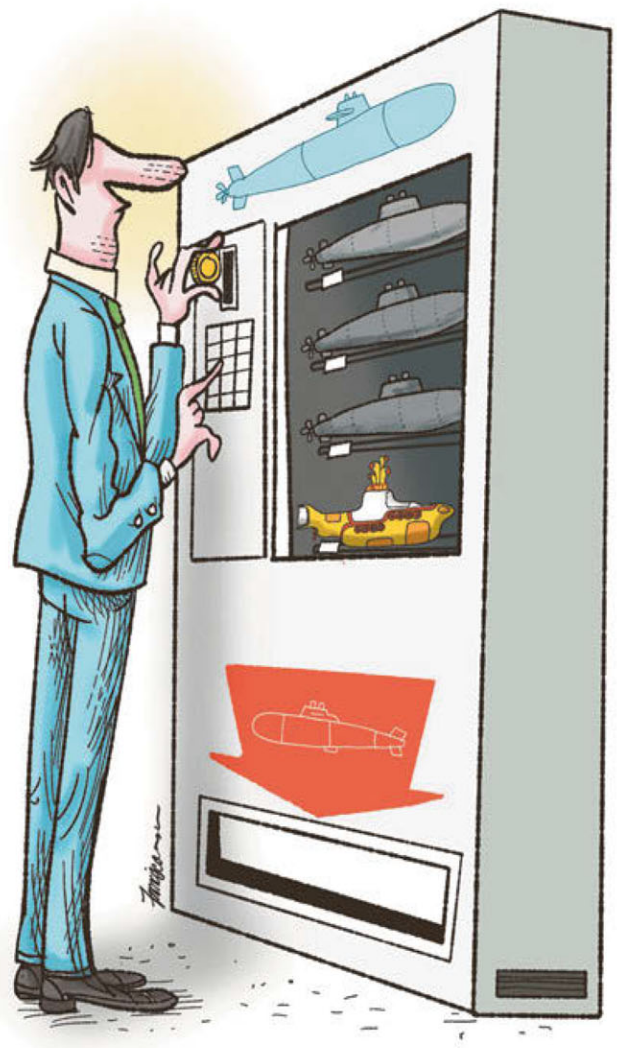
After Aukus: Asian submarine proliferation



The Australian sub deal signals deeper military integration between the US and its allies and spurs the spread of submarines in Asia's waters

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For The Straits Times

Whatever the long-term political consequences of the Aukus arrangement might be, the decision by the United States and United Kingdom to help Australia build nuclear-powered submarines has highlighted a larger trend – Asia's growing appetite for submarines, both conventional and nuclear.

For some, the trend invokes fears of a new regional arms race in underwater weapons. But those looking at the shifting naval balance of power in Asia's waters believe the proliferation of submarines inevitable. Others are convinced that Aukus-type deals will in fact reduce incentives for the acquisition of nuclear weapons by Asian powers.

The concerns about nuclear proliferation have certainly gained some traction since the Aukus announcement last month. That the reactors of the planned Australian submarines will use highly enriched uranium (easily converted into nuclear weapons) has compelled a group of former US officials to caution President Joe Biden.

In a letter to the White House, they wrote that the "Aukus deal to supply Australia with nuclear-powered attack submarines fuelled with weapon-grade uranium could have serious negative impacts on the global nuclear non-proliferation regime and thereby on US national security".

Former Australian prime minister Malcolm Turnbull echoed those concerns. "Australia is a non-nuclear weapon state and has a commitment to, and a massive vested interest in, the upholding of the Non-Proliferation Treaty (NPT)," he said. "When you look at it from a non-proliferation point of view... LEU (lightly enriched uranium) is a much better proposition."

There are views to the contrary. Professor Vipin Narang of the Massachusetts Institute of Technology says the US/UK reactors powered by highly enriched uranium might be less prone to proliferation, because there is no replacement of the fuel through the life cycle of the submarine. LEU-powered reactors, in contrast, will need frequent refuelling – a process that involves removing spent fuel and invites proliferation risks.

The NPT, in fact, permits the use of special material like enriched uranium in nuclear submarine reactors. The NPT bars building nuclear weapons by non-nuclear weapon states but does not prohibit them from non-weapon military uses of nuclear energy like naval propulsion.

The International Atomic Energy Agency (IAEA), the watchdog of the NPT, says it is getting ready to deal with the many monitoring and verification issues presented by the Aukus deal. After all, it is the first time that a non-nuclear weapon state that is party to the NPT plans to acquire nuclear-powered submarines.

Until now, only six nuclear weapon powers (the US, USSR, UK, France, China and India) have operated nuclear-powered submarines. The head of the IAEA, Mr Rafael Grossi, said his organisation will "have to enter into a very complex, technical negotiation" with the US, UK and Australia to ensure "there is no weakening of the nuclear non-proliferation regime".

The Morrison government, of course, has given ringing reaffirmation of Canberra's commitment to non-proliferation and its readiness to accept a rigorous inspection regime by the IAEA.

Canberra's assurances on non-proliferation are unlikely to convince China, which has mounted a political campaign against the Aukus deal. One of Beijing's main arguments is that it undermines the NPT regime. Whatever China's political motivation, the Aukus agreement has certainly intensified Asia's quest for nuclear and conventional submarines.

THE KOREAN PENINSULA

Let us begin with the Korean peninsula. As the North Korean ambition to build a powerful nuclear and missile arsenal has endured through the past three decades, it was perhaps inevitable that South Korea would debate its own nuclear options. The idea of acquiring nuclear weapons is no longer a fringe position in Seoul's polity. At least three options are being debated in Seoul – developing an independent nuclear arsenal, redeploying US tactical nuclear weapons in South Korea, and nuclear-weapon sharing arrangements with the US.

Nuclear-powered submarines have emerged as the fourth option. President Moon Jae-in reportedly pitched the South Korean case for nuclear-powered submarines to the Trump administration, but Washington was reluctant. South Korea, meanwhile, has surprised the world last month by launching a ballistic missile from a newly built submarine. President Moon observed the test launch of the "Hyunmoo 4-4" missile from the 3,000-tonne Dosan Ahn Chang-ho submarine commissioned in August. South Korea is the first non-nuclear weapon country to field such a missile.

All others, including North Korea, which develop and test submarine-launched ballistic missiles (SLBMs) possess nuclear weapons. SLBMs are typically designed to carry nuclear weapons and meant to provide secure second strike capability against adversaries.

Since Seoul is a treaty ally of the US and enjoys the protection of the US nuclear umbrella, analysts wonder why Seoul wants to build SLBMs and invite a more intense confrontation with Pyongyang.

But the case for deterring a nuclear-armed North has steadily gained ground in the South. There is indeed speculation that a 4,000-tonne nuclear-powered submarine is on Seoul's naval drawing board.

Like the Australian nuclear-powered submarine deal, the Korean SLBM is a response to the complex security environment that is emerging in East Asia – marked by China's rise and niggling questions about the credibility of US alliances and America's nuclear umbrella. They are a part of the effort to develop capabilities that fall in the grey zone between purely conventional and nuclear deterrence.

The logic applies to Japan too. In Japan, the Aukus agreement came right in middle of last month's ruling-party election campaign. One of the candidates, former defence and foreign minister Taro Kono, supported Tokyo's consideration of nuclear-powered submarines. But Mr Fumio Kishida, who won the race and is now the Prime Minister of Japan, was sceptical. In any event, the deep anti-nuclear sentiments in the Japanese polity limit the possibility of Japan going for nuclear-powered submarines in the near term.

Some in Washington believe strengthening the military capabilities of allies such as Australia, Japan and South Korea by providing sophisticated technologies like nuclear propulsion serves two important purposes. One is to reduce incentives for allies to acquire independent nuclear arsenals of their own; and the other is to build "integrated deterrence" in partnership with allies. How this works out in relation to each ally would, of course, be different.

Nuclear-powered submarines were only one part of the Aukus deal. It also includes trilateral collaboration of a range of technologies – including underwater systems, cyber warfare, artificial intelligence and quantum computing – to enhance interoperability and joint capabilities under the integrated deterrence framework.

In relation to South Korea, the US has lifted many of the earlier restrictions on range and payload of Seoul's missiles. There is also a growing clamour in Washington that the US must begin joint nuclear planning with Japan, South Korea and Australia to strengthen America's Asian alliances and regional deterrence.

The Aukus deal, meanwhile, has increased the prospects for the transfer of naval nuclear reactors. There are reports that Russia had offered South Korea a naval nuclear reactor for civilian maritime uses and might now be eager to get a slice of the new business.

France, outraged at losing the multibillion-dollar contract to supply conventional submarines, might now be open to exporting nuclear-powered submarines. A leading French nuclear expert, Dr Bruno Tetrais, and a former French ambassador, Mr Michel Duclos wrote earlier this month that Paris should shed its inhibitions on exporting nuclear submarine technology.

"In view of the American-British precedent, France should no longer have any reservations about supplying nuclear submarines to interested clients. Its choice of fuel (low-enriched uranium, which requires the core to be reloaded during its lifetime) would logically steer it towards states that already have a civilian nuclear complex, such as India, Japan or South Korea."

INDIA AND PAKISTAN

India will certainly be interested. Faced with a rising Chinese naval profile in the Indian Ocean waters, Delhi is trying to strengthen its submarine arm. France is currently building six Scorpene-class submarines for the Indian Navy. It is also bidding for a contract to build another six conventional boats.

Like Canberra, Delhi too has been debating the option of building its own nuclear-powered submarines; Paris could figure prominently in these plans. So will Moscow.

Over the last three decades, India has leased two nuclear-powered submarines from Russia and a third one is on order. These nuclear-powered submarines (SSNs) for attacking enemy fleets are different from the nuclear-powered and nuclear-armed boats (SSBNs) that India is building. The SSBNs are to ensure a survivable nuclear deterrent.

It will be surprising if Beijing does not take advantage of the strategic opening created by Aukus. China, which currently is building conventional submarines for Pakistan, could also be tempted to lease Islamabad a nuclear-powered attack submarine.

Meanwhile, the market for conventionally powered submarines has been growing steadily in Asia. Thanks to a rapidly deteriorating naval environment in South-east Asia, many countries are focused on defensive and asymmetric strategies. There is no better asymmetric weapon than a submarine. Deployed under water and difficult to find, submarines can cause huge damage to larger surface fleets of a stronger adversary, making them attractive to weaker states seeking to exploit the vulnerabilities of the powerful. There are many vendors – including Tokyo, Beijing, Seoul, Moscow, Berlin, Stockholm and Paris – eager to service the regional need for conventional submarines. The future of Asia's under-water politics is likely to be very different from the past.

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