

CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

Michael A. McDevitt • Catherine K. Lea



Conference Report

DCP-2012-U-002417-Final
August 2012



Photo credit line:USN and Phillippine Navy Task Group during CARAT 2012 – A U.S. Navy Photo

Approved for distribution:

August 2012

A handwritten signature in black ink, appearing to read 'W. Eugene Cobble, Jr.'.

Dr. W. Eugene Cobble, Jr., Director
Strategic Initiatives Group
Strategic Studies

This document contains the best opinion of the authors at the time of issue.
It does not necessarily represent the opinion of the Department of the Navy.

Cleared for public release. Specific authority: N00014-11-D-0323.
Copies of this document can be obtained through the Defense Technical Information Center at www.dtic.mil
or contact CNA Document Control and Distribution Section at 703-824-2123.

Copyright © 2012 CNA

This work was created in the performance of Federal Government Contract Number N00014-11-D-0323. Any copyright in this work is subject to the Government's Unlimited Rights license as defined in DFARS 252.227-7013 and/or DFARS 252.227-7014. The reproduction of this work for commercial purposes is strictly prohibited. Nongovernmental users may copy and distribute this document in any medium, either commercially or noncommercially, provided that this copyright notice is reproduced in all copies. Nongovernmental users may not use technical measures to obstruct or control the reading or further copying of the copies they make or distribute. Nongovernmental users may not accept compensation of any manner in exchange for copies. All other rights reserved.



Republic of Korea Navy and China's Rise: Balancing Competing Priorities

Terence Roehrig

Director, Asia Pacific Studies Group, Naval War College

Introduction

South Korean concerns for China's evolving maritime interests and capabilities are part of a larger and complicated relationship. The two share a long history with far reaching cultural ties and numerous common interests. Seoul recognizes that it needs Beijing's help and influence in dealing with North Korea (Democratic People's Republic of Korea—DPRK) and their economic ties have grown significantly since establishing formal diplomatic relations twenty years ago. In 1992, South Korea's (Republic of Korea—ROK) trade with China was only \$6.4 billion but by 2011 had grown to \$220.6 billion with a \$47.7 billion surplus for South Korea.¹ Since 2003 China has been South Korea's number one trading partner, a position long held by the United States. For China, these trade levels are smaller as a share of its total trade but for South Korea, China consumes close to 30 percent of its exports. However, South Korea is the 4th largest source of foreign direct investment for China.² In May 2012, South Korea and China began negotiations on a free trade agreement. Thus, continued prosperity for the ROK economy, now the 15th largest in the world, depends greatly on its economic ties with China. Some ROK scholars and analysts have raised concern that growing U.S.-Sino rivalry will place South Korea in a difficult position that forces it to choose with the possibility of having to go against ROK interests by siding too closely with Washington. Others maintain that the ROK-U.S. alliance remains the bedrock of South Korea's security, with others arguing that the proper course is to balance these positions by

1 Korea Customs Service, "Import/Export by Country," <http://english.customs.go.kr/kcshome/trade/TradeCountryList.do>.

2 Li Jiabao, "China, S. Korea launch FTA negotiations," *Jakarta Post*, May 3, 2012, <http://www.thejakartapost.com/news/2012/05/03/china-s-korea-launch-fta-negotiations.html>.



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

maintaining the alliance while being more attentive to ROK relations with others in East Asia.³

Despite the strong economic ties and common interests, South Korea also has some anxiety regarding its relations with China. Some of the concerns include trepidation over China's overall strategic direction, Beijing's efforts to forcibly repatriate North Korea defectors along with its overall human rights record, a historical dispute over the ancient Kingdom of Koguryo (Gaogouli to China),⁴ and Beijing's reluctance to criticize Pyongyang for the sinking of the ROKS *Cheonan* (March 2010) and the shelling of Yeonpyeong-do (November 2010). In addition to these matters, there are several maritime issues that are problems in the relationship that impact ROK maritime strategy and naval modernization. The South Korean Navy does not appear to have made any specific operational changes in response to its concerns but its development of a blue water navy continues in part with an eye toward China.

While China is a part of ROK motivation for developing a blue water navy, Seoul has other reasons. South Korean leaders have recognized that as its economic and political power have grown, so too have its interests and need to protect them. As its power and influence as a rising middle power have increased, South Korea has begun to build a blue water navy commensurate with that position. Heavily dependent on international trade, the South Korean Navy helps guard shipping lanes and contribute to global efforts to protect the maritime commons. In addition, ROK leaders are concerned about the continuing maritime threat posed by North Korea as demonstrated by the *Cheonan* and Yeonpyeong-do events along with the dispute that continues with Japan over Dokdo, or Takeshima to the Japanese.

Thus, South Korea faces a complex security environment that increasingly has important maritime components, a situation that produces many competing priorities from coastal defense against North Korea to regional concerns, and finally to global protection of sea lanes and contributing to humanitarian assistance and disaster relief operations (HADR). Consequently, concerns for China are only one piece of the ROK Navy's strategy and force planning decisions.

3 Song Sang-ho, "S. Korea faces strategic choices amid growing Sino-U.S. rivalry," *Korea Herald*, July 12, 2012 <http://view.koreaherald.com/kh/view.php?ud=20120712001111&cpv=0>.

4 Terence Roehrig, "History as a Strategic Weapon: The Korean and Chinese Struggle over Koguryo," *Journal of Asian and African Studies* 45, no. 1 (February 2010): 5-28.



The remainder of this paper will address the history and current structure of the ROK blue water navy, ROK-Sino maritime disputes, and recommendations to address future challenges.

Building the Blue Water Navy

The ROKN website is emblazoned with the banner “To the Sea, To the World,” an apt indicator of the intention to build a blue-water navy. That path began in 1995 when Admiral An Byoung-Tae, then Chief of Naval Operations lobbied President Kim Young-sam to begin construction of an ocean-going navy. In its early years, the ROK Navy was a small fleet consisting mostly of coastal patrol craft. In the 1970s and 80s, the ROK fleet grew in size and capability through the acquisition of U.S. Navy destroyers and the construction of more modern patrol boats. However, the fleet remained focused on coastal defense.⁵ President Kim agreed with Admiral An’s proposal, and in the late 1990s, the Navy began its first steps toward building a blue water fleet.⁶ In a 2001 speech before the graduates of the Korean Naval Academy, President Kim Dae-jung declared his backing for the decision stating that South Korea would pursue a “strategic mobile fleet that protects state interests in the five big oceans and plays a role of keeping peace in the world.”⁷ Thus, according to President Kim, “The government will do all it can to help the navy grow into a true blue-water force.”⁸

In 2005, the Ministry of National Defense released Defense Reform 2020, a fifteen year military modernization program that called for increasing the size of the Navy from 67,000 personnel to 70,000 and continued the move toward a blue water navy. Later, President Lee Myung-bak expressed his support and stressed the importance of maritime power to the country.

5 Yoji Koda, “The Emerging Republic of Korea Navy: A Japanese Perspective,” *Naval War College Review* 63, no. 2 (Spring 2010): 13-26, and Michael McDevitt, “The Maritime Relationship,” in Scott Snyder (ed.), *The US-South Korea Alliance: Meeting New Security Challenges* (Boulder: Lynne Rienner, 2012): 22-26.

6 Mingi Hyun, “South Korea’s Blue-water Ambitions,” *The Diplomat*, November 18, 2010 <http://thediplomat.com/2010/11/18/south-koreas-blue-water-ambitions/>.

7 “ROK Navy,” *Global Security.org*, <http://www.globalsecurity.org/military/world/rok/navy.htm>.

8 “South Korea: Joining Asia’s Naval Arms Race,” *Stratfor*, March 28, 2011, <http://www.stratfor.com/analysis/south-korea-joining-asias-naval-arms-race>.



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

The 21st century is the era of the ocean. We have to build a state-of-the-art force that can protect our maritime sovereignty. With a vision for an advanced deep-sea Navy, our Navy should become a force that can ensure the security of maritime transportation lines, and contribute to peace in the world. Sea is the turf for our survival and national prosperity. Only if we efficiently defend and use the sea can peace and economic growth be secured.⁹

Aided by its accomplished shipbuilding industry that included the firms of Hyundai, Daewoo, and Hanjin, South Korea embarked on an aggressive shipbuilding program. Under Defense Reform 2020, ROK officials projected defense spending increases of 8-10 percent over the 15 years of the program.¹⁰ The first few years, budgets met these targets but by 2007-08, the global financial crisis and the slumping ROK economy reduced the defense budget and slowed the pace of ship construction. The fallout from the sinking of the *Cheonan* in 2010 also forced an adjustment to the tempo of the blue water program. The tragedy was a reminder of the DPRK maritime threat and the need for a stronger coastal defense, particularly ROK anti-submarine capability and readiness. The newest version of the 2020 plan, Defense Reform 307 places greater emphasis on coastal defense and deterring a conventional war with North Korea.¹¹ As a result, it is likely that ROK ambitions for a blue-water capability will remain but will have a longer time-line for adding to its fleet of ocean-going warships.

South Korea's commitment to building a blue-water navy stems from several motives. First, ROK leaders recognized that given South Korea's dependence on export markets, it was crucial for the country to build the naval capabilities to protect its maritime commerce. Growing its blue water force allows Seoul to furnish a greater share of its own security while also giving it the capability to join multilateral efforts such as the anti-piracy Combined Task Force (CTF)-151 in the Gulf of Aden.¹²

9 Jin Dae-woong, "Lee backs plan for blue-water Navy," *Korea Herald*, March 19, 2008, <http://www.koreaherald.co.kr/archives>.

10 International Institute of Strategic Studies, *The Military Balance*, (London: IISS, 2007): 339.

11 See Bruce W. Bennett, "The Korean Defense Reform 307 Plan," Issue Brief No. 8, *Asan Institute for Policy Studies*, April 2011, and Han Nack Hoon, "South Korea's Defence Reforms: Impact on the Navy," *Rajaratnam School of International Studies*, Commentary 183 (December 14, 2011).

12 See Terence Roehrig, "South Korea's Counter-Piracy Operations in the Gulf of Aden," forthcoming with the Council on Foreign Relations, Fall 2012.



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

Second, an increasing number of challenges to global security are occurring in the maritime domain. Illegal fishing, island and maritime boundary disputes, limiting the spread of nuclear, chemical, and biological weapons, HADR, and ballistic missile defense, among others require increased naval capability along with cooperation among maritime states. South Korea's growing and respected naval capabilities allow it to join international efforts to address these problems and make it a sought after partner for security cooperation.

Finally, South Korea's naval development is also intended to address concerns for the uncertain future of the East Asia region. Despite its close economic ties with Beijing, South Korea shares some of the same unease regarding China's rise and its future strategic intentions as do others in the region. In addition, South Korea and China have specific maritime disputes including overlapping EEZ claims, clashes over illegal fishing, and the row over Ieodo, a reef China calls Suyan rock. Many states in the Asia-Pacific, including South Korea, have adopted a hedging strategy regarding China in the face of several possible outcomes. South Korea's rivalry with Japan along with their continued dispute over Dokdo/Takeshima has also contributed to Seoul's desire for a blue water navy. The security environment in East Asia is dominated by water; thus any regional competition is likely to have a significant maritime component. A sizeable and competent ROK Navy is viewed as an important asset for protecting South Korea's interests.

The North Korean provocations of 2010 had an important impact on ROK ambitions to build its blue water navy. The attacks reminded military planners that despite South Korea's global interests and ambitions, there remain crucial defense priorities close to home.¹³ The question of whether to focus on coastal defense or a blue water navy does not have an either or answer. As its economic and political power has grown, South Korea has pursued the naval strength of a rising middle power to address regional and global concerns in addition to maintaining a robust local defense to protect against the North Korean threat. Instead, the issue is one of balance, and ROK leaders continue to assess and struggle with where to draw the lines between coastal defense and a blue water navy to achieve the proper balance.

13 Jung Sung-ki, "Navy to focus on littoral warfare," *Korea Times*, September 15, 2010, http://www.koreatimes.co.kr/www/news/nation/2010/09/205_73102.html.



The ROK Navy

The South Korean fleet consists of 177 ships and submarines with 12 destroyers, a large deck amphibious vessel, 9 frigates, 12 submarines, 109 corvettes and coastal/patrol vessels, 10 mine warfare ships, and 24 support ships (See table 1). The ROK Navy has 68,000 personnel including 27,000 Marines compared to 522,000 in the South Korean Army and 65,000 in the Air Force.

Table 1: Republic of Korea Naval Forces

Vessel	Number in Service	Planned for Construction
KDX-I Gwanggaeto the Great class <i>Gwanggaeto the Great</i> (DDH 971) <i>Ulchi Mundok</i> (DDH 972) <i>Yang Manchun</i> (DDH 973)	3	
KDX-II Chungmugong Yi SunShin class <i>Chungmugong Yi SunShin</i> (DDH 975) <i>Munmu the Great</i> (DDH 976) <i>Dae Joyeong</i> (DDH 977) <i>Wang Geon</i> (DDH 978) <i>Kang Gamchan</i> (DDH 979) <i>Choi Young</i> (DDH 981)	6	
KDX-III King Sejong the Great class <i>King Sejong the Great</i> (DDG 991) <i>Yulgok Yi I</i> (DDG 992) <i>Seoae Ryu Seong-ryong</i> (DDG 993)	3	
Dokdo class <i>Dokdo</i> (LPH 6111)	1	3
KSS I - Chang Bogo class submarines	9	
KSS II - Son Won-il class submarines	3	6
KSX-III		9
Fast Attack Patrol boats (PKM)	75	
Patrol Killer, Guided Missile (PKG) Gumdoksuri class	7	13
New Frigate Program (FFX)		12-30
Frigates (FFG) Ulsan-class	9	
Corvettes (PCC) Pohang-class	23	
Corvettes (PCC) Dong Hae-class	4	
Mine Warfare	10	
Logistics and Support	24	
TOTAL SHIPS AND SUBMARINES	177	



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

The South Korean blue water navy began with a three phase destroyer program.¹⁴ The first phase was the construction of the KDX-I Gwanggaeto the Great class destroyer, a 3,800 ton ship whose size makes it more of a frigate than a destroyer. The KDX-I is a multi-purpose ship with advanced weapons and sensors, and a helicopter deck configured to conduct strike operations, screening and convoy duty, anti-submarine warfare (ASW), and support for amphibious operations. The first ship in this line was commissioned in 1998 with plans to build up to 10 ships in this class. However, the ROKN capped the program at three and began the second phase of the destroyer program with the KDX II Chung Mugong Yi Sunshin class.

The KDX-II is a 4,800 ton ship with advanced combat systems including state-of-the-art air defense and anti-submarine warfare systems. Many of these components were purchased from the U.S. Navy. The class and first vessel are named after Admiral Yi Sunshin, the revered naval hero who defeated the Japanese twice in the 1590s and is credited with designing Korea's famous turtle ship. South Korea has built six KDX-IIs and had plans to possibly build three more. However, it is likely the program will be stopped with funds shifted to building other hulls.

Yi Sunshin destroyers are equipped with advanced combat systems including Harpoon ship-to-ship missiles, RAM MK 31 ship-to-ship guided missiles, advanced air defense and ASW capabilities, SM-2 air defense missiles, and the Goalkeeper system for anti-ship torpedoes and missiles. The KDX-II has a stealth hull design licensed from the German company IABG that is capable of deflecting radar and has other anti-detection features. The vessel is also equipped to function as the lead in a combat task force. The ship has been the backbone of ROK participation in CTF-151 where since March 2009 South Korea has deployed the *Cheonghae* unit to the Gulf of Aden consisting of one KDX-II, 30 ROK SEALs, and a Lynx helicopter. Since that time, Seoul has maintained a KDX-II vessel in the region and has been in command of CTF-151 on two separate occasions. The CTF-151 commitment requires three KDX-II destroyers to account for rotations and maintenance leaving the remaining three for other duties.¹⁵

The third phase of the destroyer program began with the construction of the 7,600-ton Aegis-class destroyer, King Sejong the Great (DDG-991). The name-sake for the entire KDX-III class, the ship was built by Hyundai and commissioned in 2008.

14 Terence Roehrig, "ROK-U.S. Maritime Cooperation: A Growing Dimension of the Alliance," *International Journal of Korean Studies*, XIV, no. 1 (Spring/Summer 2010): 91-124.

15 Roehrig, "South Korea's Counter-Piracy Operations in the Gulf of Aden."



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

South Korea built two more ships in this class, the latest the ROKS *Seoae Ryu Seong-ryong* (DDG-993), which is set to be commissioned in September 2012. The most technically advanced ship in the ROKN, the KDX-III has SPY-1D radar that can track up to 1,000 targets and engage close to 20 of them simultaneously, and the Phalanx Close-In Weapons System. The KDX-III is a multipurpose vessel designed with land attack, ship-to-ship, air defense, and ASW capabilities. The ship is also designed to include ballistic missile defense, but is not outfitted with Aegis BMD modifications or SM-3 missiles necessary for a BMD mission.¹⁶ Similar to earlier KDX destroyers, the KDX-III utilizes a large share of combat systems purchased from the U.S. Navy, an important benefit for the interoperability of ROK and U.S. naval forces.

The ROKN also has plans to build a modified version of this ship, the KDX-IIa. The vessel is projected to be a 5,600 ton ship, larger than the KDX-II but not as large as the KDX-III though equipped with Aegis technology, SPY radar, SM-2 interceptors, and other advanced weapons systems. Construction of these ships is scheduled to occur from 2019 to 2026, and the ship is targeted as a possible export item for other navies.¹⁷

In 2007, South Korea commissioned the ROKS *Dokdo* (LPH-6111), its first amphibious assault ship. The 14,000 ton vessel has a helicopter flight deck and a flooding well deck to launch landing craft and air cushion hover craft. The *Dokdo* has modern command and control systems that allow the ship to operate as a task force flag ship capable of coordinating combat, peacekeeping, or HADR operations. South Korea has plans to build three more *Dokdo*-class ships but construction plans are unclear, in part due to tightening budgets. ROK plans for two or three strategic mobile fleets included an LPH as the center piece for each. In February 2010, the ROK Navy formed its first mobile fleet, Mobile Task Flotilla 7, a smaller version of an envisioned strategic mobile fleet. The flotilla will be composed of two squadrons with each squadron consisting of one KDX-III and supplemented with KDX-II destroyers, submarines, and frigates.¹⁸

16 "Korea's KDX-III AEGIS Destroyers," *Defense Industry Daily*, July 18, 2012, <http://www.defenseindustrydaily.com/drs-wins-multiplexing-contract-for-korean-aegis-destroyers-0431/>.

17 Jung Sung-ki, "S. Korea Navy to Build 6 Mini-Aegis Destroyers," *Korea Times*, October 13, 2009, http://www.koreatimes.co.kr/www/news/nation/2010/08/113_53441.html.

18 Jung Sung-ki, "Navy Activates 1st strategic Mobile Fleet," *Korea Times*, February 1, 2010, http://www.koreatimes.co.kr/www/news/nation/2010/07/205_60079.html.



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

In addition to its blue-water surface vessels, South Korea has also devoted considerable effort and resources to maintain its coastal defense capability. The ROKN has 75 170-ton fast attack patrol boats (PKM – Patrol Killer Medium) that make up a large share of its brown water navy. In 2008, Seoul commissioned the first *Gumdoksuri*-class high-speed patrol boat (PKG—Guided Missile Patrol Killer), the first of a new class of patrol vessels designed specifically for coastal duties. Development of the ship began in 2003 after a ROK patrol craft was sunk in a clash with North Korea along the Northern Limit Line. These vessels are 440-ton boats with guided missile and integrated combat systems similar to an Aegis ship. The PKG can detect and track 100 air and surface targets while its automated weapons system can engage multiple targets simultaneously. South Korea also has plans to build a smaller, 200-ton version of the PKG sometime in the future. Currently, the ROKN has commissioned seven of these vessels with plans to build an additional 20 to 25 in the years ahead.

The remaining initiative for modernizing its coastal defense is construction of a new line of frigates (FFX class). The plan calls for building 12 to 30, 3,200 ton multirole, modular frigates for coastal patrol, ASW, and convoy transport. The FFX and the two versions of the PKGs are intended to replace the aging Ulsan-class destroyers, the PKM fast attack patrol boats, and the Pohang and Dong Hae-class corvettes.

Finally, South Korea has also made strides to improve its submarine force. The ROKN has a fleet of nine Type 209 submarines, the Chang Bogo class, constructed initially with help from the German company Howaldtswerke-Deutsche Werft (HDW). Instead of building more Type 209 submarines, South Korea worked again with its German partner HDW to build the Type 214, Son Won-il class (KSS-2) submarine. Type 214 boats are equipped with more advanced systems including the air-independent propulsion (AIP) system that allows submarines to remain submerged for longer periods of time. South Korea currently has three Type 214 submarines with plans to build another six. The ROKN also intends to develop its own indigenous KSSX-III submarine. However, due to budget shortfalls, the program has been delayed, possibly until after 2022.

ROK-Sino Maritime Disputes

While China is only part of South Korea's motivation to develop a blue water navy, there are several specific maritime disputes that have aggravated ROK-Sino ties over the past decade or so and have fueled arguments for continued growth of South Korea's ocean-going navy. Three chief issues have been a problem: overlapping and disputed EEZ claims; illegal fishing; and the Ieodo/Suyan reef dispute. Though



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

these issues are addressed separately here, they are also interrelated and impact each other. Moreover, responding to these issues often falls immediately to the ROK Coast Guard and the ministry in charge of fishing, but these concerns also spill over to affect broader naval planning and strategy.

(1) *Overlapping and Disputed Exclusive Economic Zones.* The starting point for ROK-Sino maritime disputes is the overlapping claims for each country's EEZ. The UN Convention on the Law of the Sea (UNCLOS), the international law guide to these issues, provides that each state can claim a 200 nautical mile (nm) zone (approximately 370 km) from its coast wherein the state controls access to fishing and resources.¹⁹ Both South Korea and China ratified UNCLOS in 1996 and promptly declared their 200 nm EEZs which entailed considerable overlap since the Yellow Sea is approximately 378 nm at its widest part. If states with adjacent or opposite coastlines have EEZs that overlap, they are expected to arrive at a negotiated agreement for delimitation and in the meantime, "make every effort to enter into provisional arrangements of a practical nature and, during this transitional period, not to jeopardize or hamper the reaching of the final agreement."²⁰ Seoul and Beijing have held 16 meetings to settle the EEZ question but have been unable to arrive at a resolution. A common solution to settling overlapping claims is to use a median line that is drawn equidistant from the coastline of the disputing states but Beijing and Seoul have been unable to settle on this or any other solution.

South Korea has also given indications that it will submit claims for an extended continental shelf to the UN Commission on the Limits of the Continental Shelf with a claim that continues to the Okinawa Trough in the East China Sea.²¹ In 2009, South Korea filed a similar claim as preliminary information to the commission. However, in July 2012, ROK officials announced that despite earlier reports that the submission was coming soon, the foreign ministry had decided to postpone the move but would do so sometime within the year.²² China has disputed the claim and has sub-

19 See UNCLOS, Part V, at http://www.un.org/Depts/los/convention_agreements/texts/unclos/part5.htm.

20 UNCLOS, Article 74.

21 "South Korea aims to extend maritime claims," *UPI*, July 10, 2012, http://www.upi.com/Business_News/Energy-Resources/2012/07/10/S-Korea-aims-to-extend-maritime-claims/UPI-90471341931798/.

22 "Korea delays submitting claim on East China Sea shelf to UN," *Korea Times*, July 6, 2012, http://www.koreatimes.co.kr/www/news/nations/2012/07/113_114595.html.



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

mitted its own extended shelf declaration. Japan has also been unhappy with South Korea's position on this matter. This dimension of the dispute adds further difficulty to a final resolution of the EEZs.

(2) *Illegal Fishing.* Another problem that is tied to the lack of a delimitation of the EEZ is illegal fishing. Managing fishing stocks and ensuring that aquatic food sources remain a viable and renewable resource is a crucial transnational issue globally as well as in Asia. For China, it has become a particularly difficult problem. As the Chinese population has grown and become more urbanized, consumption of maritime products has risen as well with per capita levels increasing from 5 kg in 1970 to 25 kg in 2010.²³ As a result, Chinese boats have increasingly overfished local waters and have had to venture farther and farther out to sea, sometimes encroaching on the EEZs of other countries to satisfy the demand. Coastal pollution has also depleted local fishing stocks. In addition, China exports large volumes of maritime products with total sales approaching \$17.8 billion, close to 30 percent of the country's total agricultural exports.²⁴

While both sides worked to conclude a final delimitation agreement, managing the fishing activities in these waters remained a serious problem. In 2001, Seoul and Beijing signed a fishing agreement for the next five years as a temporary measure until a final EEZ agreement could be reached. Since this has not come to pass, the agreement has been renewed on an annual basis. The agreement provides for fishing zones, licensing procedures to fish in each other's zone, catch limits, and quotas for the number of boats allowed in each country's area. Despite the agreement, illegal fishing, almost exclusively Chinese boats encroaching on South Korean waters, has remained a problem. According to one report, from 2006 to 2011, over 2,600 Chinese boats and 800 fishermen have been caught fishing illegally in South Korean waters.²⁵

During the past two years, matters have become decidedly worse. In December 2010, two Chinese fishermen died when their boat capsized in a collision with a

23 Zhang Hongzhou, "China's Growing Fishing Industry and Regional Maritime Security," *S. Rajaratnam School of International Studies Commentaries*, June 2, 2012, <http://www.rsis.edu.sg/publications/Perspective/RSIS0912012.pdf>.

24 "Group Formed To Aid Fisheries," *China Daily*, May 30, 2012, http://europe.chinadaily.com.cn/china/2012-05/30/content_15418377.htm.

25 "Eradicate illegal fishing by Chinese boats in Korean EEZ," *Yonhap News Agency*, December 5, 2011.



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

South Korean Coast Guard vessel. China protested the handling of the affair and called for compensation. The following October, three Chinese fishing boats along with 27 crew members operating illegally in the ROK EEZ were seized by the ROK Coast Guard.

Tensions escalated further in December 2011 when a crew member on a ROK Coast Guard vessel was killed and another injured while boarding a Chinese fishing boat believed to be fishing illegally in the Yellow (West) Sea. When attempting to board the vessel, two ROK coast guard crewmembers were stabbed by the Chinese captain with a piece of broken glass. This was the second Coast Guard fatality in the area since 2008. The Chinese ship, captain, and crew of eight were seized, and the men were convicted by the local court in Incheon. ROK prosecutors had been seeking the death penalty for the Chinese captain but the court gave him a 30-year prison sentence and a fine of \$17,600. The other crew members received sentences of 18 months to two years in prison.

China's response to the stabbing was muted. A spokesman for the Foreign Ministry noted "The Chinese side regrets that the relevant incident caused the death of an ROK coast guard, which is an unfortunate event. Currently the relevant authorities in China and South Korea are in close communication on investigating this situation. China is ready to work closely with South Korea to properly settle the issue."²⁶ However, following the April 19th verdict, Chinese authorities made known their displeasure with the decision. In disputing the judgment, Liu Weimin, spokesman for the Chinese Foreign Ministry maintained "Beijing and Seoul have not achieved an agreement on the definition of related exclusive economic zones, and China does not accept the unilateral resort to the law of exclusive economic zones. Beijing will keep a close watch on the case's development and provide necessary assistance to the Chinese citizens involved in the case to ensure their justified and legal rights."²⁷ The Incheon court's decision was grounded in South Korea's jurisdiction within its EEZ and ROK domestic law; China's concerns appear to be based on the court's use of the disputed EEZ as a foundation for the decision. Had the court placed its decision solely in the context of ROK domestic law, the Chinese reaction may have been different.

26 Zhang Yunbi and Liu Ce, "China regrets ROK coast guard's death," *People's Daily*, December 14, 2011, <http://english.peopledaily.com.cn/90883/7675506.html>.

27 Zhang Yunbi, "ROK's verdict on captain rejected," *China Daily*, April 20, 2012, http://www.chinadaily.com.cn/world/2012-04/20/content_15094575.htm.



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

Before the verdict was announced, ROK officials from the Ministry of Food, Agriculture, Forestry and Fisheries met with China's Fisheries Law Enforcement Command to address the issue and settle on tougher measures to combat the problem.²⁸ Two weeks later, four ROK fishing inspectors were wounded attempting to board a Chinese fishing boat. Inspectors hailed the ship but it failed to stop. The following month, ROK officials increased the penalties for illegal fishing, doubling the fine from 100 million won (\$86,800) to 200 million won (\$173,000) and any boat that failed to stop when hailed could be fined 100 million won.²⁹ On June 26, 2012, Seoul and Beijing held the first meeting of the "Korea-China Fisheries Cooperation Committee," a new consulting mechanism to address the problems of illegal fishing. ROK officials proposed convening the committee following the December 12 stabbing, and the group intends to hold regular meetings between foreign ministry officials and maritime police from both sides. The two countries have already established a hotline for these types of incidents, a positive measure by both sides to manage the issue.³⁰

Despite these efforts, many ROK officials and analysts remain skeptical that China is doing all that it can to address the problem of illegal fishing. South Koreans are tired of the level of illegal activities and officials have demonstrated they are ready to crack down. Chinese leaders are also concerned about fishing but fear South Korean enforcement is too heavy-handed. Moreover, Beijing is likely reluctant to impose significant restrictions on its fishing fleet for fear of the domestic backlash that would occur. Should the problem escalate, calls in South Korea for more robust enforcement of fishing regulations may include increased cooperation between the ROK fishing ministry, the Coast Guard, and the Navy.

(3) *Ieodo/Suyan Reef Dispute.* The third issue is the ROK-Sino dispute over a reef in the East China Sea. The international name for the reef is Socotra Rock named after the British vessel that found the submerged rock in 1900. Despite the South Korean name—"do" means island in Korean—both sides agree that the reef is not an island since it is submerged 4 to 5 meters at low tide. Under UNCLOS, these are not islands and do not qualify as a territorial dispute. The reef is located approximately

28 "China, S Korea agree on tackling illegal fishing," *China Daily*, April 17, 2012.

29 "S. Korea toughens penalties for EEZ violation," *Korea Herald*, May 15, 2012, <http://view.koreaherald.com/kh/view.php?ud=20120515000698>.

30 "Seoul, Beijing begin talks to deter illegal Chinese fishing," *Yonhap News Agency*, June 26, 2012 <http://english.yonhapnews.co.kr/national/2012/06/26/15/0301000000AEN20120626005500315F.HTML>.



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

80 nm (149 km) from the closest ROK territory, the island of Mara-do and 155 nm (287 km) from the nearest Chinese island of Tongdao. In 1938 when Korea was under Japanese occupation (1910-1945), Tokyo conducted a survey of the area and had planned on building a research station there. However, plans were dropped as the start of World War II approached.

In 1951, the ROK Navy and the Korea Mountain Climbing Association fixed a bronze marker to the reef with the words “Jeodo, Territory of the Republic of Korea,” and the following year, South Korean President Syngman Rhee declared a ROK line of jurisdiction that included Jeodo. After several decades of relative calm on the issue, South Korea built the Jeodo Ocean Research Station on the rock in 2003 that included a helicopter pad and scientific research facilities. ROK authorities indicated the station was constructed to collect data on ocean currents, weather, fishing, and climate change. Despite the disputed EEZ, ROK officials maintained the station was justified since the reef was part of its continental shelf making the facility permissible. Proponents argue that UNCLOS Articles 60 and 80 provide South Korea with the justification to construct artificial islands, installations, and structures in areas within the EEZ or on the continental shelf.³¹

Chinese authorities have regularly filed protests maintaining this area was disputed based on overlapping EEZs, and until the disagreement was settled, South Korea should refrain from placing a structure on the rocks. In 2006, China began to periodically make more determined arguments for jurisdiction but little came from its protests. That year, Chinese Foreign Minister Qin Gang objected to South Korea’s “unilateral” actions, a reference to the research station and described the action as “illegal.”³² In July 2011, Beijing dispatched three patrol boats to the reef to demand that South Korea cease work on a salvage operation to raise a commercial vessel that had sunk the previous April. In December 2011, China also announced that it would send a maritime monitoring ship to the region to help demonstrate its claim to jurisdiction over the area.³³

31 “No territorial dispute,” *Korea Herald*, March 13, 2012, <http://view.koreaherald.com/kh/view.php?ud=20120313000457&cpv=0>.

32 “China Chafes at Koran Observatory on Reef Island,” *Chosun Ilbo*, September 14, 2006, http://english.chosun.com/site/data/html_dir/2006/09/14/2006091461017.html.

33 “China renews territorial ... claim to Jeodo waters,” *Korea Herald*, March 11, 2012, <http://view.koreaherald.com/kh/view.php?ud=20120311000369&cpv=0>.



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

Tension escalated further on March 3, 2012 when the Director of China's State Oceanic Administration, Liu Xiqui reasserted China's claim that Ieodo/Suyan was in China's "jurisdictional waters," and Beijing would increase patrols and enforcement of Chinese law over this area. A South Korean foreign ministry official responded "we cannot accept any attempt by China to formally exercise jurisdictional control."³⁴ In a news conference President Lee remarked that while the issue was not a territorial matter since the reef was submerged, once Seoul and Beijing could settle their overlapping EEZs, Ieodo would "fall naturally into South Korean-controlled areas," since the reef is much closer to South Korea than to China.³⁵ The issue has since calmed down but it remains a concern for both sides and an important motivation for some in South Korea to continue developing its blue water navy.

For South Koreans, there are largely two reasons why they believe Ieodo falls under ROK jurisdiction. First, as President Lee noted, the reef is closer to South Korea than to China. As a result, when the two sides settle their EEZ delimitation claims, presumably using the median line approach that draws the line midway between the Chinese and South Korean coasts, Ieodo will be on Seoul's side of that line. According to the Korea Hydrographic and Oceanographic Administration website, "Since Ieodo is located within waters closer to Korea than other neighboring countries, it will be under Korea's maritime jurisdiction according to the Middle Line principle which is applied to the determination of the EEZ."³⁶ Second, officials argue that South Korean jurisdiction over Ieodo is further strengthened by being part of Korea's continental shelf.

A key issue connected to the dispute over Ieodo is the ROK construction of the Jeju-do Naval Base. Jeju is an island off South Korea's southwest coast that provides ready access to important shipping lanes in the Yellow Sea and the East China Sea. The port will also provide a base of operations for the ROKN to protect its maritime interests in this area including maintaining jurisdiction over the Ieodo reef. Discussions to construct a base on Jeju began in the early 1990s and plans moved forward in 2003 under President Roh Moo-hyun. The location was finalized in 2007 and

34 Jeremy Page, "China, South Korea in Row Over Submerged Rock," *Wall Street Journal*, March 13, 2012.

35 Chang Jae-soon, "Lee: Ieodo will remain under S. Korea's control," *Yonhap News*, March 12, 2012, <http://english.yonhapnews.co.kr/fullstory/2012/03/12/75/4500000000AEN20120312007551315FHTML>.

36 Korea Hydrographic and Oceanographic Administration, "Ieodo," http://ieodo.khoa.go.kr/eng/open_content/introduce/introduction.asp.



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

construction began in January 2011.³⁷ The facility covers 125 acres and is expected to cost \$970 million to build with completion anticipated sometime in 2014. The port facilities can accommodate 20 warships and submarines and will be a stop for cruise ships as Jeju's scenery, beaches, and tropical climate make it an outstanding destination for visitors.

Opponents of the base fear the environmental damage that will occur during construction. Others are also convinced the facility will eventually become a U.S. Navy base and be an area similar to U.S. bases on Okinawa, an arrangement that will do much to antagonize China. Protests against the project have occurred often and several have been violent. However, the courts have ruled the protests illegal and the project has continued. Though base construction presses forward, it has been a divisive issue in South Korea. Yet, the row over Ieodo has provided considerable fodder for those who support the base. On March 13, 2012, an editorial in the conservative *Chosun Ilbo* entitled "Naval Base Protesters Are Dangerously Naïve," referred to Ieodo and the soon-to-be presence of China's first aircraft carrier in the region and noted sarcastically that "maybe the protesters would like to gift-wrap the rocks when that happens and hand them over to China."³⁸

Addressing Future Challenges

ROK-Sino maritime relations and the ROK Navy's response to China are all part of a broader relationship that, like others in the region, struggles with the uncertainty accompanying China's rise. South Korea will not be able to match China's naval strength and has many reasons to maintain good ties with Beijing. Indeed, Seoul has been reluctant to join the U.S.-led BMD system in East Asia for fear of alienating China and has proposed an intelligence sharing agreement similar to the ROK-Japan pact that collapsed in July.³⁹ The South Korean Navy has not undertaken any specific operational measures in response to Chinese actions, but its shipbuilding program and the construction of the naval base on Jeju Island are occurring in part with an eye toward China's future strategic direction. Similar to oth-

37 Jaeyeon Woo, "Jeju Naval Base Faces Strong Protest," *Wall Street Journal*, March 7, 2012, <http://blogs.wsj.com/korearealtime/2012/03/07/jeju-naval-base-faces-strong-protest/>.

38 "Naval Base Protesters Are Dangerously Naïve," *Chosun Ilbo*, March 13, 2012, http://english.chosun.com/site/data/html_dir/2012/03/13/2012031301525.html.

39 Chung Min-uck, "Seoul proposes military pact with Beijing," *Korea Times*, July 13, 2012, http://www.koreatimes.co.kr/www/news/nation/2012/07/116_115054.html.



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

ers in the region, South Korea is hedging and maintaining an important economic relationship with Beijing while also keeping a close watch on the future.

As South Korea continues forward in what will be an increasingly complex and uncertain security environment, two key areas will need attention. First, South Korea and China need to resolve their outstanding maritime disputes. Most important on the list is a final agreement on the demarcation of their overlapping EEZs. Though complicated by extended continental shelf claims, the most common solution for these types of disputes is to settle on a median line that is drawn midway between the baselines of South Korea and China. Settling the EEZ issue would resolve the Ieodo/Suyan dispute and help the fishing problem. Yet, given the pressure of overfishing and declining fish stocks, the challenge of managing the fishing issue is likely to remain. Continued efforts by Seoul and Beijing as well as others in the region will be necessary to improve cooperation and enforcement. Improving ROK-Sino dialogue on this issue is a good start but more will need to be done, especially by Chinese authorities. Moreover, this is not only an issue of regional concern but is also part of a broader, global problem to manage the maritime commons. All of these maritime issues—EEZ, illegal fishing, and Ieodo/Suyan—could be pesky irritants for ROK-Sino relations and pose a danger of escalating into larger clashes. Settling these issues would go a long way to ensuring that these concerns do not jeopardize the larger relationship and regional stability. In addition, a settlement could also be a model for solving other maritime disputes. In the meantime, both sides need to be careful to avoid any provocative actions until these issues can be settled, and to continue work on dispute resolution mechanisms to deal with conflict when it does arise.

The second challenge South Korea faces is achieving the proper balance of various military capabilities in the face of several competing security priorities. Seoul confronts a daunting ground threat across the DMZ that necessitates significant resources. These requirements will continue to grow as South Korea moves forward with the transition to assume wartime operational control scheduled for December 2015 and the necessary capabilities that will require. The sinking of the *Cheonan* and the shelling of Yeonpyeong-do were grim reminders of weaknesses in ROK ASW and coastal defense. Improving these capabilities will require continued attention. Finally, South Korean defense planners remain committed to the goal of a blue water navy. ROK leaders see the need to protect the country's maritime interests beyond the coast, develop sufficient naval strength to hedge for an uncertain future, and maintain the ability to contribute to security in the global commons, a responsibility that comes with South Korea's climb into the ranks of the world's middle powers;



CNA Maritime Asia Project

Workshop Two: Naval Developments in Asia

all of these call for the continued development of its blue water fleet. ROK defense planners must contend with several competing priorities and must carefully consider the balance they need to strike between these demands on its armed forces. Yet, it will be important to maintain continued growth of its naval capabilities, both blue water and coastal while also beginning to shift from a long held ground-centric focus to its defense planning. The North Korean threat remains but so too do a growing set of interests that draws South Korea into a more active role in maintaining international peace and security in the maritime domain.

Conclusion

South Korea faces some difficult challenges in achieving the proper balance between several competing security priorities. Despite the pressures to remain a ground-centric military and focus on coastal defense, the continued development of a blue water ROK Navy is an important initiative to continue, not only for South Korea to directly protect its interests but also to allow Seoul to participate in HADR, anti-piracy operations, protection of trade routes, and contributing to the overall stability and security of the global maritime commons. Apprehension for the future direction of China's rise is part of South Korea's motivation to develop a blue water fleet but other issues are factors as well. Continuing budget challenges that remain from the global economic crisis and the demands of other security challenges may lengthen the time line but a blue water naval capability remains an important component of building a capable military that can protect ROK interests and contribute to international security.