

Making Waves

Sea Blindness and Australia's Second Sea

Brian K. Wentzell

It is interesting to examine countries with coasts on more than one ocean. Which coast is emphasized illustrates much about the country's history. Thus in Canada, the focus has historically been on the Atlantic Ocean. Only recently has focus changed to the Pacific coast and even more recently the Arctic coast. For Australia the focus has been on the Pacific Ocean, and not the Indian Ocean.

David Brewster, writing for the Australian Strategic Policy Institute, has highlighted the importance of the Indian Ocean as a waterway to world markets from the west and northwest of the Australian continent. His article, entitled "Australia's Second Sea: Facing Our Multipolar Future in the Indian Ocean," exposes Australia's national blindness to the importance of this ocean to the economy and security of the country.¹

The state of Western Australia, the largest state in the country, is a very significant source of national resource wealth derived from large mineral deposits and liquified natural gas from reserves found on land and adjacent ocean waters. These exports represent about 42 per cent of all such exports from Australia. In addition, there are significant agriculture exports and the waters off western Australia also provide food from the fisheries. During the two World Wars, safe anchorages and support facilities for naval and military forces were located in Western Australia. The population of the state is about 2.6 million out of a national population of near 25.1 million in 2018.

Despite the importance of the Indian Ocean, the geographical focus of Australian defence policy has been to the north and east of the continent since 1945 – in other words, toward the Pacific Ocean. The Korean and Vietnam Wars together with various emergencies in Malaya/Malaysia, Indonesia, East Timor, and the continuing concern about North Korea and nuclear weapons have focused military policy, resources and operations. In what Australians have traditionally considered as the politically benign Indian Ocean, the only long-term commitment is sharing the command and staffing of Combined Task Force 150 with Canada for the interdiction of contraband in the north Indian Ocean area. Otherwise, the Indian Ocean is considered a relative backwater by the political leaders of the country.

It was only in 1978 that the government of Australia commissioned its west coast base for the Royal Australian

Navy (RAN), HMAS Stirling, at Garden Island, off Fremantle, Western Australia. The base is now the home of all *Collins*-class submarines, five *Anzac* frigates and a single fleet tanker. There is also a heliport to support helicopters assigned to the ships. Other resources, including the landing ships, air warfare destroyers, coastal patrol vessels and mine warfare forces would have to deploy from the east coast and northern areas to counter a major maritime threat in the eastern Indian Ocean.

The Royal Australian Air Force has three air bases, two of which are in a maintained but inactive status in the north coast area of Western Australia, and the other is a training airfield shared with the Republic of Singapore Air Force near Perth, which is on the southwest coast. Aside from two training squadrons, there are no dedicated combat, early warning, maritime patrol or cargo aircraft based in the region. In an emergency, such aircraft could be deployed from the eastern bases but there is little infrastructure to handle a significant increase in operations.

The Australian Army's Special Air Service (SAS) Regiment is based at Swanbourne, near Perth. This unit is a very experienced permanent force regiment. There is also the reserve 13 Brigade in Western Australia. The Pilbara Regiment, similar to the Canadian Rangers, is part of this formation and its purpose is to patrol the remote northwest and northern coasts of the country. In any emergency requiring resources beyond the SAS Regiment, the army



Fleet Base West, or HMAS Stirling, is Australia's west coast naval base, and was formally commissioned in 1978.



Credit: ABIS Kieren Whiteley, Royal Australian Navy

The Landing Helicopter Dock HMAS Canberra sails next to the Sri Lankan Navy Offshore Patrol Vessel Sayurala on 29 March 2019 during Indo-Pacific Endeavour 2019.

would have to deploy units and equipment to the region.

While there are definitely more assets located on the Indian Ocean side of the country than in the recent past, as noted, other naval, air force and most army resources would need to be deployed from the eastern half of the country to engage a major threat in the Indian Ocean area. The national blindness to Indian Ocean risks continues to be substantial. The government appears to consider the Indian Ocean to be benign, despite the fact that this is certainly an overly broad assessment of a vast area with many different elements. The long absence of an immediate threat has hidden the risk.

Australia would be wise to take another look at the Indian Ocean. The expansive nature of China's Belt and Road Initiative poses an emerging threat. The ongoing conflict between Pakistan and India is another continuing threat as both countries have economic and social ties to Australia. Whilst the Middle East conflicts seem never ending, the relations with Iran have deteriorated significantly in the past few years, and the illegal trade of drugs, weapons and other contraband thrives and constitutes a continuing threat.

The recent sailing of a task force consisting of the Landing Platform Dock HMAS Canberra, two frigates, an operational support ship, with embarked helicopters for an exercise in Sri Lankan waters appears to be an initial step to show a national interest in the security of the northern Indian Ocean area. But there is still work to be done to convince Australia to pay attention to its 'second sea.'

David Brewster has written an important paper that is a call to action aimed at the Australian government and the citizens of his country. Just as the Arctic Ocean has emerged as an important security issue for Canada, the Indian Ocean has likewise become a real security issue for Australia. 🇺🇸

Notes

1. David Brewster, "Australia's Second Sea: Facing Our Multipolar Future in the Indian Ocean," Australian Strategic Policy Institute, March 2019, Australia.

Ships, Sailors and Pawns

Ann Griffiths

There are a number of points of tension between Russia and Ukraine. I would like to discuss just one of them – the incident that occurred in November 2018 in the Kerch Strait. At the time of writing, 24 Ukrainian navy sailors have been held in a high security Russian prison for 150 days, and three Ukrainian navy ships have been in the hands of Russia for the same period. Russia shows no sign of giving either the sailors or the ships back. A new President in Ukraine may ease the situation, but that is yet to be determined.

The November 2018 incident that led to this state of affairs was not the first maritime incident in the Kerch Strait between Ukraine and Russia since the collapse of the Soviet Union in 1991. In October 2003 there was an 'incident' between Russia and Ukraine about an island in the strait. Russia claimed that the 1954 transfer of Crimea to Ukraine had only included the continental parts of Crimea, even though Tuzla Island had been administered by Crimea since 1941. Russia decided to build a dam from the peninsula on its side toward the island to, ostensibly, prevent erosion. It did this without consulting Ukraine, but the construction of the dam stopped exactly at the Russian-Ukrainian border. The dam led to an increase of the intensity of the stream in the strait and the deterioration of the island. To prevent this Ukraine decided to deepen the strait. On 21 October 2003 the border service of Ukraine arrested a Russian tugboat that had crossed the border of Ukraine to conduct surveillance of the island.

After this incident, a protocol was created and the ship was handed back to the Russian border authorities. Disputes about right of passage were resolved by the "Contract Between the Russian Federation and Ukraine on Cooperation in the Use of the Sea of Azov and Kerchensky Strait" which was ratified by both countries in early 2004. The Preamble to the 'contract' states that it is "[g]uided by the relations of friendship and cooperation between the peoples of Russia and Ukraine."



Сред: Совет министров Республики Крым (Council of Ministers of Crimea)

The Ukrainian gunboats *Berdyansk* and *Nikopol*, along with the tug *Yany Kapu*, remain in Russian custody after their capture in November 2018. This photo was published 27 November 2018 by the current head of the 'Republic of Crimea.'

According to the contract, vessels of both countries can freely access the Sea of Azov. Article 2 states:

1. Commercial vessels and warships, as well as other state vessels under the flag of the Russian Federation or Ukraine, exploited for non-commercial purposes, enjoy the freedom of navigation in the Sea of Azov and the Kerch Strait.
2. Merchant ships under the flags of third States may enter the Sea of Azov and pass through the Kerch Strait, if they are sent to the Russian or Ukrainian port or return from it.
3. Warships and other state vessels of third States, exploited for non-commercial purposes, may enter the Sea of Azov and pass through the Kerch Strait, if they are sent on a visit or business trip to the port of one of the parties on its invitation or resolution agreed with the other party.

Should there be a disagreement, Article 4 states that “[d]isputes between the Parties relating to the interpretation and application of this Treaty shall be settled by consultation and negotiation, as well as by other peaceful means at the choice of the parties.” Problem solved!

But then in March 2014, Russia helped itself to Crimea. Relations between Russia and Ukraine soured. The Sea of Azov agreement was still in force, but would Russia abide by it?

By taking Crimea, Russia now controls both sides of the Kerch Strait and access to the Sea of Azov. In May 2018, Russia opened a 19-kilometre bridge across the strait to connect Crimea to the mainland of Russia. Russian control of Crimea and the bridge have made it difficult for

Ukraine to access its major port, Mariupol, in the Sea of Azov. Russian authorities are inspecting and delaying – delays of several days are common – vessel traffic into and out of the Sea of Azov, which Ukraine has complained represents a virtual blockade of the port.

The situation simmered. Russia claims that tension increased in March 2018 when the Ukrainian coast guard seized a Russian-flagged fishing boat, in the Sea of Azov, accusing the crew of entering territory ‘under a temporary occupation.’ The crew was not detained but the captain was, although he was released in early April 2018. (Russia launched a criminal case against Ukraine’s State Border Service on charges of “hijacking an aircraft, watercraft or railway train” because of this incident.)

In September 2018 the Ukrainian Navy launched an operation to move a search-and-rescue ship and a tugboat from Odessa to Mariupol, the first Ukrainian Navy ships to the Kerch Strait since Russia annexed Crimea. The naval ships radioed their intention to enter the Azov Sea via the Kerch Strait as they approached, but did not request permission. This was purposeful, and a way of denying Russian control and asserting the Ukrainian claim. Russia did not hinder the ships’ passage and they reached Mariupol. It is possible that Russia had not expected the Ukrainian operation, and so decided to allow the ships through.

But Russia was ready in November 2018. The incident on 25 November is now well known, although some details are still disputed. Ukrainian naval ships – artillery boats *Berdyansk* and *Nikopol* and tugboat *Yany Kapu* – attempted to complete a journey from the Black Sea port of Odessa to the Azov Sea port of Mariupol. As they approached the Kerch Strait, Russian coast guards ships accused the Ukrainian ships of illegally entering Russian territorial waters, and ordered them to leave. When the Ukrainians refused, citing the Russia-Ukraine treaty on freedom of navigation in the area, the Russian ships attempted to intercept them, and rammed the tugboat. When they tried to ram the gunboats, two Russian ships collided, and one was damaged. The Ukrainian vessels continued their journey, stopping near the anchorage waiting zone, about 14 kilometres from the bridge, where they remained for the next eight hours. During this time, the Russians placed a cargo ship under the bridge, blocking the route into the Sea of Azov, and scrambled two fighter jets and two helicopters to patrol the strait. In the evening, the Ukrainian ships turned back to return to Odessa. As they were leaving the area, the Russian coast guard pursued



Credit: Міністерство оборони України (Ukrainian Ministry of Defense)

An annotated infra-red image captured by one of the Ukrainian gunboats during the 25 November 2018 Kerch Strait incident shows the tug *Yany Kapu* (left) in physical contact with the much larger Russian Federation Coast Guard ship *Don*.

them, later firing on and capturing the Ukrainian vessels about 23 kilometres off the coast of Crimea, in international waters.

Ukraine naturally complained. The Ukrainian government said it had informed the Russians of the planned passage through the Kerch Strait in advance. The ships had established contact with a Russian coast guard outpost and communicated their intention to sail through the Kerch Strait.

The Russian Federal Security Service (FSB) said it had incontrovertible proof that Ukraine had orchestrated this incident as a 'provocation.' The FSB said that Ukraine had not followed the official procedure required for passage through the strait – i.e., the port authority in Kerch should be informed 48 and 24 hours in advance, with an official confirmation four hours before the passage. It also said the Ukrainian ships had been manoeuvring dangerously and intentionally ignored FSB instructions in order to stir up tensions. Russian President Vladimir Putin said the incident was a deliberate attempt by Ukrainian President Petro Poroshenko to increase his popularity ahead of the Ukrainian presidential election in March 2019.

The three Ukrainian naval ships and the 24 crew members – six of whom were injured – were taken to Crimea. On 30 November, the crew members were transferred to Moscow and are being held in Lefortovo, a high security prison, while they await trial. They were charged with illegally crossing the Russian border. A conviction could lead to a six-year prison sentence.

If we ignore the propaganda coming from both sides, there

are several points that should be emphasized about this incident. I am certainly not an expert in international law, but it seems clear that Russia has broken a number of accepted international norms. First, both sides agree that Russian forces seized the Ukrainian naval ships while they were returning to Odessa and in international waters. Second, as already noted, Russia and Ukraine have an agreement that says that warships enjoy freedom of passage through the strait and into the Sea of Azov, and that any disputes will be settled peacefully.

Third, the Russian actions fit the definition of aggression as outlined by the United Nations. Paragraphs (c) and (d) of Article 3 of the 1974 Definition of Aggression, United Nations General Assembly Resolution 3314 (XXIX) state:

Article 3

Any of the following acts, regardless of a declaration of war, shall, subject to and in accordance with the provisions of article 2, qualify as an act of aggression: ...

(c) The blockade of the ports or coasts of a State by the armed forces of another State;

(d) An attack by the armed forces of a State on the land, sea or air forces, or marine and air fleets of another State; ...

Fourth, there are a number of elements of the UN Convention on the Law of the Sea (UNCLOS), to which both states are party, that Russia contravened. Even if we accept that the waters are Russian as Russia claims – and Ukraine vigorously denies – Russian actions are contrary to the right of innocent passage protected in international



Credit: Ukrainian Navy

A large hole on the side of the Ukrainian gunboat *Berdyansk's* superstructure illustrates the violent character of the 25 November incident.

law. Article 17 of UNCLOS states that “ships of all States, whether coastal or land-locked, enjoy the right of innocent passage through the territorial sea.”

Fifth, sovereign immunity of warships has long been recognized in both customary international law and international treaties. As well, domestic legislation about this has existed for many years – for example, the United States has recognized this since 1812. These norms are reflected in the UN Convention on the Jurisdictional Immunities of States and Their Property, and the International Convention for the Unification of Certain Rules Relating to the Immunity of State-Owned Vessels, in addition to UNCLOS.¹ Article 95 of UNCLOS states that “[w]arships on the high seas have complete immunity from the jurisdiction of any State other than the flag State,” and this is affirmed in UNCLOS Article 32. There seems to be no ambiguity in this. As well, if a vessel is sovereign immune, it cannot be required to consent to a search, and police and/or port authorities may only board with permission of the commanding officer.² Presumably the Ukrainian ships did not give permission to the Russians.

Sixth, assuming that Russia has control of the straits – which Ukraine denies – and if we ignore the fact that the Ukrainian ships were in international waters, according to UNCLOS, Russia still cannot simply seize the ships and crew. According to Article 30, “[i]f any warship does not comply with the laws and regulations of the coastal State concerning passage through the territorial sea and disregards any request for compliance therewith which is made to it, the coastal State may require it to leave the territorial sea immediately.” It does not say that you can seize the ships; you require them to leave.

And again assuming that the Ukrainian ships were in Russian waters, and this time ignoring sovereign immunity, that still doesn’t help Russia. Article 27 of UNCLOS limits the criminal jurisdiction a state has on board a foreign ship. Article 27 says that with a few exceptions (such as the crime extending into the state, the crime disturbs the peace, the assistance of local authorities is requested, or to stop drug trafficking), “[t]he criminal jurisdiction of the coastal State should not be exercised on board a foreign ship passing through the territorial sea to arrest any person or to conduct any investigation in connection with any crime committed on board the ship during its passage.” There are two other problems for Russia here. Article 27(2) says that the state can’t pursue criminal matters after the ship leaves internal waters, and 27(3) says that contact with consular or diplomatic agents must be facilitated.



Credit: Valentin V. Morozoff, Wikimedia

The pillars supporting the Kerch Bridge connecting Crimea with mainland Russia dramatically restrict the space through which vessels can enter the Sea of Azov.

What about the crew members? In addition to protesting their incarceration in the first place, Ukraine says that Russia is breaking the Geneva Conventions in its treatment of the crew members. Ukraine says they are prisoners of war, and should be treated as such – including regular visits by consular officials. They are still in jail after a motion by the Russian state to extend their detention until July.



Meng Wanzhou, the Huawei executive whose arrest by Canadian authorities is suspected of causing retaliatory arrests of Canadians by Beijing, is seen here with President Vladimir Putin at an investment forum in Moscow in 2014.

On 16 April 2019, Ukraine submitted an appeal to the International Tribunal for the Law of the Sea (ITLOS) about the incident. It wants the ships back and the crew released. Hearings are to be held in early May 2019. Perhaps President Putin will be amenable to discussions now that the Ukrainian presidential election is over since he regularly stated that President Poroshenko sent the naval ships purposely to provoke Russia and increase his chances of re-election. Ukraine now has a new President, which may help. And indeed, several days after the run-off election, Russia allowed three of the sailors to phone home.

Conclusions

This incident illustrates several things. It illustrates that people are becoming political pawns. In this case, the Ukrainian sailors are pawns in the game of chess being played between Russia and Ukraine (and the West). Rule of law doesn't matter – people are arrested not for breaking real laws but to send a message. Now that the presidential election in Ukraine is over, the political utility of the sailors may have ended, but we'll see. It should be noted that using people as pawns is not a game only Russia plays. Indeed, several Canadians have been in custody

in China almost as long as the Ukrainian sailors, as blow-back for Canada arresting a Huawei official on a US extradition request.

Another lesson from this incident, the more important one, is that international law is a fragile thing. It depends on the agreement of sovereign entities. If they withdraw their agreement, then unless other states act to bring them into line, the law becomes hollow. Other states see that they too can do what they want without repercussions. Since 2014 Russia has ignored a number of international laws/norms, with few repercussions. Yes, there have been sanctions but, just in terms of this incident, the Ukrainian sailors remain in a Russian jail and the Ukrainian navy ships remain in Russian possession.

International law has always been built on uncertain foundations, but the foundations seem shakier now. Are we returning to a time when international law was something you followed when it suited your purpose, but not when it didn't? This, of course, primarily applies to strong states because they can get away with it. Russia does what it wants in Crimea and the Kerch Strait because it can. China does what it wants in the South China Sea because it can. The United States protests but its protests have become less and less credible because no one believes that when push comes to shove, it will act to force Russia to follow the rules. And the United States has also ignored international law when it is inconvenient.

Several thousand years ago, Thucydides wrote the Melian Dialogue in his account of the Peloponnesian War. In this dialogue he portrayed a world to which we seem to be returning when he wrote “the strong do what they can, the weak suffer what they must.” 🍷

Notes

1. The Fletcher School of Law and Diplomacy, *Law of the Sea: A Policy Primer*, “Chapter 5: Sovereign Immunity,” 2017, available at <https://sites.tufts.edu/lawofthesea/chapter-5/>.
2. *Ibid.*

‘Future-proofing’ the Type 26 Frigate

David Dunlop

The process of choosing the winning design for the Canadian Surface Combatant (CSC) has been long and arduous. Now that the Lockheed Martin/BAE consortium has won the contract to design the Type 26 CSC, it is time to debate what weapons and sensor requirements and capabilities will provide Canada and the Royal Canadian Navy (RCN) with the best bang for the buck on these 15 8,000-ton frigates over the next decades. These frigates will be nearly 50 per cent larger than the *Halifax*-class frigates and nearly as large as most modern destroyers. Designed



to be multi-modal and versatile, the Type 26 frigate is equipped with a reconfigurable mission bay for light boats, unmanned surface/aerial vehicles, and/or cargo containers. This will allow the vessels to be reconfigured depending on mission and requirements. *Leadmark 2050* is clear: while the CSC will undertake a variety of mission types, it will be designed primarily to operate in a high-end war-fighting environment. That makes sense since a ship designed to fight pirates and provide humanitarian assistance and disaster relief wouldn't fare well against modern anti-ship cruise missiles or torpedoes.

Operating in a high-end environment requires a Combat Management System (CMS) that tightly integrates the ship's weapons, sensors, communications and Tactical Data Links (TDLs) to allow it to defend itself, and take the fight to an adversary. This is especially true for air defence, as the nature of contemporary air threats means that the ship's crew may only have seconds to react to a missile coming over the horizon. The CMS 330 will be key to this task as it must gather and display data from the ship's sensors, activate active and passive countermeasures, and cue incoming threats to its weapon systems much faster than ever before.

There are three categories of air defence capabilities that the government must consider when deciding on the CSC Type 26 design: short- to medium-range; long-range; and ballistic missile defence (BMD). Having an effective short- to medium-range air defence capability is perhaps most important in terms of ship survivability. But being able to detect and engage threats at longer ranges will become just as important as threats become more advanced. So decisions made about the CMS now will have long-term effects down the road. Missiles such as the Evolved Sea

Sparrow missile, with ranges of around 50 kms, will likely form the main defence of the CSC's short- to medium-range air capability, so having a CMS that works well with it will be critical. Lockheed Martin (LM) Canada's CMS 330 is already integrated with the Evolved Sea Sparrow in mind.

In terms of providing a long-range air defence capability, things get more complicated. Two of three systems on offer (CMS 330 and 9LV) have not yet been integrated with long-range air defence missiles such as the SM-3 or SM-6 RIM-174 Extended Range Active Missile (ERAM) with ranges of over 150 kms. The RCN's needs dictate what systems are required, given the importance of long-range air defence in the CSC and area-air warfare roles that the government has already stated the Type 26 must fulfill. That is not to say longer-ranged missile systems cannot be integrated into the CMS 330, however system integration is a complex process and additional integration increases the risk of cost over-runs and delays. The Australian Type 26 faced the same problem. Australia's solution was to combine its 9LV/CEAFAR radar combination with the US Navy's Aegis CMS to facilitate the integration of future US missile systems to give the Australian Type 26 frigate a greater long-range air defence capability. By doing this, Australia is hedging the future viability of its frigates on the continued ability of the USN to be on the cutting edge of naval weapons and sensors technology. Having Aegis CMS along with the 3D SPY-1D (V) S band long-range radar on its Type 26 ships reduces the burden (and cost) of integrating future US weapons systems and sensors into the Royal Australian Navy's CMS architecture.

The Canadian government must think carefully about its approach to 'future-proofing' the CSCs to ensure that they can be upgraded as cost-efficiently as possible if it wants to include a sea-based BMD capability. Currently, the United States, Australia, Spain and Japan are the only four countries with an effective sea-based BMD capability to track and engage theatre ballistic missiles using a special configuration of the Aegis CMS, the SM-3/SM-6 missile system and the MK 41 Vertical Launch System (VLS). If Aegis BMD is included in the Type 26 CSC to complement either the UK Type 997 Artisan 3D search radar, or if a 3D version of the SPY-1 radar system is acquired, Canada will then be able to lessen future integration costs through collaboration with all four Aegis BMD allies. If Aegis BMD is not included, Canada would then be responsible for integrating future weapons systems and sensors into its CMS architecture which has the potential



The Australian version of the Type 26, the **Hunter**-class, features the domestically-produced CEAFAR 2 phased-array radars combined with the American Aegis Combat Management System.



Credit: US Navy

USS John Paul Jones fires an SM-6 missile on 19 June 2014, during a series of live-fire tests. The SM-6 is the latest variant of the Standard Missile family, designed to receive guidance data from external sensors to enable the missile to engage targets well beyond the launch vessel's own sensor range.

of increasing cost. Given the nature of threats the CSC is likely to face in the future, careful deliberation is required when deciding which CMS best meets Canada's short- and long-term requirements.

The incoming missile risk profiles associated with the LM/BAE CMS 330 are likely to be important factors in positioning the CSC Type 26 for future upgrades. Judicious planning should ensure that Canada is able to field an effective, upgradeable CSC that can fulfill the government's requirements now and in the future. A part of this would be that the government should reconsider the decision made by Prime Minister Paul Martin in 2005 not to join the US BMD program. If this decision is reversed, the Canadian government must then restart discussions with the Americans about the possibility of participating in continental and naval BMD systems. Canada remains largely alone among its major allies in not directly participating in some form of BMD.

The MK 41 VLS could be reconfigured from 24 to 48 or even 64 cells to accommodate a precision strike and BMD capability. The \$61 billion (CAD) allocated for the Type 26 build and equipment acquisition will ensure the RCN gets the best bang for the buck enabling a more robust anti-air warfare MK 41 VLS with a BMD capability along with

an Aegis-style platform as recommended to the government by the Senate Committee on National Defence in May 2017.¹ The first four Type 26 frigates could very easily have this extended anti-air warfare capability incorporated into their design.

While the CSCs will be based on the British design Type 26 Global Combat Ship, systems and capabilities will be tailored to Canadian requirements, a process which will ultimately produce a uniquely Canadian ship. Although the armament, sensors and combat system fitted to the Type 26 CSC will differ in some respects, there will still be significant commonality of components coming from the UK's *City*-class design, especially the propulsion system, main gun, close-in-weapon system, sonar systems, Type 997 Artisan 3D medium/long-range S band search radar (if the SPY-1 S-band radar system is not fitted) along with secondary X/I band radars. Updated extended-range Harpoon Block II+ ER surface-to-surface missile silos may also be fitted, although the SM-6 RIM-174 ERAM will also have a surface-to-surface missile mode.

Like the ship's weapons systems, the CSC's sensor suite on the Canadian variant remains to be determined, however a mandatory requirement for the Canadian platform is a fixed-phased array radar. What will remain unchanged is the ship's acoustically quiet hull, an essential feature for the kind of anti-submarine warfare on which the RCN has focused since the Second World War. The ship will also have an advanced sonar system with a towed array system for tracking submarines. In the realm of submarine detection and warfare, surface ships have long been enabled by helicopters. As such, the Canadian CSC will possess an expanded flight deck capable of landing aircraft similar in size to the Boeing Chinook. The hangar/mission bay may be able to accommodate two Sikorsky CH-148 Cyclone aircraft, which are currently being delivered to the Canadian Armed Forces. Should Canada adopt the LM/BAE Type 26 Aegis BMD program as Australia has done with the USN, these three close allies would have superior interoperability and capabilities unmatched by any other allied states.

Procurement of these vessels into the RCN will likely take place throughout the next decade gradually replacing the *Halifax*-class which is slated for retirement in the early to mid-2030s. Once brought into service, the CSC will be the backbone of the RCN for a generation, serving well into the 2050s. If Canada is to gain the most value for money in a project the effects of which are planned to span more than 40 years from construction to full operation to disposal, it needs to make smart decisions from the beginning. The weapons and sensors applied to the Type 26 CSC frigate, combined with short/medium-range Evolved



Sea Sparrow missiles and long-range SM3/SM6 missiles, paired with an S-band 3D radar and Aegis BMD system, make sense. The Type 26 would then provide the RCN with a ship specifically designed to have the most effective anti-submarine warfare hull, considering noise signatures and sensor and weapon use, but also the clearest winner in anti-air warfare capabilities and ‘future-proofing.’ 🍷

Notes

1. Senate Standing Committee on National Security and Defence, “A Plan for the Future,” Eleventh Report, May 2017, Recommendation 15, p. 40.

China and Antarctica: A Lesson for Canada?

Brian K. Wentzell

China has indicated its interest in gaining access to the Canadian Arctic for alleged scientific research purposes. Before Canada approves such a request, it should study the Australian experience with China in Antarctica.

The Antarctic Treaty was signed in Washington on 1 December 1959 by 12 countries and entered into force in 1961. Australia was an original signatory of the treaty. Today, there are 53 member states. The People’s Republic of China joined the treaty in 1983 and attained full consultative power status in 1985. Thus, China must adhere to all of the provisions of the original treaty.

The core provisions of the treaty provide that: Antarctica shall be used for peaceful purposes only; that scientific research is freely permitted; and the results thereof shall be freely shared and available to other signatories. The treaty did not recognise any pre-existing territorial claims by any state and the conduct of scientific activities by any signatory state should not give rise to or be used to support any territorial claims. Military activities are not permitted and the use of military resources for peaceful purposes must be fully disclosed. Each signatory has the right to inspect facilities and activities of all treaty members in Antarctica.

China established bases in the Australia sector starting in 1985. There are now five research bases, each equipped with long runways, research facilities, accommodations and other infrastructure designed support long-term stays. Little is known about the scientific activities conducted by the Chinese.

Although many countries saw the possibility of mineral mining as a driver for Antarctic exploration, such extraction was banned by the Protocol on Environment Protection of 1991. Nonetheless, the scientific research activities



The third Chinese Antarctic research base, Great Wall, is pictured in this 2011 photo.

of China have increased. Clearly, China is interested in Antarctica for reasons other than mineral extraction. Since 2011, China has created two new bases, improved aviation capabilities and built a second icebreaker to support its activities. However, it has never declared its scientific research intentions, thus we have no way of knowing what it is researching. The most obvious reason is for military or security reasons – although we don’t know. This would likely explain why the country ignores the treaty requirement that the number and purpose of the military personnel at the premises be disclosed. It must be noted, however, that Australia has never exercised its treaty right to visit and inspect the Chinese bases. Is this a case of willful blindness on the part of the Australians?

There are suspicions that the Chinese are doing more than pure scientific research. Antarctica provides access to three continents – Australia, South America and Africa. The continent can provide a useful base for navigation and communications systems. As well, it provides training and research facilities for developing polar knowledge and skills that can be applied to the Arctic region. Hence, the Chinese concept of being a ‘near Arctic’ power is not totally without foundation.

Canada can learn from the Antarctic adventures of China. In my opinion, there is no good reason to grant a request from China to send a scientific mission into either Canadian Arctic waters or lands. Without any idea of what ‘research’ exactly the Chinese are conducting, it would seem ill-advised. China has already proved its disdain for Canada and its citizens through unmerited detentions of Canadian citizens, the exploitation of the Canadian political system and the arbitrary cancellation of canola imports from two Canadian suppliers. It is time for Canada to protect itself! 🍷