

Submarine and Expeditionary Ship Market Outlook



As part of AMI's knowledge partnership with IMDEX organizer Experia Events Pte Ltd, Hot News includes periodic focused naval market assessments from AMI Advisory Services. March's edition looks at the Asia Pacific (A-P) market outlook for submarines and expeditionary ships in support of the upcoming IMDEX Asia 2011 event in Singapore 18-20 May.

Overview:

The Asia-Pacific region represents the world's largest future submarine market, with AMI projecting 107 new construction submarines hulls to be acquired by regional navies through 2030. This is 38% of the total world market by volume.

Measuring the market value of the A-P submarine market, AMI forecasts regional navies will spend almost US\$57B (at 2010 exchange rates) on new construction submarines in the next 20 years. This is about 27% of the total value of the global new build sub market through 2030. The A-P is second only to the United States in the size of forecasted procurement budgets for submarine programs.

World Naval Market Forecast – New Ship Builds: 2010-2030

Platform	20 Year Hull Count	20 year Value (US\$B)	Market Share (%)
Aircraft Carriers	15	57.8	7.8
Amphibious Ships	329	58.1	7.8
Auxiliaries	197	37.4	5.0
Cruisers	3	3.2	0.4
Destroyers	155	177.6	23.9
Frigates	280	109.9	14.8
Corvettes	87	22.3	3.0
OPVs	244	23.8	3.2
MCMVs	180	15.6	2.1
FACs	190	10.5	1.4
Patrol Craft	1170	17.5	2.4
Submarines	281	210.9	28.3
Totals	3131	744.6	100.0

Submarine Market Outlook

More new submarines will be built or bought by Asian-Pacific navies over the next 20 years compared to any other region in the world—including the US.

Most of the future submarine investment in the A-P region in the coming two decades will be by countries that have long operated submarines and have had long standing submarine new build and modernization programs. These include China, India, Australia, Japan, and the Republic of Korea. Others, such as Vietnam and Thailand, will be (re) introducing submarines to enhance their naval capability mix into all three domains—air, surface and subsurface.

Looking at specific countries, China and India lead the region in forecasted new sub acquisitions, with each country expected to add 30-40 new sub hulls to their naval inventory by 2030.

The Republic of Korea, Japan, Australia, Indonesia and Vietnam will also invest significantly in new submarine capabilities, with each country forecast to add 5-10 subs to their force structure over the next 20 years.

As far as what all these submarines will be used for, the short answer is deterrence. Confronting even one potential submarine forces naval planners to go to considerable time and trouble to counter and adds potential political and economic threats to the calculus of national leaders.

ISR is one vital mission that subs excel at—and ISR is a contributor to deterrence. Deployment of special operations forces is another related mission likely to be part of the task set for subs in the region in the future.

But the conventionally powered subs that will make up most of the subs to be acquired in the A-P region are designed to sink ships with missiles and torpedoes. In a conflict scenario, submarines would likely go after vulnerable "high value targets"—cargo carrying both commercial and naval shipping—but can also threaten an array of surface forces found in regional navies.

And the ability to pose a risk to surface traffic is one of the capabilities that make subs such strong deterrents in a region like the A-P, where so much national wealth and economic development depends on secure sea lines.

Asia-Pacific Market Forecast:

Vessel Type	In Progress		Planned		Projected		Totals	
	# Hulls	US\$B	# Hulls	US\$B	# Hulls	US\$B	# Hulls	US\$B
Aircraft Carriers	6	5.2	0	0	0	0	6	5.2
Amphibious Ships	47	4.3	36	6.4	12	0.8	95	11.5
Auxiliaries	16	1.7	9	2.0	9	1.0	34	4.7
Cruisers	1	1.0	2	2.2	0	0	3	3.2
Destroyers	16	15.8	32	23.2	0	0	48	39.0
Frigates	75	19.4	48	22.5	0	0	123	42.0
Corvettes	0	0	0	0	0	0	0	0
OPVs	33	2.1	9	0.4	8	0.4	50	2.9
MCMVs	28	2.2	17	1.4	12	1.0	57	4.6
FACs	69	2.5	38	0.9	6	0.4	113	3.8
Patrol Craft	45	0.5	137	3.0	61	0.3	243	3.8
Submarines	61	21.9	46	35.0	0	0	107	56.9
Totals	397	76.6	374	97.0	108	3.9	879	177.6

Expeditionary Ship Market Outlook

Asian-Pacific Navies represent the world's largest market for new amphibious and expeditionary ships over the coming two decades, with AMI forecasting 95 new "L-class" ships joining regional navies.

This represents 30% of the world market volume for these types of ships and compares with US plans to build 20 new amphibious ships over the next 30 years (although much of the planned US build in this segment is on large high value ships, compared to a segment mix of small and large amphibious ships in the Asia-Pacific region).

Looking at market value, new construction amphibious ships in the A-P region will be worth about US\$11.5B (2010 rates). This is about 20% of the total forecasted market value worldwide

for these types of ships, and represents the second largest market value for this ship type over the next 20 years, second only to planned US Navy spending.

Australia, the Republic of Korea and Japan are investing in "big deck" LHD amphibious ships that combine capabilities for sea lift (well decks), air lift and direct air support to embarked troops with large flight decks able to support helicopters and fixed wing aircraft.

India, China, Singapore, Indonesia, Thailand and Malaysia are investing in LPDs that are more limited in their capability to support embarked aircraft via flight decks on the aft of these 5,000-10,000t full load displacement ships.

Both LHDs and LPDs offer flexible options for supporting humanitarian assistance, disaster relief and other peacetime missions, in addition to conventional roles supporting amphibious power projection during conflict. The LHD and LPD also offer robust command and communications facilities that can support fleet and combined task force flagship requirements.

The inherent flexibility of amphibious/expeditionary ships in the maritime and archipelagic settings found in much of the Asia-Pacific region helps explain the robust growth expected to continue in the market segment over the coming 20 years.

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