



ASIA OPV AND CORVETTE MARKET REPORT 2015

“The demand for corvettes in the Asian region outstrips every other region in terms both of numbers and operational requirements”

Asian Military Review

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The Asia Pacific region, and especially South East Asia, is one of the busiest sea channels in the world, with over 1000 vessels passing through the Singapore and Malacca Straits each day. There, both Navies and Coast Guards conduct a myriad of maritime operations, in a bid to enhance maritime security and maritime domain awareness.

In addition to protecting the exclusive economic zones (EEZs) of each country, a major security issue in the region is piracy. Although stories of piracy in the Gulf of Aden dominate western media, a report by the International Maritime Bureau (IMB) revealed that Asia accounted for around 75 percent of global maritime piracy and robbery incidents in 2014. Of 245 actual and attempted acts of piracy worldwide last year, 183 of those occurred in Asian waters. Given that a third of the world's oil supply passes through the region, regional countries have a strong interest in protecting trade routes

Consequently, interest in modernizing and expanding military capabilities is strong and growing. This is particularly the case as many developing nations in the region are already stretched to adequately protect and respond to incidents within their maritime territory. Today, the platform of choice to plug these capability gaps is offshore patrol vessels and corvettes, both of which are fitting the criteria for cost-effective high endurance platforms to protect force and enhance security.



Vital Information: OPVs

Offshore Patrol Vessels (OPV) usually displace between 1700 and 2000 tonnes. Such vessels are outfitted with good sea-keeping abilities to ride out most storms in deep water, and with excellent endurance and range.

An OPV requires space to embark a variety of equipment together with some medical facilities while another useful feature is a deck from which to operate a maritime support helicopter. Some may also require a good sonar to assist in the auxiliary task of hydrographic survey work, but a good air and sea surveillance radar is the primary sensor. A datalink is useful to exchange radar track data with other law-enforcement vessels, and some form of Combat Management System (CMS) for more efficient operations with other ships performing law enforcement is also desirable. This law-enforcement requirement means that the ship will usually employ a medium (40-76mm) calibre main armament augmented by smaller calibre (7.62mm-30mm) weapons.



Vital Information: Corvettes

Like OPVs corvettes are designed for operations against any threat either to an EEZ or to coastal waters. Because they are essentially ASuW (Anti-Surface Warfare) platforms with limited anti-air and anti-submarine capabilities they tend to have a more sophisticated radar than OPVs together with a CMS and some electronic warfare systems. They too tend to offer a high endurance, and usually have fuel-efficient diesel engines making them capable of higher speeds for rapid transit and manoeuvre.

Interest in corvettes has grown in the past couple of decades as it became clear that the fast attack craft had poor survivability vis-à-vis air attack. Their surveillance radars have a comparatively short range given the height of the vessel in water, reducing the search area and countermeasures reaction times while lacking a significant air defence system. The corvette provides a significant improvement in capability and survivability with better radar coverage, thanks to the height of the vessel in the water, and space for weapon systems such as SSMs and SAMs. These ships can even perform Anti-Submarine Warfare (ASW) by employing sonars and lightweight torpedoes.

Why OPVs?

- 1** **Critical transit areas and nodes** need to be protected continuously
- 2** Capable to **provide long range presence, surveillance and response in EEZs**
- 3** **High endurance** to spend extended periods at sea
- 4** Able to **support helicopter operations and multi-RHIBs launches**
- 5** **High operational flexibility**

OPV and Corvette Mission Capabilities



Maritime Security

- Anti-piracy/sea-robbery
- Counter – terrorism
- Maritime surveillance and interception



Maritime Search And Rescue



Maritime Law Enforcement

- Prevention of illegal immigration
- Enforce smuggling interdiction
- Enforce drug interdiction
- Enforce fisheries protection



Environmental Control

- Marine pollution enforcement and response
- Enforce adherence to legislation on fishery protection



Disaster Relief and Humanitarian Assistance



THAILAND



Royal Thai Navy	
Ship Type	No. in Service
'Chakri Naruebet' class aircraft carrier	1
'Knox' class frigate	2
'Naresuan' class frigate	2
'Modernised Jianghu' class frigate	4
'Ratanakosin' class corvette	2
'Tapi' class corvette	2
'Khamronsin' class corvette	3
'River' class offshore patrol vessel	1
'Pattani' class offshore patrol vessel	2
'Makut Rajakumarn' class offshore patrol vessel	1
'Hua Hin' class offshore patrol vessel	3
'PSMM Mk.5' class offshore patrol vessel	6
'Tor 991' class offshore patrol vessel	3
'Tor 994' class offshore patrol vessel	3
'M36' class offshore patrol vessel	3
'MBM-230' class fast attack craft	3
'FPB-45' class fast attack craft	3
'MV-400' class fast attack craft	3
'Cannon' class training ship	1
'Endurance' class amphibious support ship	1
'Normed PS-700' class tank landing ship	2
'Marsun M55' class utility landing craft	2
'Thongkaeo' class utility landing craft	4
'Mannok' class utility landing craft	3
'Similan' class replenishment vessel	1
'Jula' class replenishment vessel	1
'YOG-5' class replenishment vessel	1
'Prong' class replenishment vessel	1
'Proet' class replenishment vessel	2
'Matra' class replenishment vessel	1
'Chuang' class replenishment vessel	2
'MSC-289' class mine countermeasures vessel	2
'Thalang' class mine countermeasures vessel	1
'M48' class mine countermeasures vessel	2
'Gaeta' class mine countermeasures vessel	2
'Chan' class hydrographic vessel	1
'Sok' class hydrographic vessel	1
'Paruehasabordee' class hydrographic vessel	1
'Rin' class tug	2
'Samsan' class tug	2
'Klungbadan' class tug	2

OPVs

Thailand has a requirement for five OPVs, and is considering ordering a second 'Krabi' class ship, while it operates two 1463-tonne 'Pattani' class OPVs officially designated as corvettes.

The Thai Navy future plans include improve SSM & EW capabilities as well as the flight deck and hangar on their existing Krabi Class OPV.

CORVETTES

Thailand has two US-built 'Ratanakosin' class ships, which have surface warfare, ASW and air defence capabilities and three 'Khamronsin' class corvettes which are primarily ASW platforms. Bangkok appears to be more interested in new frigates than modernising the Royal Thai Navy's corvette force.



Caption: HTMS Krabi Class Offshore Patrol Vessel
 Source: By Saberwyn (Own work) [CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0/>)], via Wikimedia Commons



Indonesian Navy	
Ship Type	No. in Service
'Chang Bogo' conventional hunter-killer sub.	3 to enter service
'Cakra' conventional hunter-killer submarine	2
'Sigma' class frigate	2 to enter service
'Ahmad Yani' class frigate	6
'Bung Tomo' class corvette	3
'Diponegoro' class corvette	4
'Fatahillah' class corvette	3
'Kapitan Patimura' class corvette	16
'Mandau' class fast attack craft	4
'Todak' class fast attack craft	4
'Pandrong' class fast attack craft	2
'Clurit' class fast attack craft	4
'Sampari' class fast attack craft	3
'Andau' class gunboat	4
'Kakap' class gunboat	4
'Sibarau' class gunboat	8
'Boa' class gunboat	13
'Tripartite' class mine countermeasures vessel	2
'Kondor' class mine countermeasures vessel	9
'Makassar' class amphibious support ship	4

OPVs

In December 2014 Indonesia launched a new coastguard secure maritime borders and counter maritime security threats. In an interview with Reuters, Chief Security Minister, Tedjo Edy Purdijatno explained, "There are too many overlapping agencies that are not effective in securing the seas."

He went on to add that the government aims to boost defense spending from 0.8 percent to 1.5 percent of gross domestic product over the next five years, putting it on par with neighbors such as Malaysia

OPVs

Defence spending would be focused on weapons and technical know-how, from countries like South Korea and China, to domestically manufacture and eventually export equipment like submarines and missiles, according to Purdijatno.

"For example, after the first two ships or fighter jets are built outside, number three we can build in Indonesia," he said. "But it has to be for the domestic market first and then we export."



Caption: 'Bung Tomo' class corvette

Source: By Marwan Mohamad (Own work) [CC BY-SA 4.0 (<http://creativecommons.org/licenses/by-sa/4.0/>)], via Wikimedia Commons



CORVETTES

Due to Indonesia's size, the archipelago state operates a large fleet of 26 corvettes. The majority are former East German 'Parchim I' class which are unusual in being dedicated ASW platforms with hull-mounted sonar, augmented in some ships by variable depth sensors. They are armed with both anti-submarine torpedoes and mortars while many have replaced their Russian diesel engines with western designs, manufactured by German propulsion specialist MTU. The corvettes are augmented by three 'Fatahillah' class which also feature a strong ASW suite and four 'Diponegoro' class ships built by DSNS based upon their 'Sigma 9113' class design which are used largely for the surface warfare and ASW roles.

The 'Sigma' class family has been selected to meet Jakarta's Guided Missile Escort 105 requirement for 'light frigates' (in actual fact corvettes) which will be built domestically and for which steel on the first two was cut earlier in 2014. The new ships will be based upon the 'Sigma 10514' class design, and these 2400-tonne vessels will be optimised for ASW with the first of two scheduled to be laid in 2014 and to enter service in 2016. Nevertheless, it remains unclear as to how many are required.



Caption: KRI Diponegoro Class Corvette

Source: Mr Wim Kosten, www.maritimephoto.com via Wikimedia Commons



Royal Malaysian Navy	
Ship Type	No. in Service
'Perdana Menteri' class hunter-killer sub.	2
'Gowind' class frigate	6 on order
'Lekiu' class frigate	2
'Kasturi' class frigate	2
'Laksamana' class corvette	4
'Kedah' class corvette	6
'Perdana' class offshore patrol vessel	4
'Handalan' class offshore patrol vessel	4
'Jerung' class offshore patrol vessel	6
'Sri Tiga' class offshore patrol vessel	2
'CB-90' class fast attack craft	17
'Sri Indera Sakti' class replenishment vessel	1
'Mahawangsa' class replenishment vessel	1
'Mahamiru' mine countermeasures vessel	4
'Gagah Samudera' class training ship	2
'Hang Tuah' class training ship	1
'Perantau' class hydrographic ship	1
'Mutiara' class hydrographic ship	1
'Bunga Mas' class auxiliary vessel	2

GEOGRAPHY

4,490 km of coastline

614,000 sq km of MMZ

561 islands

60% of population live along the coast

SECURITY CHALLENGES

Encroachment by foreign fishing vessels in Malaysian waters

Smuggling of contraband

Human smuggling

Illegal immigration

TECHNOLOGICAL AND GEOGRAPHIC FACTORS

Easy access to boats, communications and navigational equipment, weapons.

Geographical features such as porous borders, long coastline, narrow straits and waterways provide a benign environment to criminals.



Caption: The Laksamana Muhammad Amin, part of the Eastern Sabah Security forces, cruising in Sandakan Bay

Source: © Cephoto, Uwe Aranas / , via Wikimedia Commons



OPVs

The Malaysian Maritime Enforcement Agency (MMEA) has a fleet of some 100 patrol boats of various sizes, including operates two 1300-tonne former Royal Malaysian Navy 'Langkawi' class OPVs. MMEA is reported to have an outline requirement for an unknown number of OPVs.

Malaysia's OPV capabilities are equally stationed in 3 regions – Lumut, Kuantan & Kota Kinabalu



CORVETTES

The Royal Malaysian Navy is targeting an operational entry date of 2019 for the first-of-class Second Generation Patrol Vessel - Littoral Combat Ship (SGPV-LCS), reports IHS Jane's Defence Weekly. Boustead Heavy Industry Corporation is building the 3,000-tonne SGPV-LCS in partnership with DCNS Group, whose Gowind corvette design is being used as the basis for the vessel.



Caption: Royal Malaysian Navy ship, the Kedah-class offshore patrol vessel "Pahang"

Source: By jimmyweee (IMDEX 2007: Malaysian ship Uploaded by russavia) [CC BY 2.0(<http://creativecommons.org/licenses/by/2.0>)], via Wikimedia Commons



PHILIPPINES



Philippine Navy

Ship Type	No. in Service
'Gregorio del Pilar' class frigate	2
'Datu Kalantiao' class frigate	1
'Pohang' class corvette	1
'Emilio Jacinto' class corvette	3
'Rizal' class corvette	2
'Miguel Malvar' class corvette	6
'General Emilio Aguinaldo' inshore patrol vessel	2
'General Mariano Alvarez' inshore patrol vessel	1
'Jose Andrada' class patrol boat	22
'Kagitingan' class patrol boat	2
'Tomas Batillo' class fast attack craft	6
'Conrado Yap' class fast attack craft	3
'Alberto Navarette' class inshore patrol vessel	2
'Bacolod City' class heavy landing ship	2
'LST-1/542' class heavy landing ship	2
'LCU Mk.6' class utility landing craft	3
'Mulgae' class utility landing craft	1
'Ang Pangulo' class presidential yacht	1
'Lake Mainit' class replenishment vessel	2
'Lake Buluan' class replenishment vessel	1
'Design 381' class replenishment vessel	1
'YTL-442' class hydrographic ship	2

GEOGRAPHY

7,000+ islands
Coastline - 36,000 kms

56% or 832 of the country's 1,495 municipalities and more than half of the 136 cities are situated along the coast.

SECURITY CHALLENGES

Risk of maritime accidents increased

Natural disasters (Average of 22 typhoons/ year)

Increase in maritime traffic (passenger, freight and vessel movements)

Aging domestic maritime fleet – Limited coastguard assets to respond

OPVs

The Philippines Coast Guard is planning the delivery of one 82m OPV in Q1 2015. The rationale behind this acquisition is the vessel's longer deployment period during calamities and disasters. It will also address a critical gap in all weather, high endurance vessels for maritime patrol and SAR operations.

CORVETTES

The Philippines, which has largely relied upon OPVs such as its three 'Jacinto' class ships and two recently-acquired 3300-tonne former United States Coast Guard (USCG) 'Hamilton' class High Endurance Cutters (known locally as the 'Gregorio del Pilar' class). It is now seeking two new frigates for the navy entering service in the second half of this decade.



CORVETTES

In January 2015 The Philippine Department of National Defense began seeking bids to upgrade One of the Philippine Navy's Jacinto class corvettes, the BRP Artemio Ricarte. IHS Jane's Navy International reports that, "the bidding process was restarted after a November 2014 attempt to award a tender fell through. The approved budget for the new upgrade phase has been set at PHP249,672,000 (USD 5.56 million)."



Caption: Royal Malaysian Navy ship, the Kedah-class offshore patrol vessel "Pahang"

Source: By jimmyweee (IMDEX 2007: Malaysian ship Uploaded by russavia) [CC BY 2.0(<http://creativecommons.org/licenses/by/2.0>)], via Wikimedia Commons



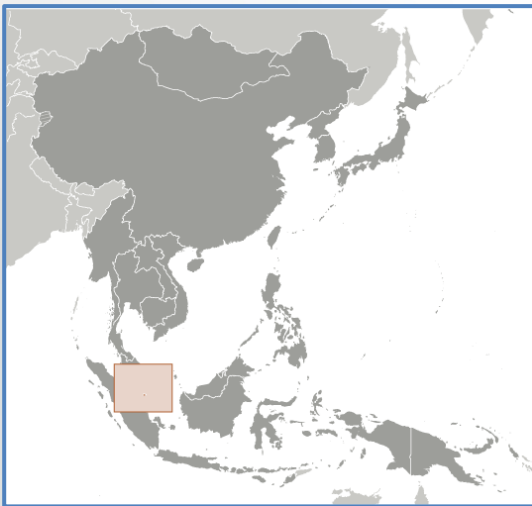
SINGAPORE



Republic of Singapore Navy	
Ship Type	No. in Service
'Challenger' class conventional hunter-killer sub.	4
'Archer' class conventional hunter-killer sub.	2
'Formidable' class frigate	6
'Victory' class corvette	6
'Fearless' class offshore patrol vessel	12
'Endurance' class amphibious support ship	4
'Landsort' class mine countermeasures vessel	4

CORVETTES

Singapore operates six 'Victory' class surface warfare/ASW corvettes, but they will be replaced on a one-for-one basis by the Littoral Mission Vessel (LMV) of which there are few details; yet.



Caption: 'Fearless' class offshore patrol vessel RSS Resilience on patrol around Singapore

Source: By VK35 [CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0/>)], via Wikimedia Commons



Royal Brunei Navy	
Ship Type	No. in Service
'Darussalam' class offshore patrol vessel	4
'Itjihad' class inshore patrol vessel	4
'TBD' class fast attack craft	1
'Waspada' class fast attack craft	3
'Perwira' class inshore patrol vessel	3
'Serasa' class mechanised landing craft	2
'Teraban' class utility landing craft	2
'Bendeharu' class inshore patrol vessel	3
PDB 0-1 class inshore patrol vessel	11
'FDB 512' class inshore patrol vessel	2

OPVs

Brunei operates four 1625-tonne 'Darussalam' class OPVs, the fourth of which was delivered in May 2014. They are the largest and most capable vessels in the Brunei Navy.

According to IHS Jane's Fighting Ships, the Darussalam-class vessels have a top speed of 22 kt and a standard range of 7,500n miles. The 80m ships displace 1,625 tonnes and are powered by two 11,400 hp 12V diesel engines.



Caption: Darussalam class offshore patrol vessel

Source: By Saberwyn (Own work) [CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0>)], via Wikimedia Commons



MYANMAR



Myanmar Navy	
Ship Type	No. in Service
'Kyan Sitttha' class frigate	2 pending
'Aung Zeya' class frigate	1
'Jianghu-II' class frigate	2
'Anawrahta' class corvette	3
'Osprey' class offshore patrol vessel	2
'Houxin' class fast attack craft	6
'5-Series' class fast attack craft	21
'Admirable' mine countermeasures vessel	1
'Hainan' class fast attack craft	9
'PGM-43' class inshore patrol vessel	6
'Y311' class inshore patrol vessel	1
'Y Series' class inshore patrol vessel	10
'Swift' class inshore patrol vessel	1
'Carpentaria' class inshore patrol vessel	6
'412' class inshore patrol vessel	4
'PB-90' class inshore patrol vessel	3
'PBR' class river patrol vessel	6
'Yan Naing' class river patrol vessel	11
'Michao' class river patrol vessel	25
'PCE' class river patrol vessel	4



OPVs

Myanmar has sought assistance from India in building OPVs and obtaining naval sensors. An agreement achieved during the July 2013 talks between Myanmar Navy Chief Vice Admiral Thura Thet Swe and Indian Navy chief Admiral Devendra Kumar Joshi called for the OPVs to be built at Indian shipyards. Training will be given to Myanmar's Navy officers and sailors at Indian naval facilities, although it has not been revealed when this will occur.

COASTLINE
1,930 km

MARITIME CLAIMS

Territorial sea: 12 nm

Contiguous zone: 24 nm

Exclusive economic zone: 200 nm

Continental shelf: 200 nm or to the edge of the continental margin



VIETNAM



Vietnam People's Navy	
Ship Type	No. in Service
'Kilo' class conventional hunter-killer submarine	2
'Gepard 3.0' class frigate	2
'Petya' class frigate	5
'Sigma' class corvette	2 pending
'Tarantul-1' class corvette	4
'Moiniya' class corvette	4
'BPS-600' class corvette	1
'Osa' class offshore patrol vessel	8
'Svetlyak' class offshore patrol vessel	6
'Turya' class offshore patrol vessel	5
'TT-400 TP' class offshore patrol vessel	3
'Sonya' class mine countermeasures vessel	4
'Yurka' class mine countermeasures vessel	2
'Yevgenya' class mine countermeasures vessel	2
'Giao su Vien si Tran Dai Nghia' hydrographic vessel	1
'K-122' class transport/logistics vessel	2
'HQ-996' class transport/logistics vessel	1
'Trường Sa' class transport/logistics vessel	7
'LST-542' class heavy landing ship	1
'Polnochny' class amphibious support ship	3
'HQ-521' class amphibious support ship	2





OPVs	CORVETTES
<p>No OPV requirements but IHS Jane's Navy International reports that The Vietnamese Coast Guard is looking to acquire new naval helicopters for its DN 2000 (Damen 9014-class) OPVs. "The acquisition of the helicopters will be part of Vietnam's effort to integrate aerial surveillance as a part of the coastguard's patrols," said Maj Nguyen. "This will significantly enhance our maritime operations."</p>	<p>Vietnam has been steadily expanding its corvette fleet from four 'Tarantul' class surface warfare/ASW ships to two 'Improved Pauk' class vessels and is acquiring up to ten 'Improved Tarantul' class ships, all of which are pure surface warfare vessels. Hanoi is also discussing the purchase of four 'Sigma 10514' class ships from the Netherlands' Damen Schelde Naval Shipbuilding (DSNS), of which two would be built in Europe and the other two in Vietnam.</p>



SOUTH KOREA



Republic of Korea Navy	
Ship Type	No. in Service
'Chang Bogo' class conventional hunter-killer submarine	9
'Son Wonil' class conventional hunter-killer submarine	9
'Dolgorae' class conventional hunter-killer submarine	2
'Dokdo' class amphibious support ship	1
'Go Jun Bong' class heavy landing ship	4
'Gwanggaeto the Great' class destroyer	3
'Chungmugong Yi Sun-shin' class destroyer	6
'Sejong the Great' class destroyer	3
'Ulsan' class frigate	9
'Incheon' class frigate	3 in service, 9 pending
'Pohang' class corvette	21
'Wonsan' class mine countermeasures vessel	1
'Ganggyeong' class mine countermeasures vessel	6
'Yangyang' class mine countermeasures vessel	1
'Chamsuri' class offshore patrol vessel	75
'Gumdoksuri' class offshore patrol vessel	15
'Cheonji' class replenishment vessel	3
'Chung Haejin' class replenishment vessel	1
'Pyeongtaek' class replenishment vessel	1
'Sincheonji' class hydrographic ship	1

 OPVs	 CORVETTES
<p>The Republic of Korea's (RoK) coast guard operates a large number of aging 'Chamsuri' class OPVs and is receiving a small expansion of some five modern vessels from the Hyundai shipyard, including a 3000-tonne OPV, although the date of their delivery has yet to be revealed.</p>	<p>The RoK will replace 22 'Po Hang' class surface warfare/ASW corvettes with 'Incheon' class frigates and additional 'Gumdoksuri' offshore patrol vessels (and this programme should be complete by the end of the decade).</p> <p>The RoK's Future Frigate Experimental (FFX) programme is intended to replace the aging fleet of existing 'Ulsan' class frigates and 'Pohang' class corvettes with new multi-mission frigates.</p>



Caption: Gumdoksuri class offshore patrol vessel Yoon Youngha (PKG 711) being launched.

Source: By Helznite (Own work) [CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0/>)], via Wikimedia Commons



Caption: Pohang class corvette, PCC-773 Buceon.

Source: By 대한민국 국군 Republic of Korea Armed Forces (2010. 3. 해군 PCC함의 일상 Rep. of Korea Navy) [CC BY-SA 2.0 (<http://creativecommons.org/licenses/by-sa/2.0/>)], via Wikimedia Commons



INDIA



Indian Navy	
Ship Type	No. in Service
'Chakra' nuclear-powered attack submarine	1
'Arihant' nuclear ballistic missile submarine	1
'Sindhughosh' conventional hunter-killer submarine	10
'Shishumar' conventional hunter-killer submarine	4
'Centaur' class aircraft carrier	1
'Kiev' class aircraft carrier	1
'Kolkata' class destroyer	1
'Delhi' class destroyer	3
'Rajput' class destroyer	5
'Shivalik' class frigate	3
'Talwar' class frigate	6
'Brahmaputra' class frigate	3
'Godavari' class frigate	3
'Kamorta' class corvette	1 in service, 3 to enter service
'Kora' class corvette	4
'Khukri' class corvette	4
'Veer' class corvette	12
'Abhay' class corvette	4
'Austin' class amphibious support ship	1
'Shardul' class tank landing ship	3
'Magar' class heavy landing ship	2
'Kumbhir' class heavy landing ship	4
'Pondicherry' class mine countermeasures vessel	7
'Saryu' class offshore patrol vessel	4
'Sukanya' class offshore patrol vessel	6
'Car Nicobar' class patrol boat	10
'Bangaram' class patrol boat	4
'Trinkat' class patrol boat	2
'Super Dvora' class patrol boat	6
'Solas' class patrol boat	4
'Deepak' class replenishment vessel	2
'Jyoti' class replenishment vessel	1
'Aditya' class replenishment vessel	1
'Sagardhwani' class hydrographic ship	1
'Sandhayak' class hydrographic ship	8
'Makar' class hydrographic ship	1
'Gaj' class tug	2
'Bhim' class tug	3
'Madan Singh' class tug	2
'Balram' class tug	2
'Bahadur' class tug	1
'Anand' class tug	1
'BC Dutt' class tug	2
'Nakul' class tug	2
'Arga' class tug	3



OPVs

As of September 2014 the navy is received the fourth of it's 'Saryu' class OPVs. The Indian navy claims that 90% of these 105-m long, 2,200 tonne, locally designed OPVs are indigenously sourced. Speaking at the commissioning ceremony the Indian Chief of Staff Admiral R K Dhowan declared, "We have transformed from a buyers navy to a builders navy". He later added, "The blue print for the IN's future is anchored on self-reliance and indigenisation and presently we have 41 ships and submarines under construction in public and private sector shipyards".

Goa Shipyard Limited is reported to be is building six similar OPVs for the Indian Coast Guard at a cost of INR18 billion, deliveries of which are scheduled to begin in October 2015 and be completed two years later.

India's coast guard has 16 OPVs, ranging from the 1300-tonne 'Vikram' class to the 2266-tonne 'Sanklap' class, and plans six more 'Sanklap' class vessels and seven more undefined OPVs by the end of the decade. Most of these ships are, at best, lightly armed with only the coast guard's four 'Samar' class ships carrying a 76mm Oto Melara Super Rapid gun, but the Indian Navy's version of the 'Sanklap' class, the 'Saryu' class, will have a similar armament.



CORVETTES

The Indian Navy has tended to rely upon Russian designs and is currently using four 'Abhay' class ASW vessels which may be re-engined, although there is currently no word on when this might take place, and twelve 'Veer' class surface warfare ships. New Delhi's first indigenous corvette design, the 'Project 25' class, was planned as an ASW platform but instead the 'Khukri' class have appeared as surface warfare ships as are the improved 'Kora' class with four of each being built.

The latest 'Kamorta' class corvettes feature shaping to reduce their radar cross section and appear to be planned as multi-role ships and the addition of a SAM will provide a good air defence capability. The lead ship was commissioned in June 2014 and another three are being constructed with plans for up to twelve ships, but construction has been prolonged and the fourth ship will not be commissioned until 2015. However, it is reported that New Delhi is now looking at an improved corvette design known as the 'Project 28A' but no details are available.

As with India's latest OPV production, 90% of the INR19 billion (USD316 million) new 'Kamorta' class corvettes is reported to be indigenously sourced. "It's time we cease to remain the world's largest buyer of defence equipment and become an important manufacturer," said defence minister Arun Jaitley.



Caption: INS Nirbhik, a Veer-class corvette of the Indian Navy.

Source: Indian Navy [CC BY 2.5 in (<http://creativecommons.org/licenses/by/2.5/in/deed.en>), CC BY 2.5 in (<http://creativecommons.org/licenses/by/2.5/in/deed.en>) or CC BY-SA 2.5 (<http://creativecommons.org/licenses/by-sa/2.5>)], via Wikimedia Commons



AUSTRALIA



Royal Australian Navy	
Ship Type	No. in Service
'ANZAC' class frigate	8
'Adelaide' class frigate	4
'Armidale' class offshore patrol boat	14
'Huron' class mine countermeasures vessel	6
'Collins' class conventional hunter-killer submarine	6
'Balikpapan' class heavy landing craft	3
'Leeuwin' class hydrographic ship	2
'Paluma' class survey launch	4
'Tobruk' class heavy landing ship	1
'Bay' class dock landing ship	1
'Durance' class replenishment vessel	1
'Sirius' class replenishment vessel	1



OPVs

Australia's Project Sea 1180 plans for the procurement of an Offshore Combat Vessel (OCV) using a basic 2000-tonne hull design will produce 20 vessels during the first half of the next decade to replace up to 26 vessels including the Royal Australian Navy's 'Armidale' class patrol boats, 'Huron' class mine countermeasures vessels and the hydrographic survey vessels of the 'Leeuwin' and 'Paluma' classes.

IHS Janes reports that, Australia's Defence Materiel Organisation (DMO) is exploring options for the possible acquisition of a Maritime Tactical Unmanned Aerial System (MTUAS) to complement this modernization plan.



Caption: Armidale class patrol boat HMAS Broome

Source: By Hpeterswald (Own work) [CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0>)], via Wikimedia Commons



NEW ZEALAND



Royal New Zealand Navy	
Ship Type	No. in Service
'ANZAC' class frigate	2
'Canterbury' class replenishment vessel	1
'Endeavour' class replenishment vessel	1
'Protector' class offshore patrol vessel	2
'Manawanui' class diving support vessel	1

OPVs

New Zealand operates two 'Protector' class OPVs with ice-strengthened bows to operate in Antarctica.

IHS Jane's Navy International reports that the Royal New Zealand Navy is looking into the possibility of acquiring a third OPV. "We learned that offshore patrol vessels cost a lot less to run [than frigates]," said Lieutenant Commander Owen Gee from the NZDF on 14 May at the MilSatCom Asia Pacific 2014 conference in Singapore. "If acquired, we plan to utilise it in a constabulary role and this releases our frigates for other operations."

Lt Cdr Gee also revealed to IHS Jane's Navy International that the NZDF plans to equip all three OPVs with satellite communication systems. "We have an Exclusive Economic Zone 15 times the size of the New Zealand land mass. There is no way we can rely on terrestrial communications. We will have to equip our vessels with satellite communications," Lt Cdr Gee said.

No timeline or specifications of the possible OPV acquisition was provided.



Caption: 'Protector' class offshore patrol vessel HMNZS Otago (front) forms part of the Navy fleet concentration in the Cook Strait.

Source: By New Zealand Defence Force from Wellington, New Zealand (HMNZS Otago) [CC BY 2.0 (<http://creativecommons.org/licenses/by/2.0>)], via Wikimedia Commons



CHINA



People's Liberation Army Navy	
Ship Type	No. in Service
'Liaoning' class aircraft carrier	1
'Tang' class nuclear ballistic missile sub.	In development
'Jin' class nuclear ballistic missile sub.	5
'Xia' class nuclear ballistic missile sub.	1
'Type-095' nuclear-powered attack sub.	14 to enter service
'Shang' class nuclear-powered attack sub.	5 with 3 to enter service
'Han' class nuclear-powered attack sub.	3
'Yuan' class conventional hunter-killer sub.	13
'Song' class conventional hunter-killer sub.	13
'Kilo' class conventional hunter-killer sub.	12
'Romeo' class conventional hunter-killer sub	13
'Luyang-III' class destroyer	12 to enter service
'Luzhou' class destroyer	2
'Luyang-II' class destroyer	5
'Luyang-I' class destroyer	2
'Sovremenny' class destroyer	4
'Luhai' class destroyer	1
'Luhu' class destroyer	2
'Luda' class destroyer	7
'Jaingkai-II' class frigate	16 with 4 to enter service
'Jiangkai-I' class frigate	2
'Jiangwei-II' class frigate	10
'Jaingwei-I' class frigate	4
'Jianghu' class frigate	8
Type 056 Class Corvette	18 with 12 to enter service
'Houbei' class fast attack craft	83
'Houjian' class fast attack craft	6
'Houxin' class fast attack craft	16
'Haiqing' class fast attack craft	46
'Hainan' class fast attack craft	68
'Shanghai-III' class fast attack craft	17
'Wolei' class minelayer	1
'Wozang' class mine countermeasures vessel	2
'Wosao' class mine countermeasures vessel	6
'Wochi' class mine countermeasures vessel	8
'Lianyun' class mine countermeasures vessel	50
'Yuzhao' class amphibious support ship	3
'Yuting-III' class landing ship	9
'Yuting-II' class landing ship	10
'Yuting' class landing ship	4
'Yukan' class landing ship	3
'Fuchi' class replenishment vessel	4 with 2 to enter service
'Fusu' class replenishment vessel	1
'Fuqing' class replenishment vessel	2



OPVs

China has the largest fleet with 400+ hulls ranging from 1150 to 3400 tonnes displacement, in addition to one aircraft carrier, and is in the process of receiving an additional 36 vessels of varying displacements.

CORVETTES

China is building numerous 1440-tonne Type 056 aka 'Jiangdao' class surface warfare /ASW corvettes which, like all modern corvette designs, feature shaping to reduce their radar signature. Last year 18 were reported launched, or commissioned, with at least a dozen on order to replace the 40-year-old 'Jianghu I/II' class frigates and the 'Houxin/Houjian' class fast attack and patrol craft.



Caption: Type 056 corvette 583 Ganzhou

Source: By 櫻井千一 (Own work) [CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0>)], via Wikimedia Commons



JAPAN

Japan Maritime Self Defence Force	
Ship Type	No. in Service
'Soryu' conventional hunter-killer sub.	5
'Oyashio' conventional hunter-killer sub.	11
'Izumo' class helicopter carrier	1
'Hyuga' class helicopter carrier	2
'Shirane' class destroyer	2
'Atago' class destroyer	2
'Kongo' class destroyer	4
'Hatakaze' class destroyer	2
'Akizuki' class destroyer	4
'Takanami' class destroyer	5
'Murasame' class destroyer	9
'Asagiri' class destroyer	8
'Hatsuyuki' class destroyer	3
'Abukuma' class destroyer	6
'Osumi' class heavy landing ship	3
'Uraga' class mine countermeasures vessel	2
'Yaeyama' class mine countermeasures vessel	3
'Enoshima' mine countermeasures vessel	2
'Hirashima' mine countermeasures vessel	3
'Sugashima' mine countermeasures vessel	12
'Uwajima' mine countermeasures vessel	5
'Leshima' mine countermeasures vessel	2
'Hayabusa' class offshore patrol vessel	6
'Shimayuki' class training vessel	3
'Kashima' class training vessel	1
'Asashio' class training submarine	2
'Mashu' class replenishment vessel	2
'Towada' class replenishment vessel	3
'Hiuchi' class training vessel	5
'Hibiki' class hydrographic ship	2



OPVs

Japan's Coast Guard, formerly the Maritime Safety Agency, employs some 50 OPVs ranging in displacement from the 1300-tonne 'Hateruma' class to the two 5204-tonne 'Mizuho' class.

The Senkaku/Diaoyu islands dispute has led to a considerable expansion of Japan's Coast Guard which will build four 1000-tonne OPVs of an as-yet-to-be-named class by the end of 2014.



Caption: Two Hayabusa class patrol boats Hayabusa (left) and Umitaka (right) at dockside

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CAMBODIA



Royal Cambodian Navy	
Ship Type	No. in Service
'Turya' class fast attack craft	5
'Stenka' class fast attack craft	5
'Shershen' class fast attack craft	1

OPVs

While the Royal Cambodian Navy did not report any significant acquisitions in 2014, the service nonetheless participated in large-scale exercises. The navy's most significant training event was during the June 2014 Pacific Partnership multilateral humanitarian assistance and disaster relief preparedness mission conducted in the Asia-Pacific region.



SRI LANKA



Sri Lankan Navy	
Ship Type	No. in Service
'Sukanya' class offshore patrol vessel	1
'Reliance' class offshore patrol vessel	1
'Vikram' class offshore patrol vessel	1
'Jayasagara' class offshore patrol vessel	1
'Saar-4' class fast attack craft	2
'Shanghai-I' class offshore patrol vessel	2
'Shanghai-II' class offshore patrol vessel	4
'Shanghai-III' class offshore patrol vessel	3
'Lushun' class offshore patrol vessel	2
'Bay' class offshore patrol vessel	2
'Super Dvora Mk.III' class patrol boat	6
'Super Dvora Mk.II' class patrol boat	3
'Dvora Mk.I' class patrol boat	4
'Shaldag' class patrol boat	7
'Colombo' class patrol boat	22
'Simoneau' class patrol boat	3
'Chevron' class patrol boat	4
'Trinity Marine' class patrol boat	5
'Wave Rider' class patrol boat	25
'Yuhai' class heavy landing ship	1
'Yunnan' class heavy landing ship	2

OPVs

Sri Lanka operates a long standing dual-track strategy to cooperate on naval matters with India and China.



Caption: Offshore Patrol Vessel SLNS Sayura (P 620)

Source: By Chamal Pathirana [CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0/>)], via Wikimedia Commons



TAIWAN



Taiwan Navy	
Ship Type	No. in Service
'Chien Lung' conventional hunter-killer sub.	2
'Hai Shih' conventional hunter-killer sub.	2
'Kee Lung' class destroyer	4
'Cheng Kung' class destroyer	8
'Chi Yang' class frigate	8
'Kang Ding' class frigate	6
'Oliver Hazard Perry' class frigate	2 to enter service
'Ching Chiang' class offshore patrol vessel	11
'Kuang Hua VI' class fast attack craft	31
'Tuo River' class corvette	1 in service, 11 to enter service
'Yung Yang' class mine countermeasures vessel	4
'Yung Feng' class mine countermeasures vessel	4
'Yung Ching' class mine countermeasures vessel	2
'Hsuhai' class dock landing ship	1
'Chung Cheng' class dock landing ship	1
'Chung Ho' class heavy landing ship	2
'Chung Hai' class heavy landing ship	7
'Mei Chin' class heavy landing ship	4
'Ta De' class tug	1
'Tai Hu' class tug	1
'Ta Tung' class tug	1
'Chung Bai' class replenishment vessel	2
'Wu Kang' class coastal transport	2
'Wan An' class coastal transport	1
'Tai Wu' class coastal transport	1



OPVs

Taiwan's Ministry of National Defense (MND) is to provide a further eight 40 mm gun systems to the country's Coast Guard Administration (CGA) as efforts continue to strengthen its offshore patrol capabilities, according to IHS Jane's Defence Weekly.

In 2014, Taiwan's Coast Guard Administration launched two new 3,000 ton patrol vessels. According to Globalsecurity.org this new class of ship is intended to be a fast, reliable platform capable of deep sea operations, in all weather conditions. Both vessels, CG-128 Yilan and CG-129 Kaohsiung are outfitted with helicopter landing pads on the deck are intended for open-sea patrols and search-and-rescue missions.

CORVETTES

In December 2014 Taiwan launched its first domestically produced warship, the new 500-ton stealth missile 'Tuo River' class corvette. Speaking at the opening ceremony of the vessel, Defense Minister Yen Ming said, "During our initial testing, the vessel's speed not only met the requirement but far exceeded our expectations This has made it the fastest and most powerful warship in Asia."



BANGLADESH



Bangladeshi Navy	
Ship Type	No. in Service
'Ulsan' class frigate	1
'Jianghu-II' class frigate	1
'Hamilton' class frigate	1
'Jianghu-III' class frigate	2
'Salisbury' class frigate	1
'Romeo/Ming' conventional hunter-killer sub.	2 to enter service
'Castle' class corvette	2
'Durjoy' class corvette	2
'Type-056' class corvette	4 to enter service
'Island' class offshore patrol vessel	5
'Sea Dragon' class offshore patrol vessel	1
'Padma' class offshore patrol vessel	5
'Type-024' class fast attack craft	5
'Type-021' class fast attack craft	4
'Kraljevica' class patrol boat	2
'Type-062-1' class patrol boat	1
'Type-037' class patrol boat	1
'Type-062' class patrol boat	4
'Type-021' class patrol boat	1
'Chamsuri' class patrol boat	4
'Meghna' class patrol boat	2
'Type-025' torpedo boat	4
'Roebuck' class hydrographic ship	1
'Agradoot' class hydrographic ship	1
'Type-010' class mine countermeasures vessel	1
'River' class mine countermeasures vessel	4
'Island' class training ship	1
'Yuch'in' class mechanised landing craft	5



OPVs

Bangladesh operates two former 1630-tonne Royal Navy 'Castle' class OPVs. A parliamentary ten-year development plan launched in 2009 indicated that Bangladesh has a requirement for three OPVs although no vessels have yet been procured to this end. To the south, Sri Lanka operates three OPVs in the form of two former Indian 'Vikram' and 'Sukanya' class vessels and a former 1147-tonne US 'Reliance' class ship. Colombo has placed an order for two 'Sanklap' class vessels for delivery by 2016.



Caption: Island Class offshore patrol vessel BNS Sangu (P-713)

CORVETTES

Bangladesh is reported to have ordered its first two 'Jiangdao' class corvettes from China for delivery in 2016 and Dhaka is reported to have a long term plan to order four more corvettes from Turkey yet no date has been announced to this effect.

Source: By Naval Surface Warriors (Flickr: 120921-N-WX059-111) [CC BY-SA 2.0 (<http://creativecommons.org/licenses/by-sa/2.0>) or Public domain], via Wikimedia Commons

CONCLUSION



In terms of OPVs and corvette capabilities and procurement plans, the Asia-Pacific region is typical of the developing world with requirements for a variety of vessels to cover a broad range of hydrographic requirements. Unlike the other prime market, Latin America, there is little sign that nations are co-operating to meet their requirements like Argentina, Chile and Colombia are in using the same basic OPV design. The demand for corvettes in the Asian region outstrips every other region in terms both of numbers and operational requirements and is likely to see demand increase certainly over the short term.

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