

# OPRF MARINT Monthly Report

## November 2012



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### 2. Topic

Chinese J-15 fighter succeeded in taking off from and landing on China's first aircraft carrier *Liaoning*

This monthly report was summarized and produced by OPRF staff writers based on their analyses and assessments of open source information.

Each source of information is described as an internet link in a bracket, which is available as URL online as of the end of November 2012.

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# 1. Information Digest

## 1.1 Maritime Security

### November 1-8 “East African Exercise Cutlass Express 2012-2 in the Indian Ocean and Gulf of Aden” (The Maritime Executive, November 8, 2012)

From November 1 to 8, a multinational military exercise named “Exercise Cutlass Express 2012-2 (CE12-2)”, which sailors and maritime professionals from 8 countries joined, was took place at sea around Djibouti, Port Louis in Mauritius and Dar Es Salaam in Tanzania under an arrangement between regional maritime operation centers. The participants were Djibouti, Mauritius, Mozambique, the Netherlands, the Seychelles, Tanzania, Uganda and the United States. This exercise was the second time since the fall in 2011 and an East African maritime exercise to train information sharing and coordinated operations among international navies, focusing on counter-piracy, counter-narcotics and illegal fishing. Additionally, CE 12 hosted by the Pentagon’s African Command is aimed at working together to deal with common maritime issues, training information sharing and coordinated operations. Through the week, the participants trained maritime interdiction operations including visit, board, search and seizure (VBSS) techniques, using small rigid-hulled inflatable boats (RHIBs) to HNLMS *Rotterdam* (L800), flagship of Operation Ocean Shield, NATO's anti-piracy campaign off the Horn of Africa. Therefore, the maritime interdiction exercise including VBSS against unidentified ships was conducted. The following is a situation at that time.

Refer to the article: Eight Navies Complete East African Exercise Cutlass Express 2012

<http://www.maritime-executive.com/article/eight-navies-complete-east-african-exercise-cutlass-express-2012/>



Source: The Maritime Executive, November 8, 2012

### **November 5 “Somali Pirates Released Two Seychelles Fishermen” (The Maritime Executive, November 5, 2012)**

The Office of the President of Seychelles has confirmed that Somali pirates released two Seychelles fishermen on 5th. On the 2nd, the men were riding on their vessel FV *Aride* which was hijacked by Somali pirates and confirmed that hijacking was confirmed by photographs taken by a surveillance aircraft. Since the Seychelles boats were attacked for the first time in February 2009, 5 fishing boats and 11 fishermen were abducted, but fortunately released after payment of a ransom. Before this release, Seychelles administrative officials had a meeting with the President of the Transitional Federal Government of Somalia (TFG) and pressured them to secure the release of the two fishermen. No further details have been revealed whether a ransom was paid for the release, while other sources tell that \$3 million ransom was to have been paid.

Refer to the article: Seychellois Hostages Freed After Year Held By Pirates

<http://www.maritime-executive.com/article/seychellois-hostages-freed-after-year-held-by-pirates/>

### **November 21 “EU naval force apprehended 9 suspected pirates and released” (EU NAVFOR Public Affairs Office, Press Release, November 21, 2012)**

Early morning on 21st, Romanian frigate ROS *Regele Ferdinand* which belongs to the EU Naval Force (EU NAVFOR) apprehended 9 suspected pirates in Somalia under close co-operation with Turkish warship TCG *Gemlik* of Combined Task Force 151 (CTF-151). According to the report from EU naval force, Swedish EU NAVFOR Maritime Patrol Aircraft located at sea 420 nautical miles east of Mogadishu discovered a suspicious small boat and quickly alerted to naval forces being close to them. TCG *Gemlik* and ROS *Regele Ferdinand* made haste to the area to investigate, as the Luxembourg EU NAVFOR patrol aircraft maintained visual coverage from the air. After one hour, a boarding team of ROS *Regele Ferdinand* apprehended 9 suspect pirates and embarked them for further questioning. The boat was destroyed and the following is the situation at that time.

Refer to the article: EU Naval Force and Combined Task Force 151 Work Together to Ensure No Safe Haven for Pirates In Indian Ocean

<http://www.eunavfor.eu/2012/11/eu-naval-force-and-combined-task-force-151-work-together-to-ensure-no-safe-haven-for-pirates-in-indian-ocean/>



The boarding team from ROS *Regele Ferdinand* brings the apprehended pirates and their skiff back to the Romanian warship

Source: EU NAVFOR Public Affairs Office, Press Release, November 21, 2012

## 1.2 Military Developments

### November 1 “Vietnam’s Anti-Access Strategy with Submarines from James R. Holmes’s View” (The Diplomat, November 1, 2012)

James R. Holmes at the US Naval War College contributed an article titled “Vietnam’s Undersea Anti-Access Fleet” to the web magazine *The Diplomat* dated the 1st, and he described a strategic significant about anti-access strategy which 6 Vietnamese *Kilo*-class submarines have as follows.

- (1) While anti-access strategies are different by countries, Vietnam is pursuing it with 6 *Kilo*-class submarines which are under construction in Russia. According to the report from Vietnam in August 2012, 1 of the 6 has already been launched and the rest is scheduled to be delivered by 2016. It is likely that the *Kilo*-class submarines should be a lethal access-denial force. While China’s People’s Liberation Army Navy is also operating the same class submarines, it has conspicuously neglected antisubmarine warfare hardware and techniques. Therefore, even though Chinese Navy is overwhelmingly superior to the Vietnam People’s Navy, South China Sea will remain opaque to Chinese commanders for the foreseeable future.
- (2) Vietnam’s anti-access force, like all such forces, is asymmetric to the adversary and almost purely one-dimensional. Hanoi doubtless chose well if it could select only one platform to execute its strategy. Submarines offer enormous bang for the buck, and they are survivable. However in case that China improves its Chinese antisubmarine, it could nullify Vietnam’s

effort to fend off the PLA Navy. Other part, Vietnamese access denial could operate offensively as well as defensively. For example, Vietnamese *Kilo* class submarines can approach the Chinese naval station at Sanya without being detected and expose its location to the adversary, holding PLA Navy submarines at risk at the delicate moment when they are entering or leaving port.

- (3) Therefore, strategically access denial with a defensive posture includes the risk for escalatory hue and the inception of a Vietnamese undersea fleet will further overcrowd the already crowded water-space in South China Sea, complicating efforts to discriminate among friend, foe, and bystander. Additionally, it is predictable that India dispatch *Kilos* to the region, and practically Singapore, Malaysia and other regional seafaring states are operating different types of submarine. Accompanying the development of access-denial strategies, the risks for miscalculations and accidents will only increase.

Refer to the article: Vietnam's Undersea Anti-Access Fleet

<http://thediplomat.com/the-naval-diplomat/2012/11/01/vietnams-undersea-anti-access-fleet/>

### **November 5 “Taiwan plans to buy two frigates from the US” (Channelnewsasia.com, AFP, November 5, 2012)**

On the 5th, Taiwan's defense minister Kao Hua-chu said that Taiwan plans to buy two warships from the United States as part of an effort to modernize its naval force amid a perceived military threat from China. The two *Oliver Hazard Perry*-class frigates, now serving in the US navy, will be delivered to Taiwan by 2015, Kao said while answering questions in parliament. The two warships, estimated to cost a total of about TW\$7 billion (US\$240 million), will replace two of eight now ageing *Knox*-class frigates which Taiwan acquired in the early 1990s.

Refer to the article: Taiwan to buy two frigates from US: defence minister

[http://www.channelnewsasia.com/stories/afp\\_asiapacific/view/1235324/1.html](http://www.channelnewsasia.com/stories/afp_asiapacific/view/1235324/1.html)

### **November 14 “The U.S. Navy pivots to Asia –Admiral Jonathan Greenert” (Foreign Policy, November 14, 2012)**

Admiral Jonathan Greenert, the Chief of Naval Operations of the U.S. Navy, contributed an article titled “The navy pivots to Asia” to *Foreign Policy* dated the 14th. In this article, Admiral Greenert introduced some key points about the rebalance toward Asia-Pacific and its outlook. The summary is as follows.

- (1) The most visible element of our rebalance toward the Asia-Pacific region is an increase in day-to-day military presence. The U.S. forces in the region are a symbol which proves its military commitment and provide a full-time capability to support our allies and partners. Though a little more than the half of the deployed fleets are concentrated in the Pacific and 50 fleets are always deploying, it is insufficient just to carry out rotational dispositions of naval fleets or airplanes at an interval between for six months and nine months, taking the long distance from the U.S. homeland to Asia into consideration. Therefore, more than 90% of U.S navy in Asia-Pacific are stationed at spots permanently or semi-permanently to

decrease transit time and strengthen the nexuses with its allies and partners. For example, about half of the 50 deployed ships are permanently home-ported in Japan and Guam along with their crews and families.

- (2) Although it is planned to reduce our future budgets, the navy continues to strengthen its presence in the Asia-Pacific region. The benchmark year of the Defense Strategic Guidance is estimated to be 2020, and by then the Navy Fleet will grow to approximately 295 ships. In addition to increasing the number of fleets, three factors as followings usually allow the U.S. to dispatch 60 fleets in the Asia-Pacific by 2020.
  - a. It is estimated that 4 destroyers will permanently base in Rota, Spain within the next several years to help defend European allies from ballistic missiles. Today 10 destroyers are traveling rotationally from the U.S. homeland to the Mediterranean Sea. As the result, 6 destroyers can dispatch rotationally to the Asia-Pacific.
  - b. If new Joint High Speed Vessels (JHSV) and Littoral Combat Ships (LCS) under construction will be dispatched and used for security cooperation and humanitarian assistance in South America and Africa, the destroyers and amphibious ships can deploy to the Asia-Pacific. The amphibious ships will be deployed to the Asia-Pacific within the next a few years to support marine operations, including those from Darwin, Australia.
  - c. To reduce transit time, JHSV, LCS, Mobile Landing Platforms and Afloat Forward Staging Bases (AFSB) will be deployed forward and civilian or military crews will be disposed rotationally
- (3) In addition to more ship presence in the Asia-Pacific, it is expected to increase deployments of aircraft and strengthen cooperative air surveillance operations with regional partners. Today the U.S. has already practiced such operations with Australia, the Philippines, and Thailand and shared awareness of activities on the sea by bringing partner personnel on board or sharing surveillance information. The U.S. will expand these missions with new partners that concern threats from piracy, trafficking, and fisheries violations. To strengthen the surveillance ability, it is scheduled that the navy version of the MQ-4 Global Hawk unmanned air vehicle will be disposed and operates by the middle of this decade.
- (4) To support increased military presence in the Asia-Pacific, the U.S. changes the fraction of ships and aircrafts based on the U.S. West Coast and the Pacific from 55 percent to 60 percent by 2020. Ships that operate from an overseas port provide full-time presence and engagement in the region and deliver more options for Combatant Commanders and political leaders. It also frees up ships that would otherwise be needed to support a rotational deployment. Today the U.S. has about two dozen ships home-ported in Guam and Japan. In 2013, the Littoral Combat Ship USS *Freedom* will begin operating from Singapore, eventually growing to four ships by 2017. The LCS will conduct maritime security operations with partner navies throughout Southeast Asia. And under the Air-Sea Battle concept, the navy will cooperate with the air force to maintain the credibility of our security commitments and ability to deter aggression around the world under anti-access threats. The navy will also field improved platforms and systems that exploit the undersea

domain for power projection and surveillance.

Refer to the article: The Navy pivots to Asia.

[http://www.foreignpolicy.com/articles/2012/11/14/sea\\_change?print=yes&hidecomments=yes&page=full](http://www.foreignpolicy.com/articles/2012/11/14/sea_change?print=yes&hidecomments=yes&page=full)

### **November 15 “The U.S., Thailand signed new alliance vision” (Diplonews.com, November 15, 2012)**

On the 15th, Thai Defense Minister Sukampol Suwannathat had meetings with U.S. Defense Secretary Leon E. Panetta during his visit to Thailand, and signed an agreement on their nations' long-term military partnership, The 2012 Joint Vision Statement for the Thai-U.S. Defense Alliance. According to the new vision statement, U.S.-Thai defense cooperation will focus on four key areas: Partnership for regional security in Southeast Asia; Supporting stability in the Asia-Pacific region and beyond; Bilateral and multilateral interoperability and readiness; and Relationship building, coordination and collaboration at all levels. “Today the minister and I moved this alliance into the 21st century,” Panetta said.

Refer to the article: US, Thai Leaders move Defense Alliance into 21st Century

[http://www.diplonews.com/feeds/free/15\\_November\\_2012\\_150.php](http://www.diplonews.com/feeds/free/15_November_2012_150.php)

### **November 16 “China, Myanmar pledge to further military strategic cooperation” (Diplonews.com, November 19, 2012)**

On the 16th, Qi Jianguo, deputy chief of general staff of the Chinese People's Liberation Army (PLA), held a meeting with Soe Win, the deputy commander-in-chief of the Myanmar Armed Forces and commander of the Myanmar Army during his visit to China. They had in-depth exchange of views on regional security situation, the China-Myanmar relations, the military-to-military relations between the two countries and other issues of common concern. The China-Myanmar relations have withstood tests from the changeable international situations in the past 60-odd years since the establishment of the diplomatic relations, and the long-term mutual understanding and mutual support between the two countries have achieved fruitful accomplishments, Qi Jianguo said. The Chinese PLA and the Myanmar Armed Forces have conducted in-depth and pragmatic communications in terms of high-level exchange of visits, equipment technological cooperation, personnel training, border control and so on, which have exerted active effects in promoting the comprehensive development of the relations between the two countries, Qi Jianguo added.

Refer to the article: China, Myanmar pledge to further military strategic cooperation

[http://www.diplonews.com/feeds/free/19\\_November\\_2012\\_283.php](http://www.diplonews.com/feeds/free/19_November_2012_283.php)

### **November 26 “Aircraft carrier which is repaired in Russia will be delivered to India in the end of 2013” (Defense News, November 26, 2012)**

On the 26th, Indian Defense Minister A.K. Antony noted that the fourth quarter of 2013 has been set as the latest date for the delivery of the 44,570-ton aircraft carrier, renamed INS



*Vikramaditya* by India, against the envisaged deliver schedule of December 2012. Though Indian navy has only one aircraft carrier named INS *Vikrant* which has been in service since 1961, it is will be phased out soon. INS *Vikramaditya* was scheduled to be delivered in August 2008 with the price of \$978.4 million in 2004, but it was revised to \$2.3 billion for delivery in 2012. Antony assured that the cost of \$2.3 billion remains unchanged even in the last quarter of 2013. Russia had been arms supplier for India which occupied 70 % of all, but now India likely diversifies its suppliers such as Israel, the U.S. and France.

Refer to the article: India to Get Soviet-era Aircraft Carrier in 2013

<http://www.defensenews.com/article/20121126/DEFREG03/311260004/India-Get-Soviet-era-Aircraft-Carrier-2013?odyssey=tab%7Ctopnews%7Ctext%7CFRONTPAGE>

### **【Related article】**

#### **“Indian-made-aircraft carrier: More costly, already delayed” (NDTV, November 20, 2012)**

According to the Indian NDTV news dated the 20th, the Defense Ministry of India requires the government for an additional Rs. 2,000 crore meet the cost overrun for completing the first phase of Indigenous Aircraft Carrier (IAC) being constructed at the Cochin Shipyard. As Defense Minister AK Antony revealed at the Parliament before, the IAC is delayed by at least five years and is expected to be with the Indian Navy only after 2018 as against the scheduled date of delivery of 2014. As sources told, the first phase of the construction was started in 2003 by the cost about Rs. 3,200 crore. The construction of the ship was delayed because India could not procure special steel from Russia and gear boxes produced by a Gujarat-based firm in collaboration with the German partner had been found to be faulty. In estimation that the constructive cost of aircraft carrier without its component would be likely between Rs. 14,000-to Rs. 18,000 crore, Antony who reviewed the progress of the construction directed Shashikant Sharma to monitor the progress of the construction and formed empowered apex committee. Furthermore, the Ministry of Defense asked Cochin ship yard to come with a firm date of deliver. The aircraft carrier is inevitable for India to be a dominant player in the Indian Ocean. India needs at least 2 aircraft carriers to keep its permanent deployment there. British INS *Viraat* with 50 years old is still activating, though the ship was scheduled to retire in 2002.

Refer to the article: Indian aircraft carrier: More costly, already delayed

<http://www.ndtv.com/article/india/indian-aircraft-carrier-more-costly-already-delayed-294997>



The Indigenous Aircraft Carrier (IAC) being constructed at the Cochin Shipyard

Source: NDTV, November 20, 2012

**November 26 “U.S. Navy tests carrier-based unmanned aircraft” (gCaptain, November 28, 2012)**

The U.S. Navy is preparing to test take offs and landings of carrier-based unmanned aircraft for the first time. On the 26th, a Northrop Grumman X-47B Unmanned Combat Air System was loaded from Naval Air Station in Maryland into USS *Harry S. Truman* (CVN 75) by barge and that will be the first carrier which tests unmanned aircraft. Test director said that “we have been testing the aircraft for the last several years and to finally put it on a ship is so exciting. If these tests are successful, they will prove that the future for unmanned aircraft is wide open”. X-47B, which its wingspan is more than 62 feet (wider than that of an F/A-18 Super Hornet), will be controlled remotely via a hand-held control display. The U.S. Navy will test X-47B for more than 3 weeks which include in-port and underway demonstrations aboard Truman.

Refer to the article: U.S. Navy Testing Carrier-Based Unmanned Aircraft  
<http://gcaptain.com/us-navy-testing-carrier-based-unmanned-aircraft/>



U.S. Navy Sailors assist with the onload of the X-47B Unmanned Combat Air System (UCAS) demonstrator aboard the aircraft carrier USS *Harry S. Truman* (CVN 75)

Source: gCaptain, November 28, 2012

### **November 28 “Russia’s newest SSN successfully fired a cruise missile while submerged” (RIA Novosti, November, 28, 2012)**

As the United Shipbuilding Corporation revealed on the 28th, Russia’s newest attack submarine, which is the *Yasen* class *Severodvinsk*, successfully fired a cruise missile while submerged. According to that, the submarine fired a supersonic cruise missile and successfully destroyed a land target in the White Sea, and conducted a test for cruise missiles on the 26th. *Severodvinsk* is one of 8 *Yasen* class boats laid down in 1993 which has a submerged displacement of 13,800tons, length of 119 meters and speed of 31 knots, a crew of 90 including 32 officers and can dive to 600 meters. Its main armament consists of 3M55 Oniks (SS-N-26) and 3M54 (SS-N-27) Kalibr cruise missiles, self-guided torpedoes and mines.

Refer to the article: Submerged Severodvinsk Sub Test Fires Cruise Missile  
[http://en.rian.ru/military\\_news/20121128/177797452.html](http://en.rian.ru/military_news/20121128/177797452.html)



*Severodvinsk*

Source: RIA Novosti, November 28, 2012

Note: On the details of the *Severodvinsk*, see following URL.

<http://en.rian.ru/infographics/20100601/159255270.html>

## **1.3 South China Sea-related Events**

### **November 1 “China’s Island Strategy: ‘Redefine the Status Quo’” (The Diplomat, November 1, 2012)**

Fravel M. Taylor, an Associate Professor of Political Science and member of the Security Studies Program at the Massachusetts Institute of Technology, contributed an article titled “China’s Island Strategy: ‘Redefine the Status Quo’” to the web magazine *The Diplomat* dated the 1st. In this article, he said that the most striking feature of China’s behavior in its maritime disputes in 2012 has been efforts to redefine the status quo. Below is the summary of his article.

- (1) In its disputes with the Philippines and Japan, China has used the presence of its civilian maritime law enforcement agencies to create new facts on the water to strengthen China’s sovereignty claims. Ships from both sides left in mid June as a typhoon approached at Scarborough Shoal where China is facing against the Philippines since April. Later,

however, Chinese ships returned and appear have maintained a permanent presence in the waters around the shoal since then. China has also roped off the sole entrance to the lagoon inside the shoal to control access to it. Before the standoff, China had no permanent presence at Scarborough Shoal. Three months later, China had effective control of the shoal and the surrounding waters, thereby altering the status quo in this dispute in its favor. As an editorial in *The Global Times* noted, China has “directly consolidated control” of the shoal.

- (2) A similar dynamic is underway in the East China Sea over the Senkaku / Diaoyu Islands. Before the Japanese government’s purchase of three of the islets from a private citizen in September 2012, Chinese government ships had generally avoided entering the 12 nautical mile limit of Japan’s territorial waters around the islands. In response to the boat collision incident of Chinese fishing boat with a Japanese Coast Guard ship in September 2010, China increased the number of patrols by marine surveillance and fisheries vessels near the islands. Most of the time, these boats remained beyond Japan’s 12 nautical mile territorial waters around the Senkaku Islands or crossed this line only briefly. China in practical terms continued to accept Japanese de facto control of the islands and their associated territorial waters. After the purchase of the islands, however, China has abandoned this approach. China first issued baselines to claim its own territorial waters around the islands\* and then began to conduct almost daily patrols within its newly-claimed waters – directly challenging the Japanese control that it had largely accepted before.
- (3) The purpose of the patrols is two-fold: to demonstrate that the purchase of the islands will not affect China’s sovereignty claims and to challenge Japan’s position that there is no dispute over the sovereignty of the islands. Although China does not control the waters around the Senkaku Islands (unlike the situation at Scarborough), it no longer accepts de facto Japanese control. On October 31, the Ministry of Foreign Affairs of China spokesman asserted that a new status quo had been created. After describing China’s new patrols as “routine,” Hong Lai stated that “the Japanese side should face squarely the reality that a fundamental change has already occurred in the Diaoyu Islands.”
- (4) In both cases, China responded to challenges to its claims with an enhanced physical presence to bolster China’s position and deter any further challenges. These responses suggest an even greater willingness to pursue unilateral actions to advance its claims. In neither case is a return to the status quo ante likely.

Refer to the article: China’s Island Strategy: “Redefine the Status Quo”

<http://thediplomat.com/china-power/chinas-island-strategy-redefine-the-status-quo/>

Note\*: Statement of the Government of the People’s Republic of China on the Baselines of the Territorial Sea of Diaoyu Dao and Its Affiliated Islands is available at following URL;

<http://www.fmprc.gov.cn/eng/zxxx/t968769.htm>

**November 16 “China deploys two 3,000-ton class vessels” (Xinhua, November 16, 2012)**

On the 14th, the State Oceanic Administration (SOA) deployed the vessels in 3,000-tonne class, *Haijian 137* and *Haijian 110*. *Haijian 137* joined the Donghai fleet under the China Marine Surveillance (CMS), a maritime law enforcement agency under the SOA. The vessel will soon begin its patrol mission in the East China Sea to safeguard the country’s sovereignty. *Haijian 110* joined the CMS Beihai fleet and started on the 12th its patrol mission in the Yellow Sea. The agency has more than 400 law enforcement vessels now. According to the SOA, several more vessels will be commissioned in near future.

Refer to the article: Two new patrol vessels join China’s marine surveillance fleets

[http://news.xinhuanet.com/english/china/2012-11/16/c\\_131978381.htm](http://news.xinhuanet.com/english/china/2012-11/16/c_131978381.htm)



*Haijian 137*

Source: <http://johnib.wordpress.com/tag/haijian-137/>

**November 19 “Relations between China and ASEAN in 2012” (DiploNews.com, November 19, 2012)**

Below is the summary of the discussion between China and ASEAN of 2012 on High-Level Exchanges and Cooperation in the South China Sea.

**(1) High-Level Exchanges**

China and ASEAN have maintained close high-level contacts in 2012. Some 50 mutual visits by officials at or above deputy-prime-minister level were made between the two sides. Foreign Minister Yang Jiechi attended the ASEAN Post Ministerial Meetings in Phnom Penh in July and reaffirmed China’s policy of promoting good-neighborly and friendly relations and mutually beneficial cooperation with ASEAN. China opened a mission to ASEAN in Jakarta, Indonesia and appointed Chinese Ambassador to ASEAN. The Chinese Mission to ASEAN was inaugurated on September 27. On May 29, Chinese State Councilor and Defense Minister Gn. Liang Guanglie

attended the first China-ASEAN Defense Ministers' Consultation in Phnom Penh. Parties exchanged views on the security situation in the region and discussed ways to deepen mutual trust and cooperation.

#### (2) Cooperation in the South China Sea

The year 2012 marks the 10th anniversary of the signing of the Declaration on the Conduct of Parties in the South China Sea (DOC). China and ASEAN countries held the fourth senior officials meeting and seventh working group meeting on the implementation of the DOC in Beijing in January and the fifth senior officials meeting in Hanoi in June. According to the 2012 Working Plan adopted at the fourth senior officials meeting, China hosted the seminar on marine disaster prevention and mitigation in the South China Sea and the seminar on marine ecological environment and surveillance technology in the South China Sea. China and ASEAN countries have maintained communication over discussions on a code of conduct in the South China Sea (COC). Senior officials held informal consultations on COC on July 8 and September 13 respectively. By discussing relevant issues, parties have enhanced mutual understanding and expressed the desire to jointly uphold peace and stability in the South China Sea. China also attended the Track 1.5 seminar on COC held by think tanks of ASEAN countries in Malaysia and exchanged views with other parties over relevant issues.

Refer to the article: China details its cooperation and initiatives with ASEAN in 2012

[http://www.diplonews.com/feeds/free/19\\_November\\_2012\\_13.php](http://www.diplonews.com/feeds/free/19_November_2012_13.php)

## 1.4 Diplomacy and International Relations

### November 5 “the U.S-China-India’s Trilateral Maritime Diplomacy from an Indian Expert’s View” (The Diplomat, November 5, 2012)

C. Raja Mohan, who is a Distinguished Fellow at the Observer Research Foundation in New Delhi, contributed an article to the web magazine *The Diplomat* dated the 5th, titled “The New Triangular Diplomacy: India, China and America at Sea,” and he insisted that as both of China and India develop its naval powers, their interaction with the United States will truly be a defining feature in the Indo-Pacific region. The following is that summary.

- (1) As maritime interests of the both countries expand and an area which the each navy activates overlaps, that began to create a diplomatic friction between China and India in the Indian Ocean and the Pacific Ocean. The rise of China and the emergence of India as a maritime superpower suggest that the two big oceans should be strategically recognized as a combined maritime area.
- (2) China’s main maritime preoccupations are reunifying Taiwan, defending Chinese territorial claims, and constraining American naval dominance in the Western Pacific. Yet, China’s rising presence in the Indian Ocean, where it imports a large portion of its energy and mineral resources, is causing strong concerns in Delhi. But while India puts a priority

on securing its primacy in the Indian Ocean, their navy often travels to the Western Pacific. India's closing bilateral naval exchange with Vietnam that has its territorial disputes with China, supporting the principle of freedom of navigation in the South China Sea and practicing cooperative naval exercises with the U.S. and Japan raise eyebrows in Beijing.

- (3) Even though the both of China and India build up its naval capabilities and strengthen its presence in the Indian and Pacific Oceans, neither of them can be a sufficient player to supplant the United States as the dominant maritime power. The U.S. military rebalance toward Asia expresses a deep wariness to China's growing presence and great enthusiasm to vitalize the partnership with India and this shapes a dynamic trilateral relations in the Indo-Pacific.
- (4) While India wants to benefit from China's economic growth, like the rest of those in Asia, it would like to avoid the prospects for Beijing's dominance. As the rise of China has preceded that of India and the strategic gap between India-China has expanded, Delhi can only bridge it through a combination of internal and external balancing. Therefore, it is natural for Delhi to strengthen an alliance with the U.S. But India concerns the lack of U.S.'s constant policy to China and the political and financial durability of its rebalance to Asia and sufficiently recognizes the risk of diplomatic improvement between China and the U.S. without India. For that reason, India strategically refrains from provoking China and tries to strengthen its security cooperation with the U.S.
- (5) In this dynamic trilateral relation, China has clearly the superior hand. China could accommodate either Delhi or Washington to limit the depth of a prospective India-U.S. strategic partnership. Considering the ambiguity of the trilateral relation, it is uncertain how the relation will be created for the future. But one thing is certain. The emergences of China and India as naval superpower and the intersection of their maritime policy with those of the U.S. are a main factor to churn the security policies of the Indo-Pacific for coming decades.

Refer to the article: The New Triangular Diplomacy: India, China and America at Sea

<http://thediplomat.com/2012/11/05/the-new-triangular-diplomacy-india-china-and-america-on-the-high-seas/>

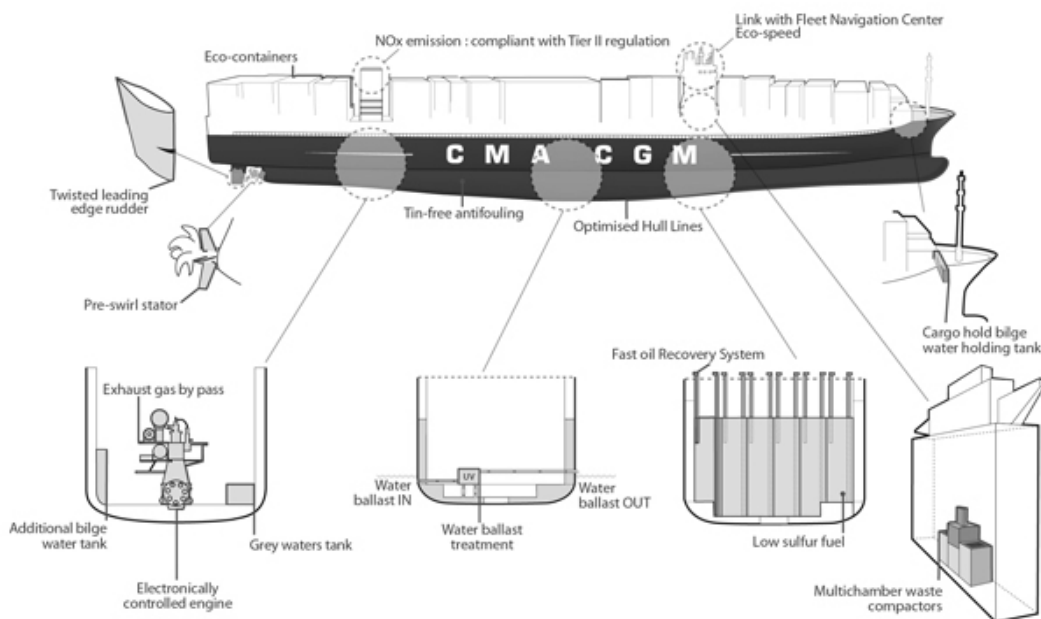
## 1.5 Shipping, Shipbuilding and Harbors

### November 12 "World's largest containership takes office" (gCaptain, November 12, 2012)

According to gCaptain dated the 12th, the MV *Marco Polo* which is a new UK-flagged owned by French shipping company CMA CGM started its navigation in the beginning of November from Ningbo, China. The vessel is the world's largest containership (16,090 TEU) built by Daewoo Shipbuilding and Marine Engineering (DSME) in South Korea, measuring 396 meters long and

54 meters wide with a draft of 16 meters. Further 2 more of these behemoths will be delivered by the end of 2013. These ships have the latest innovative technologies to protect marine environments and already meet the demand of 30% reduction of the EEDI (the Energy Efficiency Design Index) by 2025 set by IMO (the International Maritime Organization).

Refer to the article: CMA CGM's Marco Polo is Now the World's Largest Containership  
<http://gcaptain.com/cgms-marco-polo-worlds-largest/>



Source: gCaptain, November 12, 2012

**November 16 “Indonesia’s container traffic in 2012 will increase by 27% compared with the last year” (The Jakarta Post, November 16, 2012)**

According to *The Jakarta Post* dated the 16th, it is estimated that the container traffic in 2012 at the Tanjung Priok Port in North Jakarta will increase by 27 % compared with 2011 and likely



reaches 7 million TEUs, up from 5.5 million TEUs last year. The Indonesian Port Corporation said that the container traffic has already reached almost 6 million TEUs and this estimated figure is almost double the traffic in 2009. Additionally, the IPC predicts that it is possible to boost their business not only because of strong economic growth but also expansion of the port since 2009. Other part, for the last 3 years, the IPC installed a new container loading cranes and a vessel traffic information system which cost nearly US\$250 million and implemented a 24-hour port operation system. As a result, adding the fact that a container ship with a capacity of 5,000 TEUs was able to dock at the port every day, surging cargo traffic was also recorded at 11 other ports managed by the IPC. The company has strengthened these ports to deal with more container traffic. For example, 4 new terminals and cranes will be established by the end of 2012 at the Teluk Bayur Port in Padang, West Sumatra.

Refer to the article: Container traffic expected to increase 27% this year

<http://www.thejakartapost.com/news/2012/11/16/container-traffic-expected-increase-27-year.html>

## 2. Topic

### **Chinese J-15 fighter succeeded in taking off from and landing on China's first aircraft carrier *Liaoning***

#### **November 27 "U.S. experts' comment: "China Aircraft Carrier Style!" assessing the first takeoff and landing" (The Wall Street Journal, November 27, 2012)**

American experts on Chinese military affairs, Andrew Erickson and Gabe Collin contributed an article titled "China Aircraft Carrier Style!" to the American newspaper *The Wall Street Journal* dated the 27th, commentating about that an Chinese J-15 fighter succeeded in taking off from and landing on China's first aircraft carrier *Liaoning*. On the weekend in the fourth week of November, CCTV first broadcasted that J-15 landed and took off again on the aircraft carrier. Ericson and Collin described the first takeoff and landing, saying that China exceeded the expectations of many foreign observers regarding timelines for the practical use of the Chinese aircraft carrier. Below is the summary of the article.

- (1) One carrier image in particular has caught the Chinese public's imagination: that of a launch officer's signal to release the wheels and send the aircraft racing down the runway. This iconic image of a "shooter" in action, popularized in the American film "Top Gun," encapsulates Chinese aspirations for national success. Accordingly, images of Chinese of a wide range of ages and walks of life assuming the stance, some in the most unlikely locations, have flooded the Internet — a meme reminiscent of planking that Chinese Internet users having taken to calling "Aircraft Carrier Style," after a certain viral video out of South Korea. In addition to the shooter gesture, American naval aviators with whom we spoke have noted familiar hardware and procedures akin to U.S. Naval Air Training and Operating Procedures Standardization (NATOPS). The landing signals officer platform, optical landing system, effective non-skid flight deck, and color-specific uniforms are all strikingly similar to their U.S. and Russian equivalents. China clearly appears to be employing a measured, methodical approach and taking the time to get things right. *Liaoning* and its crew were ready for the new step of landing the J-15 and having it takeoff again. All the pieces were in place, and the weather was ideal.
- (2) To support future carrier capabilities, China must now establish comprehensive support infrastructure that the U.S. military refers to as doctrine, organization, training, materiel, leadership and education, and personnel and facilities (DOTMLPF). It must develop training, logistics, and maintenance pipelines. It must also develop operational infrastructure, including command and control. In all these areas, which involve primarily hardware and software, it can continue to emulate U.S. and Russian approaches in many respects.
- (3) Where China will truly have to develop its own approach is in developing a theory of

operations: what its carriers will be used for, how many it will need, and the training and procedures to support such use. Here China may face more difficult challenges.

One obvious use of carriers is to enhance Chinese prestige by showing that Beijing has joined an exclusive international club. As soon as *Liaoning's* air wing can be assembled, and operated with some degree of confidence, it will likely depart Chinese waters on a series of cruises to “show the flag” as a Great White Fleet of one. (Note: the name of United States Atlantic Fleet that displayed its power through around-the-world voyage from December 1907 to February 1909)

A second major mission is likely to entail demonstrating, and if necessary using, capacity to pressure neighbors with which China has island and maritime disputes. Being able to use deck aviation to cover an amphibious assault on islands, rocks and reefs—e.g., in the South China Sea—offers Beijing the means to pressure its smaller rivals without confrontation escalating into a shooting war. This approach may be fraught with risk, however, not only politically but also operationally. Carriers are generally ineffective platforms for sea control fighting in confined waters given their extreme vulnerability to missiles and other means of attack. Even a far-less-capable military, such as that of Vietnam, has the ability to develop rudimentary “anti-access” capabilities.

Beyond the possible regional contingencies where Chinese leaders might see a carrier as a useful instrument of national power, there is the question of to what extent the Chinese aircraft carrier program will be governed by the country’s naval strategy, and to what extent the carrier’s existence may reshape Navy leaders’ policy outlook and perception of how many carriers it needs. Although the ultimate number of aircraft carriers China will build remains uncertain, Chinese sources such as the *Liaoning* carrier’s deputy chief designer suggest the country seeks multiple carriers. There are relatively straightforward operational reasons behind seeking multiple vessels. For instance, keeping 1-2 carriers operationally ready means that the PLAN would likely need at least 3-4 vessels.

- (4) Carrier aviation is an inherently risky business. In “Top Gun,” Nick “Goose” Bradshaw dies in a training accident. In real life, the U.S. carrier program was forged in the crucible of wartime, when severe losses were not just accepted but expected. Planes and pilots were lost at an extreme rate, but the Navy gained invaluable experience in the process. High loss rates persisted well through the early Cold War years. Despite tremendous improvements, even today it is not uncommon for a plane, pilot or deck crew member to be lost.
- (5) Chinese deck aviation, by contrast, is being developed in a technologically-advanced peacetime environment that does not justify significant losses. While carriers have always been “high-value units” whose use has been predicated on acceptable risk, today’s aircraft are more expensive and pilots scarcer in relative terms, making losses much harder to tolerate. Beijing has started with a prestigious, flawless image, and wants to maintain it both abroad and perhaps especially at home. In fact, the very public interest and support that has helped to propel China’s aircraft carrier program may stymie it by making decision-makers extremely risk averse.

(6) This poses a dilemma. Adopting a risk-averse flight posture and avoiding high-volume flight operations may minimize accidents, but it cannot prevent them entirely. An American naval analyst has recounted to us a slow-motion tragedy in which a U.S. Navy aircraft caught an arrestor wire and ruptured it without slowing down sufficiently. Unable to stop in time, yet sapped of momentum sufficient to permit a hasty takeoff, the aircraft rolled off the deck in front of the carrier and was promptly run over, causing both aircraft and pilot to be lost. Even the most meticulous Chinese operations could not prevent such an accident. On the other hand, always choosing “baby steps” over “pushing the envelope” will severely restrict the progress that Beijing can make. Chinese planners thus face important decisions in this regard. How they decide will be reflected in part in how aggressively *Liaoning* pursues operations at night, in all weather conditions, and in rough seas. Perhaps if public excitement eventually dies down, it will become easier to use the carrier.

Refer to the article: China Aircraft Carrier Style! Assessing the First Takeoff and Landing  
<http://blogs.wsj.com/chinarealtime/2012/11/27/china-aircraft-carrier-style-what-first-takeoff-and-landing-means/>



In this undated photo released by China’s Xinhua News Agency, made available on Sunday, November 25, 2012, a carrier-borne J-15 fighter jet lands the *Liaoning*.



This frame grab taken from Chinese television CCTV on November 27, 2012 shows undated video broadcast on November 25 of two crew members directing a Chinese-made J-15 fighter jet as it takes off from the deck of the *Liaoning*, China's first aircraft carrier.



In this undated photo released by China's Xinhua News Agency, made available on Sunday, November 25, 2012, a carrier-borne J-15 fighter jet takes off from China's first aircraft carrier, the *Liaoning*.

**【Related article 1】****“Korean naval professional’s comment: China’s A2/AD strategy and commissioning of aircraft carrier” (Pac Net, No 72, November 13, 2012)**

Dr. Sukjoon Yoon (retired ROK Navy Captain), a senior research fellow of the Korea Institute for Maritime Strategy and visiting professor of defense system engineering, Sejong University in Seoul, contributed an article titled “An Aircraft Carrier’s Relevance to China’s A2/AD Strategy” to *PacNet*, No. 72 of CSIS Pacific Forum dated the 13th. Yoon discussed the position of a Chinese aircraft carrier in A2/AD strategy in his article as follows.

- (1) Two forces have driven the acquisition of China’s first aircraft carrier: the ambition of the late Adm. Liu Hwaqing, known as China’s Mahan, who, as the first PLAN officer to visit a U.S. aircraft carrier, played a crucial role in promoting the PLAN’s interests; and the concern of the Chinese leadership that their country’s status as a permanent member of the United Nations Security Council could be undermined by the lack of an aircraft carrier. According to this view, possession of an aircraft carrier and its associated air wing are the preeminent manifestation of great power status. Until 2012, China’s naval air capabilities were limited to regional naval power functionality –notwithstanding its global interests –after the strategic prioritization of asymmetric tools in a naval modernization drive that had strictly adhered to an “anti access, area denial” A2/AD strategy. The *Liaoning*, China’s first aircraft carrier, and the most substantial and transformational naval platform ever built by the Chinese navy, signals the start of a new phase for China.
- (2) The conceptual basis of China’s military strategy has been considered defensive in nature due to the lack of high-level military technologies and resources. The PLAN has adopted an A2/AD strategy with asymmetric assets such as anti-ship cruise missiles (ASCM), anti-ship ballistic missiles (ASBM), and stealthy diesel and nuclear-powered submarines. The PLAN’s acquisition of an outdated aircraft carrier has changed the nature of its naval strategy. With an aircraft carrier and, before long, indigenous aircraft carriers capable of carrying 2~3 air wings, the PLAN has progressed one step closer toward deploying an operational area-access and ocean-going task fleet comprising a variety of assets, including sophisticated surface screening, underwater, early warning and replenishing, and support-at-sea vessels. With its fleet air wing capability, China will be able to achieve significantly greater offensive naval power projection capabilities, which will extend the combat-effectiveness of its land-based naval power beyond the regional air defense functions of its current fleet. Alarm bells have been ringing recently. In future naval exercises, a yet-to-be-commissioned indigenous aircraft carrier seems to be the intended flag ship, with a naval operation concept of composite warfare, including naval air wing functions of fleet air defense and the projection of air-strike power inland. The PLAN aircraft carrier apparently means to test the application of the concept of offensive multi-mission naval warfare, as manifest in a blue-water navy capacity reaching to the outer island chain.
- (3) The induction of China’s first-ever operational aircraft carrier indicates that the naval

concept of sea control is gaining ground against the established, and much less expensive, concept of sea denial. The Chinese A2/AD strategy has produced very successful and satisfactory results, and continuing this approach may result in the U.S. withdrawing back to Guam-Hawaii-San Diego and the PLAN being able to take a breath to build momentum for the expansion of its naval operational space. The expected commissioning of an indigenous aircraft carrier by the PLAN in the near future will clearly distinguish the line between an A2/AD strategy and a sea control concept. The A2/AD strategy has demonstrated that the Chinese navy can apply the concept of sea denial as a low-cost, low-risk and high effective strategy to prevent adversaries from using the maritime domain. Once it possesses true aircraft carrier capability, however, the PLAN will be able to implement a new conception of maritime strategy, based on the principle of sea control rather than sea denial.

- (4) There are U.S. countermeasures designed to marginalize the Chinese A2/AD strategy: the AirSea Battle Concept (ASBC) published in 2011, and the Joint Operational Access Concept (JOAC) published by the Pentagon and the United States Joint Chiefs of Staff in 2012. The former is aimed at China's A2/AD strategy, and the latter focuses on the deterrence of China's military expansion into the western Pacific. The existence of Chinese aircraft carriers has provoked a debate among the United States and its allies. The received wisdom is that China's current A2/AD strategy in the East Asian seas will soon be amended, and that a Chinese declaration of "no-go-zones" is more than likely. The United States and its partners have to articulate a maritime strategy beyond the passive "Cooperative Strategy for 21st Century Sea Power," and it has to be more specific than the stated intention to achieve a 60/40 allocation of U.S. naval assets between the Pacific and the Atlantic. To counter the Chinese aircraft carrier(s), the U.S. navy needs a "US version" of the A2/AD strategy, such as the ASBC.

Refer to the article: An Aircraft Carrier's Relevance to China's A2/AD Strategy

<http://csis.org/files/publication/Pac1272.pdf>

### **【Related article 2】**

#### **“U.S. Navy take notice: China is becoming a world-class military shipbuilder” (The Diplomat, November 1, 2012)**

American experts on Chinese military affairs, Andrew Erickson and Gabe Collin contributed an article titled “U.S. Navy Take Notice: China is Becoming a World-Class Military Shipbuilder” to the web magazine *The Diplomat* dated the 1st. They said, “China’s military shipyards now are surpassing Western European, Japanese, and Korean military shipbuilders in terms of both the types and numbers of ships they can build. If Beijing prioritizes progress, China’s military shipbuilding technical capabilities can likely become as good as Russia’s are now by 2020 and will near current U.S. shipbuilding technical proficiency levels by 2030. China is now mass producing at least six classes of modern diesel-electric submarines and surface warships, including the new Type 052C “*Luyang II*” and Type 052D “*Luyang III*” destroyers now in series production.”

In addition, eight key themes, listed sequentially below, characterize China's rise as a world-class military shipbuilder. For reference, the companies building the warships are China State Shipbuilding Corporation ("CSSC") and China Shipbuilding Industry Corporation ("CSIC").

1. China's warship buildout thus far supports modernization and replacement, not rapid expansion

Over the past six years, China's overall fleet of frontline combatants has expanded, but slowly, growing from 172 ships in 2005 to an estimated 221 vessels in 2012. However, the fleet has improved substantially in qualitative terms as newer ships and subs replace older ones. For instance, as Type 052 C/D *Luyang*-series destroyers, Type 054A *Jiangkai* II-series frigates, and Type 041 *Yuan* diesel-electric submarines have come into the fleet, they are allowing the People's Liberation Army Navy (PLAN) to steadily retire obsolete platforms like *Luda* destroyers and *Ming* submarines.

2. Chinese military shipbuilders are catching up to Russian and U.S. Yards

China's large state-backed military shipbuilders are approaching their Russian and U.S. peers in terms of the number of warships built. China's large submarine and surface warship buildout will, in a decade, likely have it become second only to the United States in terms of total warships produced since 1990. More importantly, the ramp-up of China's construction of large warships in recent years will mean the PLA Navy will likely be taking delivery of larger numbers of modern surface combatants and submarines annually than the U.S. Navy. Measured in terms of warships commissioned since 1990, China is now number three globally and is rapidly gaining on Russia, the number two country. Most of Russia's post-1990 military ship deliveries simply reflected yards "finishing up" Soviet-era projects.

3. China's military shipbuilders are using modular mass production techniques

CSSC's Jiangnan Shipyard is using modular construction methods to build Type 052-series destroyers. Modular construction involves building the ship in "blocks." This maximizes a shipyard's productive potential and also provides greater latitude for modifying designs and customizing ships. Modular construction also gives yards the flexibility to either build centers of expertise within the yard or outsource the production of certain components and then import them to the yard for final assembly. CSSC's Hudong Zhonghua shipyard also appears to be using modular construction techniques for the Type 071 LPD (dock landing ship). The yard has now constructed four of the vessels, two of which are in service and two of which are in the trial/outfitting stage. They have also been able to fabricate the Type 071 hulls faster, with a time gap of nearly four years between the first and second vessels, but only 10 months between vessels two and three, and four months between vessels three and four.

4. China's military shipyards appear to be sharing design and production information across company lines

Historically, CSIC built all Chinese submarines, but the current production run of Type 041 *Yuan*-class advanced diesel electric subs has seen at least two boats being built in CSSC's Jiangnan yard. This suggests submarine construction expertise is growing outside of CSIC. However, there are no indications thus far that CSSC is doing submarine design work, which



could mean that Beijing is making the companies and their design institutes share submarine design and construction information. Likewise, the new Type 056 corvette is being built in both CSSC and CSIC shipyards, suggesting that a standardized design and production approach is being shared by both companies.

5. China's military shipbuilders will be able to indigenously build aircraft carriers

China's first aircraft carrier, *Liaoning*, which entered service on September 25<sup>th</sup>, 2012 of this year, started as an empty hull and gave CSIC valuable experience in effectively creating an aircraft carrier from the keel up. China has a total of seven shipyards with sufficiently large berths to assemble a carrier hull (three hundred meters or more), and the yards are basically equally dispersed between CSSC and CSIC. These yards are located in Dalian (CSIC), Qingdao (CSIC), Huludao (CSIC), Shanghai (CSSC), and Guangzhou (CSSC). CSIC Bohai Shipbuilding Heavy Industry complex near Huludao (where China builds its nuclear submarines) is a top candidate due to its large, covered building sheds where carrier parts could be fabricated in modular fashion and out of the view of satellite surveillance. The company says it has the "largest indoor seven-step" ship construction facilities in China. This facility, together with CSSC's large new Changxing Island yard, and CSIC's Dalian yard—which fitted out the carrier *Liaoning* that just entered PLAN service—are the three leading candidates to build China's indigenous carriers.

6. China will retain a military shipbuilding cost advantage

We project that for at least the next five years, Chinese shipbuilders will have a substantial labor cost advantage over their counterparts in South Korea, Japan, and the United States. CSSC's Jiangnan shipyard can likely deliver a Type 052C destroyer for 24% less than it costs Korea's Hyundai heavy Industries to produce a KDX-III destroyer. Likewise, according to disclosures in the July 2011 issue of *Shipborne Weapons*, Wuchang shipyard can produce a late model diesel electric sub such as the Type 041 for roughly 47% less than it would cost South Korea's DSME to make a Type 209 submarine. The lower labor cost in China likely serves as a core driver. This may help explain the larger Chinese cost advantage in building submarines, since advanced submarines can require substantially larger number of man-hours to build than surface ships do.

7. China's neighbors feel increasingly compelled to augment their naval forces in response to Chinese warship production

South Korea has decided to expand its procurement of advanced diesel-electric submarines to include nine KSS-III 3,000-ton submarines by 2020 and nine 1,800-ton subs by 2018. South Korea has also elected to double its Aegis destroyer purchases over the next decade. Similarly, Vietnam's maritime friction with China and fear of the PLAN's growing power is making Hanoi into one of the Russian defense industry's star customers. Vietnam has ordered six *Kilo*-class diesel submarines from Russia and is likely to take delivery of its first *Kilo* by the end of 2012. Hanoi is also adding advanced Russian anti-ship missiles and stealthy *Gepard*-class missile armed patrol boats to its naval force.

## 8. China now has the potential to become a significant exporter of diesel submarines and smaller surface warships

China's shipbuilders are becoming increasingly competitive in terms of the ratio of cost to combat power they can deliver. For instance, the July 2011 issue of *Shipborne Weapons* reports that China will supply 6 potentially Air-Independent Propulsion (AIP)-equipped submarines to Pakistan for as little as 1/3 the unit price at which European shipyards would be able to supply comparable boats. With the advent of the Type 041 *Yuan*-class diesel sub and Type 056 corvette, China now has two platforms for which it is already capable of series production and for which the unit costs are likely to drop significantly in coming years. The export version of Russia's *Stregushiy*-class corvette, called *Tigr*, currently stands at around U.S. \$150 million per vessel. As China's Type 056 production run continues to expand, it would not be a surprise to eventually see the PLAN's unit cost end up in the U.S. \$110-120 million per vessel cost range, which would make the Type 056 a serious export competitor to the *Tigr* and other smaller Russian warships.

### Conclusion – Challenges for the Future

China's naval shipbuilding industry has advanced to the point that it can series produce modern diesel submarines, landing platform docks (LPDs), destroyers, frigates, corvettes, and fast attack craft, albeit with some imported components for a number of key systems. The ongoing series production of Type 041 SSKs, Type 071 LPDs, Type 052 destroyers, and Type 056 corvettes strongly suggests that China's military shipbuilders have rapidly assimilated commercial innovations such as modular construction.

Chinese naval shipbuilding faces several challenges moving forward. Most notably, six major questions remain:

- (1) Does Beijing have the political will to continue devoting substantial and growing resources to naval modernization?
- (2) Can China achieve requisite technical advances in weapons systems, propulsion, and military electronics?
- (3) Can China master the technologies needed to build nuclear submarines capable of surviving in a conflict with U.S. and Russian boats?
- (4) Can it build an aircraft carrier with catapults that would allow it to maximize the strike and air combat capabilities of the J-15 fighter it is likely to carry?
- (5) Will the Chinese leadership be willing to invest political and financial capital in establishing intensive and realistic training for the PLAN and provide diplomatic support for establishment of sustained access to facilities in key areas such as the Indian Ocean region?
- (6) Will continued weakness in the global ship market prompt Beijing to capitalize on the availability of shipyard space to further increase the pace of military shipbuilding?

The U.S. strategic rebalancing toward the Asia-Pacific will need more than rhetoric if it is to remain credible in the face of China's potential to rapidly produce modern warships. The Pentagon should consider adjusting the U.S. Navy's ship acquisition programs in response. As

Chinese warships become better, the numbers ratio between the PLAN and U.S. Navy combatants will become increasingly important. Given that shipbuilding is an industry where lead times can be many years, now is the time for Washington to prepare strategically for further naval advances.

Refer to the article: U.S. Navy Take Notice: China is Becoming a World-Class Military Shipbuilder

<http://thediplomat.com/2012/11/01/u-s-navy-take-notice-china-is-becoming-a-world-class-military-shipbuilder/>





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