

This picture shows an Iraqi Navy OPV. Such vessels are increasingly required to perform a diverse array of missions, from protecting a nation's coast against traditional threats to counter-insurgency operations, a trend which is mirrored in the Asia-Pacific © US Navy



GUARDING THE COASTS

Somewhere between economic constraints and the significant increase of non-traditional threats in littoral regions and on the high seas, the market for Offshore Patrol Vessels (OPVs) has found a lucrative new sector involving Asia-Pacific navies and coastguards.

by **Dr. Alix Valenti**

“The motto of the coastguard at that time was, ‘You have to go out, but you don’t have to come back,’” Andy Fitzgerald told the *Boston Globe* newspaper during an interview in November 2014. Mr. Fitzgerald is the last surviving member of the US Coast Guard (USCG) team that rescued 32 crew members from the SS *Pendleton*, an oil tanker, from 18 metre/m (60 foot/ft) waves using a wooden boat south of Cape Cod, off the Massachusetts coast in February 1952. As Disney Studios prepare to release *The Finest Hours*, the movie telling the

story of this incredible event, the storm of geopolitical events that has washed over the world’s oceans during the intervening sixty years has drastically changed the role and capabilities of the coastguard.

From the creation of Exclusive Economic Zones (EEZ) in 1982 via the United Nations Convention on the Law of the Sea, which stretch 200 nautical miles/nm (370.4 kilometres/km) from a nation’s coastline, to the stark increase in maritime piracy and humanitarian crises witnessed in the Asia-Pacific and elsewhere over the past two decades, coastguards around the

world now play a major role coordinating with navies to respond to an increasingly wide variety of non-traditional threats. Accordingly, naval and coastguard capabilities have also evolved with the adoption of multi-mission vessels that “can provide the capability for every day maritime patrolling,” says Matthew Caris, a senior associate at Avascent, a consultancy based in Washington DC. These multi-mission vessels include OPVs which are themselves becoming rising stars, especially in the Asia-Pacific where they provide an ideal solution to the People’s Republic of

China's (PRC) growing maritime and territorial assertions in the South and East China Seas.

Alongside the traditional missions performed by coastguards and smaller navies such as search and rescue and maritime security enforcement, these vessels are increasingly designed to perform a much wider spectrum of missions, says Philippe Darche, marketing manager for OPVs and corvettes at DCNS. These missions include "maritime traffic control; protection of fisheries, marine environments and offshore resources; humanitarian assistance, anti-piracy, illegal immigration and counter-narcotics."

In the Asia-Pacific region the PRC's growing military power has significantly contributed to the rising popularity of the OPV. A number of countries currently have maritime sovereignty disputes with the PRC, including Japan concerning the Senkaku/Diaoyu Islands in the East China Sea (also disputed by Taiwan), the Philippines over the Scarborough Shoal (also claimed by Taiwan) in the South China Sea, and Vietnam regarding the Paracel Islands (also claimed by Taiwan) and the Spratly Islands (a dispute which involves Malaysia, the Philippines, Taiwan and Vietnam). Yet, with the possible exception of Japan, few of these other nations can afford to build strong blue-water navies which could effectively counter the People's Liberation Army Navy. Locked within a debate of "capacity versus availability", says Mr. Caris, "many countries choose to maintain a presence in the contested waters with smaller ships." He continues that OPVs provide an ideal solution to this dilemma, as they are "cheap to buy and operate, are equipped with off-the-shelf systems and do not require large crews, but can still carry helicopters, boats and are built to accommodate further upgrades," such as the addition of surface-to-air and anti-ship missiles and larger calibre guns compared to the 76mm weapons that usually equip these vessels from the outset.

Statistics published in 2015 in the *Global Offshore Patrol Vessels Market Report 2015-2016* by Defence IQ, a consultancy and events company, highlighted the increasing demand for these vessels throughout the world and, more specifically, in the Asia-Pacific region. In 2015, the total number of OPVs on order increased by four percent worldwide compared to 2014, of which the Asia-Pacific claims the largest share with 46 percent of the total vessels on order. Whilst until



The RNZN's HMNZS Otago is one of the two 'Protector' class OPVs built by BAE Systems which are tasked with a diverse mission set. These vessels also have the capability to work in the Antarctic © RNZN

recently India, Japan and the PRC were the biggest operators of OPVs the remainder of this article demonstrates that the OPV market has a long life ahead.

Australia

Australia's Force 2030 strategic defence policy, outlined in both its 2009 and 2013 Defence White Papers, intends to turn the Australian Defence Force (ADF, which includes the country's navy, army and air force) into a key player in regional and international security. Project Sea 1180, to this end, aims to "realise potential operational efficiencies and reduced cost of ownership of (the Royal Australian Navy's) patrol boat, hydrographic and Mine Countermeasures (MCM) forces." The White Papers envisage that this will be achieved by replacing the current 26 specialist role vessels, including the 'Armidale' class patrol boats, the 'Huon' class MCM vessels, the 'Leeuwin' class hydrographic survey ships and the 'Paluma' class of hydrographic survey launches into a reduced force of about 20 modular multi-role Offshore Combatant Vessels (OCVs).

Originally intended to begin in 2020, the Sea 1180 OCV acquisition project has been brought forward by two years, with construction of the first OCV estimated to begin in 2018. The entire programme is expected to cost up to \$5.8 billion ac-

cording to *The Diplomat*, an international current affairs magazine. The programme will be subject to a competitive evaluation programme, and although little information is currently available regarding the potential competitors, Esther Benito Lopez, a Navantia spokesperson, indicated that "Navantia will participate in the Australian OCV programme". It appears that Navantia's 'Avante' class OPV is currently the favoured design, according to local media reports, which includes three different patrol boat designs, the Avante 3000 BAM, Avante 2000P and Avante 1400. Aside from their displacement, indicated in their names, the key features that differentiate these designs are their capacity and weapons. The Avante 3000 can accommodate a naval support helicopter as well as Unmanned Aerial Vehicles (UAVs), habitability modules and anti-pollution equipment. In terms of weapons, the Avante 2000P has more additional options than the two other vessels, including a vertical launcher for Surface-to-Air Missiles (SAMs), and two quadruple launchers for Surface-to-Surface missiles (SSM) plus two torpedo launchers. In the meantime, as the Sea 1180 OPV acquisition project accelerates, on 31 August 2015 Austal Australia delivered the eighth and last 'Cape' Class Patrol Boat (CCPB). The CCPB's main mis-



The US Coast Guard continues to remain as a major maritime force not only in North America, but worldwide. Its assets include the USCGC Sherman, a USCG high endurance cutter which is based in Honolulu, Hawaii © USCG

sion is security and surveillance within Australia's EEZ, and as such the vessels are equipped with high-end surveillance and navigation technology.

India

Much like its Australian counterpart, India's Prime Minister, Narendra Modi, has been encouraging an increased maritime presence in the Asia-Pacific, a policy that has been driving up defence spending in an effort to modernise the Indian armed forces, including the Indian Navy. To this end, Goa Shipyard Limited was awarded a contract worth \$274 million in May 2012 to build six OPVs for the Indian Coast Guard. The first vessel, *Samarth*, was commissioned on 10 November 2015. It displaces 2450 tons, and is fitted with an Ordnance Factories Medak Close Range Naval-91 30mm gun.

New Zealand

In common with its Australasian neighbour (*see above*) New Zealand has also been outlining its future defence policy and acquisition goals via its Strategic Plan 2015-2020 published in July 2015. Within this strategic plan, the Royal New Zealand Navy (RNZN) highlights the importance of New Zealand as an island nation reliant on maritime trade for economic prosperity, and the importance of maintaining a fleet that can ensure security and safe passage within sovereign waters, as well as protect the country's EEZ, which is approximately 15 times bigger than the country's land area. Within this

context, the two 'Protector' class OPVs built by BAE Systems for the RNZN, HMNZS *Otago* and HMNZS *Wellington*, have played a major role in undertaking patrol and surveillance, as well as supplying and supporting long range operations since their delivery in February and June 2010 respectively.

Designed to patrol both the Antarctic and Pacific Oceans, perhaps one of the most important feature of these two OPVs is their ice-strengthened hull. In addition to this key feature, these vessels can carry and launch their own boats, with a capacity for two Rigid-Hulled Inflatable Boats (RHIBs), two Special Forces RHIBs and six 45-person inflatable boats. They also feature a flight deck which can accommodate a RNZN Kaman SH-2G Super Seasprite naval support helicopter. In terms of weaponry, the 'Protector' class are equipped with a remotely-operated Rafael Advanced Defence Systems' Typhoon 25mm naval gun, and two General Dynamics/US Ordnance M2HB Browning 12.7mm machine guns.

Since their delivery, the two vessels have carried out a number of successful missions, including fishery protection for Tonga, the Cook Islands and Rarotonga. As such, in its Strategic Plan 2015-2020 the RNZN has announced that it will be procuring a third OPV. No details have yet been revealed as to the main contractor, although it can be assumed that it is likely to be BAE Systems. The author contacted BAE Systems for comments, but has to date received no reply.

Taiwan

As growing Chinese military power continues to threaten countries in the Asia-Pacific region, Taiwan is continuing with its 37-ship programme aimed at boosting the capabilities of the country's Coast Guard Administration (CGA). Taiwan has been involved in sovereignty disputes with PRC (*see above*). However, defence budget limitations, combined with geopolitical constraints imposed by the PRC on Taiwan's allies regarding the procurement of defence equipment, make it difficult for the small island to build a strong blue water navy.

As such, OPVs represent an ideal alternative for Taiwan, and form the core of the 37-ship programme for the CGA, with nine OPVs as well as 28 'PP 10051' class patrol boats earmarked for construction. The programme was initiated in 2008 and expected to cost \$782 million, with five OPVs having already entered service between 2013 and 2015. In June 2015, two 3000-ton OPVs, the *Yilan* and *Kaohsiung*, were commissioned, and while one will be sent to the South China Sea, to deploy from Taiwan's Taiping island, the other will be in service in the waters north of Taiwan. According to local media sources, each vessel is armed with two 20mm and one 40mm gun.

Thailand

Like its neighbours in the region, Thailand's economy depends significantly on maritime trade and, consequently, is also significantly affected by the rise in piracy

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DCNS' 'Gowind' class of corvettes and offshore patrol vessels could increase its appeal in the future to Asia-Pacific customers beyond those vessels which have been ordered to equip the Royal Malaysian Navy © Thomas Withington

that the past two decades have witnessed in the Strait of Malacca. As such, to improve patrolling over sovereign waters, as well as to facilitate search and rescue missions and disaster relief in a region that is increasingly affected by extreme weather catastrophes, the Royal Thai Navy (RTN) is looking to increase its fleets' capabilities. Yet budget constraints remain an important issue for a country that is slowly recovering from a number of political crises in recent years, and OPVs, with their modular yet cheaper design, provide a good solution for the RTN to meet these strategic objectives.

Currently, the RTN's fleet includes seven OPVs, and BAE Systems announced in early November 2015 that it had entered a partnership with its Thai industrial partner, Bangkok Dock, for the design of a new 90 metre/m (295.2 foot/ft) OPV. This partnership is based on the transfer of design knowledge, technology and skills from BAE Systems to Bangkok Docks, for the construction of a second 'Krabi' class OPV. The design of the first, HTMS *Krabi* which was commissioned in August 2013, was based on the Royal Navy's three 'River' class OPVs. The 'Krabi' class design is armed with an OtoMelara 76mm Super Rapid gun as well as an MSI 30mm dual feed cannon, with a sensor fit which includes a Thales Variant naval surveillance and Lirod Mk.2 fire control radar. Subject to availability of funding, Defence IQ's

report cited above indicated that Thailand is considering building another four OPVs at some undisclosed point in the future.

Vietnam

Much like Taiwan, Vietnam has long been involved in maritime sovereignty disputes with the PRC, and since 1974 the relationship between the two countries has been characterised by conflicting sovereignty claims over the Paracel and Spratly Islands (*see above*). Consequently, much like its neighbours, Vietnam is enhancing the power of its navy and coastguard in order to counter the PRC's claims in these contested waters. Moreover, Vietnam has also been witnessing an increase in the number of pirate attacks in its waters, and it has become imperative for the country's economy to increase surveillance and security off its coast so as to protect commercial shipping.

To this end, local shipbuilder Song Thu Shipyard Corporation has been working, with the technological support of its Dutch partner Damen, on building new 'DN2000' class OPVs. These vessels can displace up to 2400 tons and are 90.5m (296.9ft) in length. They can accommodate a Kamov Ka-28 naval support helicopter and operate in the open sea for 40 consecutive days. Coastguard vessel 8005 was launched on 30 November 2015, and is the second of six such ships ordered

by the government with the intention of building a powerful Vietnam Coast Guard Force by 2020.

The increasingly extensive and unpredictable nature of both traditional and non-traditional threats makes it necessary for navies and coastguards in the Asia-Pacific to be able to work with, or instead of, one another in a variety of environments. "As global trading increases in these parts of the world, the region also becomes vulnerable to maritime crises," confirms Mr. Darche, a viewpoint also shared by Mr. Caris. Consequently, "the objective here is to be able to address asymmetric threats," Mr. Darche continues.

Lena Pellebergs, head of communications for Saab in the Asia-Pacific, states that her company believes that the local OPV market could potentially follow two scenarios. Firstly, where navies' budgets do not allow for the procurement of new vessels with frigate-style capabilities (i.e. which can support high intensity naval combat and project sea power around the world), Ms. Pellebergs argues that "more competent OPVs could be an alternative (to such vessels)." The second scenario could see demand for patrol capabilities that facilitate both littoral and open sea missions without offensive intentions: "OPVs are possible options to meet the open sea requirement if (they have a relatively light equipment specification)." A closer look at OPV programmes around the region confirms this speculation, as blue water navies such as those of Australia and New Zealand are increasingly also undertaking coastguard duties whilst countries with smaller navies such as Vietnam are equipping their coastguards with OPVs that are capable of carrying out some naval missions.

DCNS' 'L'Adroit' class OPV of the *Marine Nationale* (French Navy), for instance, has already been used in 2015 both for anti-piracy, as part of the European Union Naval Force's Operation ATLANTA in the Gulf of Aden, and rescuing several hundred Djiboutian citizens and foreign refugees from Yemen as that country's civil war intensified in April 2015. Ultimately, the successful future of OPVs, Mr. Caris argues, lies in their "designed for but not with" modularity that makes them appealing to navies and coastguards alike allowing them to be configured with an impressive number of weapons and sensors for the size of the vessel, and also to be upgraded with relative ease throughout their service lives. [AMIR](#)

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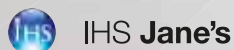
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