

Plain Talk: Is A/OPS an Acceptable Compromise?

Sharon Hobson

It's apparently full steam ahead for the navy's Arctic/Offshore Patrol Ships (A/OPS) now that the National Shipbuilding Procurement Strategy (NSPS) shipyard selections have been made. The question is, will the ice-capable vessels be adequate for the tasks the navy has been assigned?

Definition, engineering, logistics and management support contracts were awarded to BMT Fleet Technology in Kanata, Ontario, STX Marine Europe, and BAE in 2008, and the design and hull form have been tested and validated. Once the umbrella agreement for the navy's combat ships is negotiated and signed with Irving Shipbuilding, a contract to build the A/OPS will follow, likely in mid-2012 and first ship delivery is scheduled for 2015.

Briefings for the six to eight A/OPS which are to be acquired under a \$3.1 billion procurement program focus heavily on the Arctic role. But the ships will be required to operate off all three of Canada's coasts, so their capabilities have to be considered in regards to the Atlantic and Pacific Oceans, both of which experience regular and intense storms, as well as the ice-strewn northern waters.

The fleet of A/OPS will be tasked with providing presence, surveillance, response and control, and support to other government departments off of Canada's three coasts. Although the military's background documents say the ships will provide "armed, sea-borne surveillance of Canada's waters," they are not intended to counter a military threat. Rather they will be used in a constabulary role, and the threats envisioned include small-calibre guns and ramming by other ships. The ships will be fitted with a 25 mm gun and two 12.7 mm heavy machine guns.

For the first 15 years or so, the 5,730 tonne ships will deploy to the Arctic for four months a year, but then, in the longer term, as climate change causes the Arctic ice to melt, it is predicted that the ships will be able to deploy in the north for up to six months per year. The navy has increased the ships' ice capability from Polar Classification 5¹ – being able to operate in medium first-year ice (70-120 cm thick) including old-ice inclusions – to PC5+ with a PC4 bow which will allow year-round operation in thick first-year ice which may include old-ice inclusions.² The ships are to have an ice capability for their own mobility but will not provide icebreaking services to other vessels.

No one is expecting the ships to provide a rapid response capability in the Arctic. Ice conditions and extreme distances will impede and complicate any ship

movements. And things may get worse before they get better. Environment Canada's Canadian Ice Service is predicting that climate change will mean *more* ice in the Canadian Arctic for the next 10-15 years, only after this will it begin to decrease.

The Canadian Navy is moving back into the Arctic after an absence of about 50 years. Although aided by exercises in the north over the past 10 years, its corporate knowledge of that environment is limited so it is therefore relying on the Canadian Coast Guard (CCG) for help. As others have noted in this issue, charting is a major challenge because most of the charts were plotted before Global Positioning Systems (GPS) were widely used. GPS is becoming the primary navigational system, and it has been noted that even areas that have been charted may vary significantly from the GPS readings. The charts need to be updated using the more precise GPS systems. That takes time, operational resources and money.



The helicopter-carrying patrol ship KV *Nordkapp* in Adventfjord, Spitsbergen, is one possible model for Canada's Arctic/Offshore Patrol Ships.

Because there will be no support infrastructure in the Arctic for the ships other than what will be provided by the naval berthing and refuelling facility at Nansivik on Baffin Island, the A/OPS must have a high degree of system redundancy and self-sufficiency. The distances to be travelled in the north are breathtakingly long: Halifax is closer to London, England, than it is to Nanisivik (2,741 nm vs 2,805 nm) and Esquimalt is closer to Tokyo than Nanisivik (4,196 nm vs 4,646 nm). The ships will have an endurance of 6,800 nm at 14 knots transit speed – a distance that is not enough according to the CCG – but the navy expects that the distance can be increased if the speed is reduced to 10 knots.



Credit: Cpl Rick Ayer, Formation Imaging Services, Halifax

HMCS *Summerside* deploys a rigid-hull inflatable boat to take members of the Canadian Rangers ashore during *Operation Nanook* 2011.

According to documents acquired by the Canadian Press, the navy is concerned about how it will get fuel into Nanisivik to be used to refuel the A/OPS. The options include hiring a commercial tanker or asking the US Navy for help.³ Regardless of the route, the cost has to be factored into the A/OPS annual operating budget. In addition, operating costs for the A/OPS will also be higher when they patrol off Canada's Atlantic and Pacific coasts because of the hull form and the added weight of the ice-strengthening. In order to provide capability in the north for four months of the year, the ships will consume more fuel and travel more slowly the other eight months. With a top sustained speed of only 17 kts (reduced from the 20 kts that the navy originally wanted), the ships will be limited in their ability to engage in any kind of pursuit. Instead the navy will have to rely on intelligence gathering to pre-position the ships which will then use their helicopter and fast rigid-hull inflatable boats to interdict any illegal activity.

Department of National Defence Deputy Minister Robert Fonberg referred to the A/OPS as "Frankenboats" (although I suspect he wishes he had never said that out loud) and he is right. These are compromise vessels, combining various reduced capabilities to fulfill a variety of roles in a variety of extreme conditions, for a price the taxpayer can afford. Compromises such as this rarely make everyone happy.

But the question is, will the ships do enough of everything to meet the navy's assigned tasks? Commodore (retired) Eric Lerhe thinks they will. He argues that they are more capable in equipment and size than the Maritime Coastal Defence Vessels (MCDVs), and the MCDVs have already done "a sterling job" off the coast addressing illegal activities, logging problems and fishing violations. The A/OPS will be more capable, and they will carry "a big honking

helicopter" at times, which will greatly expand the ships' surveillance capabilities.⁴ The limitation, of course, is that there will likely be only six ships, not eight.⁵

While the A/OPS have been referred to as 'corvette-sized' vessels, they are actually quite substantial. At 5,730 tonnes, they are bigger than the *Halifax*-class frigates and the *Iroquois*-class destroyers. Not only will they be able to negotiate a route through the icy waters of the Arctic, but they will be sturdy enough to provide decent seakeeping capabilities in the rough seas of the Atlantic and Pacific. Lerhe thinks that the A/OPS are the right ships given the budgetary expectations of the Canadian Forces and the government's emphasis on Arctic development.

Perhaps the usefulness of these ships will be limited not so much by their inherent capabilities but by the navy's budget. In recent years, as the navy found itself straining to live within its financial and personnel budgets, it tied up some of its MCDVs. With the operating costs of the A/OPS so much higher than the current fleet of offshore patrol vessels, it's possible that the navy will look to save money by reducing patrols of the new fuel-burning offshore patrol ships. 🇨🇦

Notes

1. Classification from the International Association of Classification Societies.
2. Given that the PC4 rating is more robust than PC5, perhaps the classification should have been PC5- or PC4+, rather than PC5+ which would more properly indicate a lesser ice capability than PC5.
3. Canadian Press, "Canadian Forces May Need US Help Supplying Arctic," 14 November 2011, available at www.cbc.ca/news/canada/story/2011/11/14/pol-military-arctic-supplies.html.
4. Phone conversation with the author, 1 December 2011.
5. In testimony before a Senate committee, even the project officers were not optimistic about being able to afford the 7th and 8th ships. See, Standing Senate Committee on Fisheries and Oceans, 27 October 2009.

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