The Implications of the Cheonan Sinking: A Security Studies Perspective

Bruce E. Bechtol Jr.

Abstract

The March 26, 2010 sinking of the ROK ship Cheonan was a deliberate, well planned act of violence carried out by North Korean military forces. Evidence now available reveals a change in military leadership that enabled Special Operations Forces and other personnel in their missions to conduct brinkmanship and provocations in the Northern Limit Line area. In addition, the results of the investigation conducted by experts from five democratic nations provided compelling evidence regarding the type of naval craft used (submarine), the weapon used (torpedo), and the circumstances surrounding the day that a North Korean military attack was carried out against a ROK naval ship on a peaceful mission in its own sovereign waters. North Korean actions following the attack consisted largely of denial and defiance. These actions set back inter-Korean relations by at least a year. Thus, future provocations and brinkmanship in the Northern Limit Line area are not only possible, but likely. It is also likely that future acts of violence in the area will be conducted using different tactics, techniques, procedures, and perhaps even different kinds of military forces. Containment of Pyongyang's rogue behavior and deterrence against future provocations needs to be a high priority for the ROK-U.S. military alliance.

Key Words: North Korean military, Northern Limit Line, Cheonan, military provocation, U.N. controlled islands

On March 26, 2010, a North Korean mini-sub snuck across the "Northern Limit Line" (NLL), the de facto sea border on the west coast that separates the two Koreas, and launched what an investigation has now determined was a CHT-02D, indigenously produced, wake-homing torpedo at the ROK Navy ship Cheonan. The torpedo produced a bubble effect, causing an explosion that split the ship in half. Forty-six naval personnel (out of a crew of 104) perished in the attack. At the time of the attack, the Cheonan was not only sailing in waters south of the NLL, but it was in waters that even North Korea recognizes as being within South Korean sovereignty (see Figure 1).

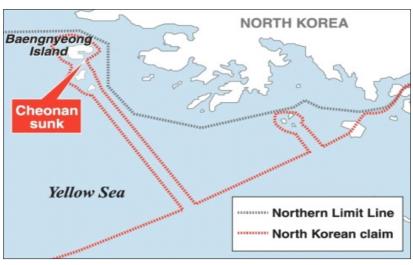


Figure 1. Location of Cheonan Sinking

Sources: Republic of Korea Ministry of National Defense, and Stars and Stripes.

The purpose of this essay will be to examine the implications behind the sinking of the Cheonan. In order to do so, I will first conduct

¹⁻ See "Investigation Result on the Sinking of the ROK's 'Cheonan'," Republic of Korea, Ministry of National Defense, May 20, 2010, URL: http://www.globalsecurity.org/military/library/report/2010/100520_jcmig-roks-cheonan/100520_jcmig-roks-cheonan.pdf.

analysis on events that occurred prior to the March 26 incident. I will also discuss the likely planning process and leadership/organizational changes that occurred prior to the incident that probably affected the way it was conducted. I will then begin an examination (in as close to chronological order as possible) of the events that ensued immediately following the sinking of the South Korean Corvette. Of course, it will be important to consider dissenting views on the evidence regarding the sinking of the Cheonan (though the evidence is overwhelming), and I will do so keeping an eye on the responses of other responsible analysts as these views arose in the press and at some levels in academia. Finally, I will discuss the actions of South Korea and its allies as the final results of the investigation of the sinking of its ship came to light, and the implications for the future that all of this brings.

Before I begin my analysis, I think it is important to point out that the sinking of the Cheonan was a provocation. While this may seem to be a minor point, it is important. As I have stated in past publications, most provocations North Korea carries out "have had four things in common: 1) they are intentionally initiated at moments when they have the likelihood of garnering the greatest attention on the regional and perhaps even the world stage; 2) they initially appear to be incidents that are relatively small, easily contained, and quickly "resolved"; 3) they involve continuously changing tactics and techniques; and 4) North Korea denies responsibility for the event."² Certainly this was the case for the sinking of the Cheonan. But before going into exact details of the incident, I believe it will be important to first examine the context of the events leading up to March 26, 2010.

²- Bruce E. Bechtol Jr., "The Cheonan Incident and North Korea's Northern Limit Line Strategy," AEI, Center for Defense Studies, May 25, 2010, URL: http://www.defensestudies. org/?p=2575.

Events Leading to the Cheonan Incident: Rhetoric and Brinkmanship

North Korea has truly made the NLL an issue that is a high priority and one that often involves violent acts of provocation - since 1999, when a short naval battle resulted in the sinking of a North Korean ship.³ In 2002, North Korea was able to "exact revenge," when in an act of cunning and well-planned violence, one of their ships sank a South Korean patrol craft - a vessel sailing south of the NLL and engaged in non-provocative behavior.⁴ The incident in 2002 raised alarm in South Korea and caused allies such as the United States to speak out against the action - but it did not end North Korea's provocative acts in the NLL (see Figure 2 for a map of the North Korean maneuvers during the 2002 provocation).



Figure 2. North Korean NLL Provocation - 2002

Source: Republic of Korea, Ministry of National Defense.

³⁻ Reid G. Miller, "S. Korea Sinks N. Korea Ship - About 30 N. Korean Sailors Believed Killed," Seattle Times, June 15, 1999, URL: http://www.thefreelibrary.com/S.+KOREA+SINKS+N. +KOREAN+SHIP+--+ABOUT+30+NORTH+KOREAN+SAILORS...-a064245394.

^{4- &}quot;The Naval Clash on the Yellow Sea on June 29, 2002 between South Korea and North Korea: The Situation and ROK's Position," Ministry of National Defense, Republic of Korea, July 1, 2002, URL: http://www.globalsecurity.org/wmd/library/news/rok/2002/00207 04-naval.htm.

There were other tensions in and around the NLL after the 2002 incident and leading up to the sinking of the Cheonan. But the latest spate of brinkmanship and tension building created by North Korea in the NLL began in January of 2009. It was then that a member of the North Korean military was displayed on Pyongyang's state-run television "demanding" South Korea stop its "hostile posture" in the NLL. The broadcast further commented that the North would "preserve" the sea border. Of course, the natural implication would be that North Korea would use military force to do so. Seoul took the remarks - intended for both South and North Korean ears - seriously, by placing its military on full alert for the first time since North Korea conducted a nuclear test in 2006. The North Koreans also threatened an "all out confrontational posture" in the NLL, blaming the South Koreans for what Pyongyang called violations of the de facto sea border that separates the two nations.⁶ In reaction to what Beijing likely perceived as increased tensions along the west coast of the Korean Peninsula, China ordered all of its fishing boats out of the area warning of possible violence that could occur there.⁷

Key leadership moves were made that enhanced North Korea's ability to conduct provocations in the NLL and placed Kim Jong-il's most trusted generals at the center of the planning process for any moves that might be made. Just weeks after the rhetoric began in January of 2009, General Kim Kyok-sik, formerly Chief of the General Staff, was named the new commander of the Fourth Corps of the North Korean army. The

⁵- Ser Myo-ja and Kim Min-seok, "Seoul Goes on Alert After Sharp Attack by Pyongyang," Joong Ang Ilbo, January 19, 2009, URL: http://joongangdaily.joins.com/article/view.asp?

⁶⁻ Kim Hyun and Sam Kim, "Tensions Rise Over N. Korea's Renewed Sea Border Claim," Yonhap, January 17, 2009, URL: http://english.yonhapnews.co.kr/news/2009/01/17/ 020000000AEN20090117002600315.HTML.

⁷- Sam Kim, "Chinese Boats Vanish as Tension Rises in Waters Between Koreas," Yonhap, Feb. 10, 2009, URL: http://english.yonhapnews.co.kr/national/2009/02/10/97/030100 0000AEN20090210006900315F.HTML.

Fourth Corps borders the NLL. Kim Kyok-sik is well known as one of Kim Jong-il's most trusted generals. Thus, it is likely that he was put in his new position because of the trust that Kim Jong-il has in him, and because he could help to plan for activities in the NLL area. On paper, it would appear that a move from Chief of the General Staff to corps commander is a demotion - when in fact, it was likely a move made because of the importance of the mission at hand (conducting provocations in the NLL).

Very soon after the moves involving Kim Kyok-sik were made, another important position shuffling of a key general occurred. The head of the Operations Department (which at the time was under the authority of the Korean Workers' Party), General O Kuk-ryol, was moved to a senior position on the National Defense Commission (NDC), the chief command and control organ of the DPRK's armed forces. 10 Soon thereafter, the Operations Department (which has conducted many of North Korea's clandestine operations) was taken out from under the umbrella of the Korean Workers' Party and placed under the control of the Reconnaissance Bureau — the DPRK's military organization that controls everything from Special Operations Forces (SOF) to intelligence, to clandestine infiltrations into South Korea. The Reconnaissance Bureau also comes under the control of the NDC.¹¹ It is clear, based on the evidence, that O Kuk-ryol was also likely involved in the planning of the recent NLL provocations and brinkmanship, as it appears the mini-sub that attacked the Cheonan was probably a Reconnaissance Bureau vessel (I will discuss this more

-

⁸- John McCreary, "Nightwatch: February 11, 2009," *AFCEA Intelligence*, February 11, 2009, URL: http://nightwatch.afcea.org/NightWatch_20090211.htm.

⁹⁻ For more about Kim Kyok-sik's background and reassignment, see "A Provocation by General Kim Kyok-sik Plotting Comeback in Pyongyang?" *JoongAng Ilbo*, March 16, 2009, URL: http://nk.joins.com/news/view.asp?aid=3335047&cont=news_polit.

^{10 - &}quot;N. Korea's Kim Picks Hawk for Top Military Post," AFP, February 20, 2009, URL: http://asia.news.yahoo.com/090220/afp/090220064136asiapacificnews.html.

¹¹- See Jeong Yong-soo, "North Korea's Military Strengthens its Grip," *JoongAng Ilbo*, April 21, 2009, URL: http://joongangdaily.joins.com/article/view.asp?aid=2903832.

later), and not subordinate to the North Korean navy (O was likely involved at all levels of planning). Thus, the appointments of key people who would plan for provocations in the NLL coincided with an uptick in rhetoric regarding the disputed border area - both in early 2009. Key shifts in these leadership positions of key personnel within the party and the military helped to enable operations that took several months to build up for - as everyone would see from events that occurred in the late fall and winter of 2009 and in 2010.

Once the key players were in place, there were two key events that occurred prior to the attack on the Cheonan. The first was a naval skirmish that occurred on November 10, 2009, when a North Korean patrol boat violated the NLL near Daecheong Island (one of the five UN controlled islands patrolled by ROK navy craft and protected ashore by ROK Marines). The North Korean ship fired at a South Korean craft, which returned fire immediately. The South Korean ship reportedly pumped more than 4,900 rounds into the North Korean ship in less than two minutes, leaving it badly damaged and limping home. According to reports that leaked out of North Korea and were discussed in the South Korean press, Kim Jong-il vowed to military officers that he would seek revenge for the small defeat. 12 The event received little attention in the South Korean press at the time or in the United States.

The second event that occurred prior to the attack on the Cheonan was a large-scale artillery live fire exercise that North Korea conducted off of its west coast at the end of January, 2010. The army conducted what appeared to be "time on target" drills. In other words, different types of

¹²- For more detailed information about the short skirmish that occurred on November 10, 2009, and the reported vow of revenge by Kim Jong-il, see "North Korean Officer Says North Sank Cheonan," Chosun Ilbo, April 20, 2010, URL: http://english.chosun.com/ site/data/html_dir/2010/04/20/2010042000972.html; "Rumors Link Cheonan Sinking to Revenge for Naval Skirmish," Chosun Ilbo, April 19, 2010, URL: http://english. chosun.com/site/data/html dir/2010/04/19/2010041901395.html.

artillery were used and fired at different times and from different ranges, with the goal being simultaneous volleys of rounds landing on a single target. The drills occurred almost right next to the NLL. The North Korean artillery involved reportedly consisted of coastal artillery pieces, multiple rocket launchers, and self-propelled howitzers. Over a period of three days, North Korea pounded the waters near the NLL - with some shells reportedly falling less than two kilometers from the de facto sea border. Close to 400 live rounds were fired in an event that was obviously meant to intimidate Pyongyang's neighbor to the South. This act of provocation received a great deal of attention in South Korea. 13 It may also have been a "practice run" for an artillery attack against one of the U.N. controlled islands in the NLL on November 23, 2010 (which I will describe later).

The Sinking of the Cheonan: How Did It Occur?

The sinking of the Cheonan occurred before 9:45 pm on the night of March 26, 2010. The Cheonan, a Corvette in service in the South Korean navy since 1989, was a 1,200 ton ship equipped with missiles and torpedoes, and was on a routine mission south of the NLL at the time. 14

¹³- For more details of the live-fire artillery drills conducted by North Korea near the NLL during January of 2010, see "DPRK Fires Artillery Again Near Disputed Sea Border: Gov't," Xinhua, January 28, 2010, URL: http://english.cctv.com/20100129/102716. shtml; "N. Korea Fires Artillery Near Sea Border for Third Day," AFP, January 29, 2010, URL: http://www.france24.com/en/20100129-nkorea-fires-artillery-near-border-thirdday; "N. Korean Artillery Fire was Time-on-Target Drill," Chosun Ilbo, January 29, 2010, URL: http://english.chosun.com/site/data/html_dir/2010/01/29/2010012900402.html; "N. Korea Resumes Shooting, Agrees to Help Recover U.S. War Remains," Yonhap, January 28, 2010, URL: http://english.yonhapnews.co.kr/national/2010/01/28/59/03 01000000AEN20100128004300315F.HTML; Yoo Jee-ho, and Lee Min-yong, "North's Action Called Measured Message," Joong Ang Ilbo, January 29, 2010, URL: http://joong angdaily.joins.com/article/view.asp?aid=2915953.

¹⁴⁻ See "S. Korean Ship Sinking in Yellow Sea," Yonhap, March 26, 2010, URL: http://english. yonhapnews.co.kr/national/2010/03/27/13/0301000000AEN20100327000100315 F.HTML; Shin Hae-in, "S. Korea Continues Rescue Operations on Sunken Ship,"

Reportedly, an unusual North Korean "scout plane" formation flew near the area immediately after the sinking of the ship. 15 Initial statements from the captain of the ship indicated that it split in half five minutes after an explosion occurred. 16 At a briefing session with the South Korean press Choi Won-il, the commander of the sunken ship, stated, "Suddenly, I heard a loud "bang" sound from the rear of the vessel, and it started to list toward the right side. Then all power and communication means were lost." One of the other officers, Lieutenant Park Yeon-su, stated, "I don't think the ship was wrecked on a rock, and neither by an explosion inside. That's not possible. I'm almost sure. So there's a possibility that the ship was attacked. But I don't have proof at the moment."17

By March 30, 2010, the ROK Navy had tentatively concluded that the sinking of the Cheonan was not due to an internal explosion.¹⁸ Survivors from the sinking testified that the ship broke in two after it shot up into the air - broken in half from an external explosion. 19 Soon thereafter, it was revealed that another ship - the Corvette Sokcho - fired more than 130 shots at what crewmembers thought was a North Korean target in the area. The Sokcho rushed to the scene after the explosion. A map revealing the times and locations of South Korean ships in the area

Yonhap, March 27, 2010, URL: http://english.yonhapnews.co.kr/national/2010/03/27/ 77/0301000000AEN20100327002900315F.HTML.

¹⁵- DPRK's Scout Planes Reportedly Come Down Near NLL March 26," KBS TV (in Korean), March 28, 2010, URL: http://www.kbs.co.kr/plan_table/channel/ltv/index.html.

¹⁶⁻ Lee Tae-hoon, "More Questions Raised than Answered Over Sunken Ship," Korea Times, March 28, 2010, URL: http://www.koreatimes.co.kr/www/news/nation/2010/03/ 113 63157.html.

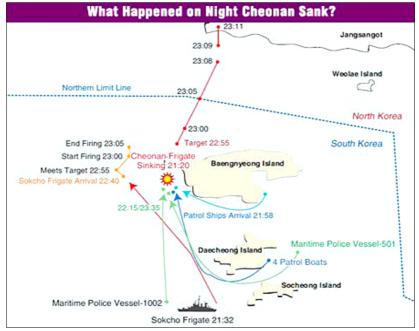
¹⁷- Oh Kyu-wook, "Testimonies from Survivors," Korea Herald, March 28, 2010, URL: http://www.koreaherald.co.kr/NEWKHSITE/data/html_dir/2010/03/29/201003290 037.asp.

¹⁸- Lee Chi-dong, "Navy Rules Out Internal Explosion as Cause of Ship Sinking," Yonhap, March 30, 2010, URL: http://english.yonhapnews.co.kr/national/2010/03/30/030100 0000AEN20100330009200315.HTML.

¹⁹- "New Clues to Sinking of the Cheonan Emerge," Chosun Ilbo, March 31, 2010, URL: http://english.chosun.com/site/data/html_dir/2010/03/31/2010033100669.html.

is shown in Figure 3.

Figure 3, South Korean Ship Locations Near Cheonan Sinking - March 26, 2010



Source: Korea Times.

By March 31 of 2010, press sources had revealed that there were reports that a North Korean submarine had left its base on the west coast which would be the most likely place one of their underwater vessels would deploy from.²⁰ But according to reports at the time, the ROK Navy did not initially detect any submarines near the Cheonan on the night of the sinking.²¹ By early April it began to appear - with some clarity - that

²⁰- "N. Korean Submarine 'Left Base Before the Cheonan Sank'," Chosun Ilbo, March 31, 2010, URL: http://english.chosun.com/site/data/html_dir/2010/03/31/20100331010

²¹- "No North Korean Submarine Detected on Night Navy Ship Sank," Yonhap, April 1,

North Korea may have been responsible for the sinking of the Cheonan. A senior military officer was reported as saying that there was a 60 to 70 percent chance that the Cheonan was sunk by a torpedo.²² South Korea's defense minister at the time cautioned that salvage operations must first occur and until then all possibilities must be looked at.²³ He also stated, however, that the seismic wave detected at the time of the explosion was consistent with what would be caused by a North Korean torpedo.²⁴ In a move designed to show deliberate investigation techniques and transparency, during the first week of April, South Korea announced that it intended to request help from U.S. experts in determining what caused the sinking of the Cheonan.²⁵

During the second week of April 2010, the South Korean government announced that it had won agreement from four nations to take part in the investigation of the sinking of the Cheonan. All four nations sent experts to participate in the investigation, and those participating included the United States, the United Kingdom, Australia, and Sweden.²⁶ The foreign experts were involved in all aspects of the investigation.²⁷ By April 12, after several days of unsuccessful salvage operations, military

2010, URL: http://english.yonhapnews.co.kr/news/2010/04/01/0200000000AEN20 100401010300315.HTML.

²²- "Suspicion of N. Korean Hand in Sinking Mounts," Chosun Ilbo, April 2, 2010, URL: http://english.chosun.com/site/data/html_dir/2010/04/02/2010040200382.html.

²³- Christine Kim, "South Korea Says Torpedo May Have Sunk Navy Ship," Reuters, April 2, 2010, URL: http://news.yahoo.com/s/nm/20100402/wl_nm/us_korea_ship_1.

²⁴- Kang Min-Seok and Lee Min-yong, "Torpedo Likely Cause of Sinking," Joong Ang Ilbo, April 3, 2010, URL: http://joongangdaily.joins.com/article/view.asp?aid=2918721.

²⁵- "Seoul Requests Washington's Help in Finding Cause of Warship Explosion," Yonhap, April 5, 1010, URL: http://english.yonhapnews.co.kr/national/2010/04/05/98/03010 00000AEN20100405004600315F.HTML.

²⁶- Shin Hae-in, "Overseas Experts to Assist Probe of Sunken S. Korean Ship: Official," Yonhap, April 8, 2010, URL: http://english.yonhapnews.co.kr/news/2010/04/08/020 0000000AEN20100408007000315.HTML.

²⁷- Jung Sung-ki, "Multinational Joint Investigation Team to Examine Wreckage to Uncover Cause of Ship Sinking," Korea Times, April 15, 2010, URL: http://www.korea times.co.kr/www/news/nation/2010/04/205_64257.html.

divers were well on their way to linking chains and hoisting the hull of the Cheonan above the surface of the water for investigation.²⁸ By April 13, as part of the ship had been lifted out of the water and moved to a better location, analysis revealed that it had been ripped apart, thus removing the possibility of a wreck from impact with a rock or metal fatigue.²⁹ In addition, because the weapons on the ship remained intact, an internal blast causing the wreck was rendered nearly impossible.³⁰ Yoon Duk-young, one of the leaders of the South Korean investigation team was quoted as saying, "The results of the investigation into the waters where the vessel submerged and the probe into the inside of the ship show a low possibility of a collision with a reef or metal fatigue of the ship." He further stated, "The hull and steel plates of the bottom of the stern were bent inward due to pressure from the left, and the right side of the stern was damaged and bent outward."31

As details from the evidence recovered in the investigation began to seep out, it began to become obvious that the attack had come from a torpedo launched by a North Korean submarine - a Reconnaissance Bureau submarine (not a submarine subordinate to the Navy). On April 9, 2010, an unidentified government official alleged to the press that not only was a North Korean torpedo the cause of the Cheonan sinking, but it was a torpedo launched by an SOF craft (subordinate to the Reconnaissance Bureau).32 Two days earlier, Kim Hak-song, the Chairman of

²⁸- "S. Korea to Move Part of Sunken Ship Amid Bad Weather," Yonhap, April 12, 2010, URL: http://english.yonhapnews.co.kr/national/2010/04/12/40/0301000000AEN2010 0412008000315F.HTML.

²⁹- Jung Sung-ki, "More Weight Put on Outside Impact for Ship Sinking," Korea Times, April 13, 2010, URL: http://www.koreatimes.co.kr/www/news/nation/2010/04/205_ 64153.html.

³⁰- Lee Tae-hoon, "External Impact Likely Cause of Ship Sinking," Korea Times, April 15, 2010, URL: http://www.koreatimes.co.kr/www/news/nation/2010/04/113_64242.html.

^{31- &}quot;External Explosion Likely Caused Sinking," Donga Ilbo, April 16, 2010, URL: http:// english.donga.com/srv/service.php3?biid=2010041748108.

³²⁻ Pak Pyong-chin and Na Ki-chon, "Sinking of ROK's Cheonan Attributed to General

the National Assembly's Defense Committee, alleged to the press that North Korean mini-submarines had disappeared from military surveillance between March 23 and 27.33 According to Ha Tae-keung, who operates Open Radio for North Korea, citing sources in North Korea (in a report that came out in May of 2010), two submarines conducted a planned intrusion into South Korean waters. A larger sub supported a smaller mini-sub - which he said was carrying two torpedos.³⁴ A map of the bases in North Korea on the west coast that support submarines is shown in Figure 4.



Figure 4. North Korea's Submarine Capability

Source: Korea Times.

During May of 2010, the South Korean Defense Ministry confirmed that the Reconnaissance Bureau was in fact the most likely suspect in

Reconnaissance Bureau of North," Segye Ilbo (in Korean), April 10, 2010, URL: http://www.segye.com/Articles/Main.asp.

^{33- &}quot;Lawmaker Points to Signs Linking N. Korean Sub to Shipwreck," Chosun Ilbo, April 6, 2010, URL: http://english.chosun.com/site/data/html_dir/2010/04/06/20100406003

³⁴- "N. Korean Leadership 'Closely Involved in Cheonan Sinking'," Chosun Ilbo, May 27, 2010, URL: http://english.chosun.com/site/data/html_dir/2010/05/27/20100527014 65.html.

the sinking of the Cheonan. Government sources also reported to the press that the most likely culprit in the torpedo launch and sinking of the Cheonan was the 130 ton Yeoneo-class submarine.³⁵ Reportedly, intelligence agencies also confirmed during May that North Korea purchased underwater radio communications equipment from China and Russia. 36 Former North Korean submarine crew member Lee Kwang-soo was the lone member of a Sango-class submarine crew who was captured alive in 1996. In a rare interview, he described some of the capabilities of the Yeoneo-class submarine, "I received helmsman training for submarines from Romeo class down to midget subs; the Yeoneo class sub is a modified version of the Yugo class." He further stated, "Yugo class submarines have a torpedo tube, but the Yeoneo class does not. Yeoneo class subs have a medium-sized torpedo fitted to both sides and are launched by applying an electrical charge."37 North Korea has also proliferated the Yeoneo-class submarine to Iran - a country that likely finds the submarine to be very useful in coastal waters that are very shallow, much like those off the west coast of the Korean Peninsula.38 Despite North Korean denials that the Yeoneo-class submarine even exists, the Daily NK was able to use Google Earth satellite imagery to show pictures of the 29-meter-long naval craft in port at a naval base on the west coast of North Korea.³⁹

^{35 -} Kim So-hyun, "Reconnaissance Bureau is Heart of N.K. Terrorism," *Korea Herald*, May 26, 2010, URL: http://www.koreaherald.com/national/Detail.jsp?newsMLId=20100 526000675.

^{36 - &}quot;N. Korea Sharply Increased Underwater Military Training in 2009: Sources," Kyodo News, May 16, 2010, URL: http://www.breitbart.com/article.php?id=D9FNSBB00& show_article=1.

^{37 -} Shin Joo-hyun, "North Korean Submarine Helmsman Breaks 14-Year Silence," *Daily NK*, June 1, 2010, URL: http://www.dailynk.com/english/read.php?cataId=nk02500& num=6445.

³⁸- Yoshiro Mkino, "U.S., ROK Confirm North Korean Sub Exported to Iran," *Asahi Shimbun* (in Japanese), June 9, 2010, URL: http://www.asahi.com.

³⁹- Kim Tae-hong, "Google Earth Torpedoes North Korean Lie," *Daily NK*, June 1, 2010, URL: http://www.dailynk.com/english/read.php?catald=nk00100&num=6444.

Getting back to the chronological examination of how events evolved following the sinking of the Cheonan, in mid-April, the investigation team reported that it had tentatively concluded that the ship had been sunk by an external explosion causing a water shock wave - known as the "bubble jet" effect. 40 Officials also confirmed that North Korea had increased training designed to launch a provocation during 2010.41 Later in the month, a North Korean party cadre leaked (probably via cell phone) to sources in South Korea that the sinking of the Cheonan was proudly being discussed in party lectures. Quoting one such lecture the North Korean said that the secretary of a party cell announced, "Since our heroic Chosun People's Army took revenge on the enemy, all South Chosun has been in fear of our defensive military ability."42 During the same time frame, Kim Jong-il publicly visited "Unit 586," a unit designator widely believed to refer to the Reconnaissance Bureau (perhaps to congratulate them on their successful infiltration and attack of a ROK naval craft).⁴³ Also near the end of the month, South Korea's defense minister publicly stated that it was likely a torpedo exploding under the hull of the Cheonan that caused the sinking of the ship. 44 The team of investigators also confirmed at this time that it was likely a "non-contact explosion" from a torpedo that caused the sinking of the Cheonan. ⁴⁵ And in perhaps

⁴⁰- "Cheonan Sinking Likely Caused by Bubble Jet from Explosion," Hankyoreh Daily, April 17, 2010, URL: http://english.hani.co.kr/arti/english_edition/e_national/416519.html.

⁴¹- "Military Intelligence Immediately Suspected N. Korea in Ship Sinking: Source," Yonhap, April 22, 2010, URL: http://english.yonhapnews.co.kr/national/2010/04/22/ 10/0301000000AEN20100422007000315F.HTML.

⁴²⁻ Lee Sung-jin, "Cheonan Sinking Rumor Proudly Circulating in North Korea," Daily NK, April 27, 2010, URL: http://www.dailynk.com/english/read.php?cataId=nk01500&

⁴³- Kim So-hyun, "Kim Visits Army Unit Spying on S. Korea," Korea Herald, April 27, 2010, URL: http://www.koreaherald.com/national/Detail.jsp?newsMLId=20100427000663.

⁴⁴⁻ Evan Ramstad, "Standoff Over Ship Escalates," Wall Street Journal, April 25, 2010, URL: http://online.wsj.com/article/SB100014240527487044467045752054008338 58626.html?KEYWORDS=EVAN+RAMSTAD.

^{45 - &}quot;Non-Contact Explosion' the Most Likely Cause of Sinking: Official," Yonhap, April 25,

one of the more important developments during April by the investigative team, the Defense Ministry ruled out any possibility that it was an "old South Korean mine" that caused the sinking of the Cheonan, eliminating any assessments that an old mine placed near the de facto sea border may have caused the tragedy. 46 During the same time frame, Seoul announced that it would brief both Chinese and Russian officials on the results of the investigation.47

By May 18, 2010, the evidence regarding the type of weapon used to sink the South Korean ship was becoming yet more clear. Investigators disclosed in public that they had discovered pieces of a propeller from a torpedo in the wreckage of the Cheonan. 48 Investigators also revealed that traces of explosive residue recovered from the wreckage were identical to that which would be contained in a North Korean torpedo.⁴⁹ Investigators soon thereafter disclosed that the initial results of the investigation would be completely revealed to 30 major nations and the international press. 50 Seoul invited envoys from dozens of countries to attend the hours-long briefing.⁵¹ In a rather stunning disclosure,

2010, URL: http://english.yonhapnews.co.kr/national/2010/04/25/60/0301000000 AEN20100425002000315F.HTML.

⁴⁶- "S. Korean Mine Ruled Out as Cause of Ship Sinking," Yonhap, April 28, 2010, URL: http://english.yonhapnews.co.kr/news/2010/04/28/020000000AEN201004280041 00315.HTML.

⁴⁷- Byun Duk-kun, "Seoul Seeks Support of China, Russia to Refer Warship Sinking to U.N.," Yonhap, April 28, 2010, URL: http://english.yonhapnews.co.kr/national/2010/ 04/28/40/0301000000AEN20100428008000315F.HTML.

⁴⁸- "Cheonan Investigators Find Pieces of Torpedo Propeller," Chosun Ilbo, May 18, 2010, URL: http://english.chosun.com/site/data/html_dir/2010/05/18/2010051800420.html.

⁴⁹- Song Sang-ho, "Explosive Traces Identical to Those of N.K. Torpedo," Korea Herald, May 18, 2010, URL: http://www.koreaherald.com/national/Detail.jsp?newsMLId=20 100518000726.

⁵⁰- "Cheonan Probe Results to go to 30 Major Nations," Donga Ilbo, May 19, 2010, URL: http://english.donga.com/srv/service.php3?bicode=050000&biid=2010051961128.

⁵¹- Sam Kim, "S. Korea Briefs Envoys of China, Russia, Japan on Warship Sinking," Yonhap, May 19, 2010, URL: http://english.yonhapnews.co.kr/northkorea/2010/05/19/33/040 1000000AEN20100519004100315F.HTML.

investigators also revealed North Korean fonts were found on fragments of the torpedo. The torpedo was said to be powered by two propellers rotating in opposite directions.⁵²

Initial Investigation Results and the Aftermath: Sanctions and Denials

The initial results from the Joint Civilian-Military Investigative Group (JIG) were both compelling and well documented in a large - and very long (several hours) - briefing that was broadcasted live on South Korean television. The JIG consisted of 25 experts from South Korea and 24 foreign experts who constituted four support teams, from the United States, the United Kingdom, Australia, and Sweden. The report stated that, "The JIG assesses that a strong underwater explosion generated by the detonation of a homing torpedo below and to the left of the gas turbine room caused Republic of Korea Ship (ROKS) 'Cheonan' to split apart and sink." They addressed the torpedo as follows, "The evidence matched in size and shape with the specifications on the drawing presented in introductory materials provided to foreign countries by North Korea for export purposes. The marking in Hangul, which reads '1번' (or No. 1 in English), found inside the end of the propulsion section, is consistent with the marking of a previously obtained North Korean torpedo. The above evidence allowed the JIG to confirm that the recovered parts were made in North Korea." The report addressed the type of submarine used in the attack as follows, "The North Korean military is in possession of a fleet of about 70 submarines, comprised of approximately 20 Romeo class submarines (1,800 tons), 40 Sango class submarines (300 tons) and 10

⁵²⁻ Jung Sung-ki and Kang Shin-who, "North Korea Lettering Discovered on Torpedo Fragments," Korea Times, May 19, 2010, URL: http://www.koreatimes.co.kr/www/ news/nation/2010/05/205_66153.html.

midget submarines including the Yeoneo class (130 tons)," further stating in part, "Given the aforementioned findings combined with the operational environment in the vicinity of the site of the incident, we assess that a small submarine is an underwater weapon system that operates in these operational environment conditions. We confirmed that a few small submarines and a mother ship supporting them left a North Korean naval base in the West Sea 2-3 days prior to the attack and returned to port 2-3 days after the attack." The final assessment was also very clear, "Based on all such relevant facts and classified analysis, we have reached the clear conclusion that ROKS 'Cheonan' was sunk as the result of an external underwater explosion caused by a torpedo made in North Korea. The evidence points overwhelmingly to the conclusion that the torpedo was fired by a North Korean submarine. There is no other plausible explanation."53

The results of the investigation as revealed by the public (televised) report were very interesting, and left no doubt that it was a North Korean submarine that was responsible for the sinking of the ROK ship Cheonan (for a map of where the submarines and perhaps the "mother ship" supporting them deployed from and the route to the Cheonan that they likely took, see the map in Figure 5). A question and answer session following the briefing was also important. Lieutenant General Kang Won-dong stated that the team was able to conclude that it was a Yeoneo-class submarine that conducted the attack and that the craft infiltrated South Korean waters via the fringes of international waters which helped it to avoid detection in the murky waters off of the west coast of the Korean Peninsula. The JIG team also noted that one Sangoclass submarine and one Yeoneo-class submarine had departed port

⁵³⁻ Joint Civilian-Military Investigative Group, "Investigation Result on the Sinking of ROKS 'Cheonan,' Republic of Korea, Ministry of National Defense," May 20, 2010, URL: http://www.mnd.go.kr/mndEng_2009/WhatsNew/RecentNews/

before the attack.⁵⁴ Immediately following the formal open briefing, the United States condemned the North Korean attack, and supported the results of the probe, with White House Press Secretary Robert Gibbs calling the North Korean attack unacceptable. 55 Predictably, the North Korean government immediately denied any involvement in the attack and called the investigation a fabrication.⁵⁶

Immediately following the public briefing of the JIG investigation results, on May 21, President Lee Myong-bak called an emergency meeting of the ROK National Security Council to address what punitive measures Seoul would take against its neighbor to the North for the violent, unprovoked act on March 26.57

Anticipated base Anticipated base Northern Limit Line (NLL)

Figure 5, Estimated N.K. Submarine Infiltration Route

Source: Republic of Korea, Ministry of National Defense.

54 - Chris Green, "Q&A Reveals Cheonan Disaster Details," Daily NK, May 20, 2010, URL: http://www.dailynk.com/english/read.php?cataId=nk00100&num=6395.

⁵⁵⁻ Hwang Doo-Hyong, "U.S. Denounces N. Korea for Torpedoing S. Korean Warship," Yonhap, May 19, 2010, URL: http://english.yonhapnews.co.kr/news/2010/05/20/02 00000000AEN20100520004600315.HTML.

⁵⁶- Kim Deok-hyun, "S. Korea Confirms North's Torpedo Sank Warship," Yonhap, May 20, 2010, URL: http://english.yonhapnews.co.kr/national/2010/05/20/50/0301000000AEN 20100520005000315F.HTML.

⁵⁷⁻ Lee Chi-dong, "Lee Convenes NSC Meeting for Countermeasures Against N. Korea," Yonhap, May 21, 2010, URL: http://english.yonhapnews.co.kr/national/2010/05/21/73/ 0301000000AEN20100521002100315F.HTML.

Seoul announced that action would be sought with the U.N. Security Council. 58 Meanwhile, in a poll taken two days after the JIG briefing, by the Korea Research Center, 72 percent agreed that the Cheonan's sinking was caused by North Korea as presented by the JIG.⁵⁹ United Nations Command in Seoul announced that it planned to investigate whether the torpedo attack was a violation of the armistice from the Korean conflict (a question easily answered in my view).60

In a speech that he gave on May 24, 2010, President Lee announced many of the punitive actions that South Korea planned to take against the North. A key move that he articulated was, "From this moment, no North Korean ship will be allowed to make passage through any of the shipping lanes in the waters under our control, which has been allowed by the Inter-Korean Agreement on Maritime Transportation. The sea routes meant for inter-Korean exchanges and cooperation must never again be used for armed provocations." He further noted, "Trade and exchanges between the Republic of Korea and North Korea will also be suspended. We still remember the killing of an innocent South Korean tourist by a North Korean armed guard at the Mt. Kumgang resort. More recently, North Korea unilaterally confiscated South Korean assets at this same resort. Worse yet, the North sank the Cheonan taking the precious lives of our young sailors. Under these circumstances, any inter-Korean trade or other cooperative activity is meaningless. However, we will continue to provide assistance for infants and children. Matters pertaining to the Gaesong Industrial Complex will be duly considered, taking its unique

^{58- &}quot;S. Korea to Seek U.N. Resolution on N. Korea Over Ship Attack," Yonhap, May 23, 2010, URL: http://english.yonhapnews.co.kr/national/2010/05/23/52/0301000000AEN 20100523000400315F.HTML.

^{59- &}quot;72 Pct. Say N.K. Caused Cheonan Sinking," Donga Ilbo, May 22, 2010, URL: http:// english.donga.com/srv/service.php3?bicode=050000&biid=2010052219238.

^{60 -} Kim Deok-hyun, "U.N. Command to Probe Whether N. Korea Violated Armistice," Yonhap, May 21, 2010, URL: http://english.yonhapnews.co.kr/national/2010/05/21/ 12/0301000000AEN20100521002400315F.HTML.

characteristics into consideration." Finally, he referred to the U.N. when he said, "In close consultations with the nations concerned, the Government will refer this matter to the U.N. Security Council, so that the international community can join us in holding the North accountable. Many countries around the world have expressed their full support for our position."61

On May 24, 2010, South Korea announced a ban on travel for all of its citizens going into North Korea - except for the minimal number of individuals required for the operations at the Gaesong Industrial Complex. 62 The South Korean government resumed anti-Pyongyang radio broadcasts that had been suspended for the past six years. 63 The North Koreans, never ones to sit idle, announced that all relations with South Korea would be severed and all inter-Korean dialogue frozen during the rest of Lee Myung-bak's term as president.⁶⁴ Sanctions imposed on North Korea in the aftermath of the Cheonan sinking (and the resulting investigation) by the South Korean government were reportedly expected to cause a loss of around 10 percent of the North's legal income. 65 The South Korean government also announced that they would resume loudspeaker broadcasts into North Korea along the DMZ (though as of the writing of this essay these broadcasts have still not resumed).66 In a move that

^{61- &}quot;Full Text of President Lee's National Address," Yonhap, May 24, 2010, URL: http:// english.yonhapnews.co.kr/national/2010/05/24/42/0301000000AEN20100524003 400315F.HTML.

^{62- &}quot;South Korea Gov't Introduces Ban on Citizens' Travel to North Korea," Itar-Tass, May 24, 2010, URL: http://www.itar-tass.com/eng/level2.html?NewsID=15157163&Page

⁶³⁻ Kim So-hyun, "Gaesong Industrial Park a Hot Potato," Korea Herald, May 24, 2010, URL: http://www.koreaherald.com/national/Detail.jsp?newsMLId=20100524000751.

^{64- &}quot;N. Korea Says Will Sever all Inter-Korean Relations," Yonhap, May 25, 2010, URL: http://english.yonhapnews.co.kr/northkorea/2010/05/25/0401000000AEN2010052 5009000315.HTML.

^{65- &}quot;What Will Be the Impact of S. Korean Sanctions on N. Korea?" Chosun Ilbo, May 25, 2010, URL: http://english.chosun.com/site/data/html_dir/2010/05/25/20100525014

^{66- &}quot;Psychological Warfare' Against N. Korea Resumes," Chosun Ilbo, May 25, 2010, URL:

showed South Korea was serious, the first North Korean merchant vessel attempting to travel a route through the NLL since the punitive measures were announced was forced to retreat back and take a detour route along the west coast of the Korean Peninsula.67

In a poll taken the last week of May, 2010, six out of 10 (60.4 percent) South Koreans stated that they approved of the sanctions their government had imposed on Pyongyang. 68 Predictably, at the end of May, 2010, the North Korean National Defense Commission (NDC) again publicly disputed the results of the JIG investigation - publicly denying that the torpedo was North Korean (even though the torpedo was marked in Hangul), and even denying that the DPRK had a 130-ton Yeoneoclass submarine in its inventory. In an announcement to the ROK press, the Ministry of National Defense disputed the very unusual and easily disputable North Korean claims. 69 As stated earlier in this essay, satellite imagery on Google Earth had already revealed North Korea's Yeoneoclass submarines sitting in port.

The Cheonan Sinking is Referred to the UNSC: **Results and Disappointments**

On June 4, 2010, President Lee announced that Seoul would formally refer the case of the Cheonan sinking to the U.N. Security Council.70

http://english.chosun.com/site/data/html_dir/2010/05/25/2010052501410.html.

⁶⁷⁻ Song Sang-ho, "N.K. Merchant Ship Deterred from Border," Korea Herald, Mary 26, 2010, URL: http://www.koreaherald.com/national/Detail.jsp?newsMLId=201005260

^{68- &}quot;60% Approve of Sanctions Against N. Korea," Chosun Ilbo, May 27, 2010, URL: http:// english.chosun.com/site/data/html_dir/2010/05/27/2010052700524.html.

^{69 -} Park In-ho, "South Korea Refutes North Korean Refutations of Investigation Results," Daily NK, May 31, 2010, URL: http://www.dailynk.com/english/read.php?cataId= nk00100&num=6439.

⁷⁰- Lee Chi-dong, "S. Korea Refers N. Korea's Naval Attack to U.N. Security Council:

South Korea's Ambassador to the U.N., Park In-kook, presented a letter to the rotating head of the UNSC, Mexican diplomat Claude Heller, asking for appropriate action to be taken. The United States supported the move by South Korea. Of course, at the time, the wild card was how much China and Russia would go along with UNSC punitive action (and blame) directed at North Korea. In a press briefing, U.S. State Department Spokesman Phillip Crowley said in part, "I don't think anyone's necessarily got a specific idea of exactly what the response should be..." further commenting, "I don't think that South Korea called, necessarily, for a specific response. We'll consider this within the Security Council, and I think, as South Korea's indicated, it wants the Security Council to act appropriately, given the severity of the North Korean sinking of the Cheonan."⁷¹ On June 7, in what appeared to be a good sign, the UNSC adopted a resolution extending existing sanctions on North Korea for another year (the sanctions had originally been introduced because of nuclear and ballistic missile tests North Korea conducted in 2009).72

On June 10, a 10-member South Korean team led by Professor Yoon Duk-yong and Lieutenant General Park Jung-yi traveled to New York to present their finding from the JIG investigation to the UNSC.⁷³ According to South Korean government officials, the UNSC raised no objections to the investigation results presented by South Korean experts and experts from five other countries in New York during mid-June.⁷⁴ In July, the

President Lee," Yonhap, June 4, 2010, URL: http://english.yonhapnews.co.kr/north korea/2010/06/04/0401000000AEN20100604008400315.HTML.

⁷¹⁻ Hwang Doo-hyong, "U.S. Expects UNSC to Take Appropriate Response to N. Korea for Ship Sinking: State Dept.," Yonhap, June 4, 2010, URL: http://english.yonhapnews. co.kr/national/2010/06/05/39/0301000000AEN20100605000300315F.HTML.

⁷²- "Mandate of U.N. Panel on N. Korea Sanctions extended for 1 Yr+," *Breitbart*, June 7, 2010, URL: http://www.breitbart.com/article.php?id=D9G6GRD01&show_article=1.

⁷³- "Experts to Explain Cheonan Findings to U.N. Security Council," Chosun Ilbo, June 10, 2010, URL: http://english.chosun.com/site/data/html_dir/2010/06/10/20100610008

⁷⁴- Chang Jae-soon, "No Objections from U.N. Security Council Members on Sunken Ship

15-member UNSC issued a formal statement. The statement was diluted from what South Korea and the United States (among others) had asked for - reportedly because of the insistence of China.⁷⁵

In fact, the UNSC statement fell short of Seoul's and Washington's hopes - but was a surprise to no one given Beijing's close relationship to Pyongyang. 76 Former U.S. State Department official Mark Fitzpatrick was quoted as saying, "the compromise came out entirely because China would not accept a condemnation," adding, "it is likely to defuse tensions for the time being." The formal statement from the UNSC was obvious in its assessment that the ship sinking came from an attack - while stopping short of formally blaming North Korea for the attack. But the UNSC did express concern based on the JIG findings as follows, "In view of the findings of the Joint Civilian-Military Investigation Group led by the Republic of Korea with the participation of five nations, which concluded that the Democratic People's Republic of Korea was responsible for sinking the Cheonan, the Security Council expresses its deep concern." The UNSC also condemned the attack on the Cheonan, stating, "Therefore, the Security Council condemns the attack which led to the sinking of the Cheonan "78

Probe: Official," Yonhap, June 15, 2010, URL: http://english.yonhapnews.co.kr/national/ 2010/06/15/46/0301000000AEN20100615004200315F.HTML.

⁷⁵⁻ Hwang Doo-hyong, "U.N. Condemns Attack of S. Korean Warship Without Naming N. Korea," Yonhap, July 8, 2010, URL: http://english.yonhapnews.co.kr/national/2010/ 07/10/17/0301000000AEN20100710000900315F.HTML.

^{76- &}quot;[Editorial] After UNSC Statement," Korea Herald, July 9, 2010, URL: http://media. daum.net/cplist/view.html?cateid=100000&cpid=22&newsid=2010070916583621 6&p=koreaherald.

^{77 -} Donald Kirk, "Why North Korea Cheonan Sinking Gets Wrist Slap from U.N.," Christian Science Monitor, July 12, 2010, URL: http://www.csmonitor.com/World/Asia-Pacific/ 2010/0712/Why-North-Korea-Cheonan-sinking-gets-wrist-slap-from-UN.

^{78- &}quot;Security Council Condemns Attack on Republic of Korea Naval Ship 'Cheonan,' Stresses Need to Prevent Further Attacks, Other Hostilities in the Region," United Nations Security Council, Department of Public Information, News and Media Division, July 9, 2010, URL: http://www.un.org/News/Press/docs/2010/sc9975.doc.htm.

Events Surrounding the UNSC Statement and the Aftermath: Action and Defiance

As the many events ensued following the initial results of the JIG investigation (and the UNSC procedures), the Russians sent an investigation team to South Korea.⁷⁹ Seoul had invited both China and Russia to send investigation teams to evaluate (in detail) the evidence from the Cheonan sinking, but the Chinese declined. 80 By June 11, North Korean ships had been ordered to leave South Korean waters on more than 20 occasions since President Lee had issued his official orders regarding the passage of North Korean ships on May 24.81 It was also revealed that North Korea actually had a marketing catalog for the type of torpedo that hit and sank the Cheonan. The torpedo even came with a quality assurance guarantee in the catalog. 82 Despite all of these events - and overwhelming evidence that linked (and still links) North Korea to proliferation and support to terrorist groups, the Obama administration decided (again) to refrain from relisting North Korea as a state sponsor of terrorism.83

While the events that occurred during June and July were both compelling and relevant to geopolitics in East Asia, in mid-July more evidence became available regarding North Korea's actions on March 26,

⁷⁹- Yoo Jee-ho, "Russian Experts Here to Vet Probe," JoongAng Ilbo, June 1, 2010, URL: http://joongangdaily.joins.com/article/view.asp?aid=2921236.

⁸⁰- "China Declines S. Korea Offer to Join Int'l Probe Into Sunken Ship," Kyodo News, June 10, 2010, URL: http://home.kyodo.co.jp/modules/fstStory/index.php?storyid=506041.

^{81- &}quot;11 N.K. Ships Expelled from the South's Waters Since Passage Ban: Minister," Yonhap, June 11, 2010, URL: http://english.yonhapnews.co.kr/northkorea/2010/06/11/6/0401 000000AEN20100611006200315F.HTML.

⁸²⁻ See "Brochure of Torpedo That Sank S. Korean Ship bears N. Korea's Country Name: Official," Yonhap, June 22, 2010, URL: http://english.yonhapnews.co.kr/news/2010/ 06/22/73/020000000AEN20100622002100315F.HTML; "North Korean Torpedo Had Quality Assurance Mark in Catalog," Donga Ilbo, June 22, 2010, URL: http://english. donga.com/srv/service.php3?bicode=050000&biid=2010062293198.

^{83 -} Keiichi Honma, "U.S. Spares N. Korea 'Terror Sponsor' Status," Yomiuri Shimbun, June 24, 2010, URL: http://www.yomiuri.co.jp/dy/world/T100623003659.htm.

2010. In late June (as reported in mid-July) a Chinese businessman visiting Pyongyang photographed a poster (see Figure 6) showing a helmeted North Korean sailor smashing a ship that appears to be a South Korean Corvette (like the Cheonan) in two. The businessman (speaking on terms of anonymity) told Radio Free Asia, "It's hard to understand how highranking officials can adamantly deny North Korea's responsibility for the sinking of the Cheonan while propaganda posters showing a ship being broken in half by a fist are in circulation..."84 Whether the ship shown in the poster is the same class as the Cheonan or not, and whether or not it is an older picture that in July was simply being recirculated, the timing and the message it carried are important: a ROK Navy ship smashed in two by a North Korean fist.

Figure 6. North Korean Poster in Pyongyang

"Ready to crush any attack with a single blow!" Source: Radio Free Asia.

⁸⁴⁻ For details of the interview with the anonymous Chinese businessman and analysis regarding the poster, see Moon Gwang-lip, "Poster in Pyongyang Recalls the Cheonan," Joong Ang Ilbo, July 15, 2010, URL: http://joongangdaily.joins.com/article/view.asp?aid= 2923225; Sarah Jackson Han, Jung Young, and Greg Scarlatoiu, "Posters Show Smashed Ship," Radio Free Asia, July 15, 2010, URL: http://www.rfa.org/english/news/ korea/poster-07152010143832.html?searchterm=None.

At the end of July the United States announced that it would put a new package of sanctions into effect against North Korea that would include targeting of both weapons proliferation and other activities bringing profits into the coffers of the North Korean elite. Such illicit activities include, but are not limited to, counterfeit \$100 bills, counterfeit cigarettes, and illegal drugs such as heroin and methamphetamines.⁸⁵ The U.S. State Department also reaffirmed its assertion that North Korea was responsible for the torpedo attack on the Cheonan, despite the lukewarm support the UNSC statement received from the Russians and particularly the Chinese. 86 Coincidentally, at the beginning of August, the Russian government announced that it would not make public the results of its investigation into the sinking of the South Korean ship.87 By early September, it was revealed in a poll that only three in 10 South Koreans completely trusted the finding of the JIG.⁸⁸ But soon thereafter, the week of September 13, the final results of the JIG investigation were released to the public. The results can accurately be described as overwhelming in the evidence chain that they use to point to North Korea as the attacker on March 26. The final results were released in a 313 page document that clearly showed exact details of how the ship was sunk, the intelligence surrounding the deployment of the DPRK submarines, diagrams and simulations of the torpedo used to sink the Cheonan, and numerous other

^{85 -} For details of the sanctions and statements by the U.S. State Department, see "Sanctions are Going to Hurt," Joong Ang Ilbo, July 24, 2010, URL: http://joongangdaily.joins.com/ article/view.asp?aid=2923620.

⁸⁶⁻ Hwang Doo-hyong, "U.S. Repeats Cheonan was Sunk by N. Korea's Torpedo: State Dept.," Yonhap, July 28, 2010, URL: http://english.yonhapnews.co.kr/national/2010/ 07/29/52/0301000000AEN20100729000400315F.HTML.

⁸⁷⁻ Hwang Doo-hyong, "Moscow Not to Make Public Probe Outcome on Cheonan's Sinking: Amb. Churkin," Yonhap, August 4, 2010, URL: http://english.yonhapnews.co.kr/ national/2010/08/05/26/0301000000AEN20100805000200315F.HTML.

^{88- &}quot;Most South Koreans Skeptical About Cheonan Findings, Survey Shows," Chosun Ilbo, September 8, 2010, URL: http://english.chosun.com/site/data/html_dir/2010/09/08/ 2010090800979.html.

detailed pieces of evidence.89

As a result of the JIG investigation, the ROK Navy announced that it would focus more on littoral warfare - with an understanding that the North Korean maritime threat had not declined. 90 In addition, in a rather revealing breaking news story, Russia's state-run television network reported that the Cheonan was in fact sunk by a North Korean torpedo though the Russian government still declined to publicly release the results of their investigation (and still has not done so as of the writing of this essay). 91 In October a member of South Korea's National Assembly (Shin Hak-yong) revealed to the open press that the South Korean Navy had knowledge of the movement of North Korean submarines on the day of the attack, but the ROK military did not raise the alert level - if true a compelling statement about the readiness at the time of Seoul's naval forces. The Defense Security Command announced that it would investigate Mr. Shin for leaking military secrets. 92 Finally, in October 2010, a new poll was released. It showed that seven out of 10 South Koreans now believed the Cheonan was torpedoed by North Korea. The poll was conducted by the Asian Institute for Policy Studies and showed that 68.7 percent of South Koreans believed the North Koreans were

⁸⁹⁻ For details of the carefully researched and articulated final results of the JIG investigation released in September 2010, see Kim Deok-hyun, "S. Korea Releases Full Report on Ship Sinking, Reaffirming N. Korea's Responsibility," Yonhap, September 13, 2010, URL: http://english.yonhapnews.co.kr/national/2010/09/13/85/0301000000AEN20100913 004500315F.HTML. For the complete 312 page final report on the sinking of the Cheonan released by the JIG, see "Joint Investigation Report on the Attack on the ROK Ship Cheonan," Republic of Korea, Ministry of National Defense, September 14, 2010, URL: http://www.cheonan46.go.kr/95.

^{90 -} Jung Sung-ki, "Navy to Focus on Littoral Warfare," Korea Times, September 15, 2010, URL: http://www.koreatimes.co.kr/www/news/nation/2010/09/205_73102.html.

^{91- &}quot;Russian TV Blames N. Korea for Cheonan Sinking," Chosun Ilbo, September 16, 2010, URL: http://english.chosun.com/site/data/html_dir/2010/09/16/2010091601080.html.

⁹²⁻ Jung Sung-ki, "Military Investigating Lawmaker for Leaking Secrets," Korea Times, October 11, 2010, URL: http://www.koreatimes.co.kr/www/news/nation/2010/10/ 205_74342.html.

responsible for the tragic event. Only 8.5 percent said they disagreed, while 22.8 percent had no opinion. 93 The poll may reflect the final JIG investigation results as well as the many compelling pieces of evidence pointing to North Korea as the culprit. Of course, North Korea officially continued to deny the accusations regarding the sinking of the Cheonan at a series of talks (seven rounds as of October 27, 2010) that began during July and continued through October at Panmunjom with military officers from United Nations Command.94

Despite the overwhelming evidence, and the fact that there was not just one evidence chain but many, there were a few naysayers regarding the JIG investigation. Among the few (but vocal) naysayers were Professors Seunghun Lee of the University of Virginia and Professor J.J. Suh of the Johns Hopkins University School of Advanced International Studies, who claimed that the evidence was not compelling enough. For example, to quote Professor Lee, "To begin, the 'No. 1' could logically have been written by South Koreans as well, and thus could not be adopted as evidence in the courtroom of a democratic society."95 The

^{93- &}quot;South Koreans Solidly Blame N. Korea for Cheonan Sinking," Chosun Ilbo, October 20, 2010, URL: http://english.chosun.com/site/data/html_dir/2010/10/20/20101020004 28.html.

⁹⁴⁻ For more details on the seven rounds of talks between United Nations Command and North Korean military officers that occurred between July and October 2010, see Park Chan-kyong, "N. Korea Demands to See Evidence on Ship Sinking," AFP July 15, 2010, URL: http://news.yahoo.com/s/afp/20100715/wl_asia_afp/skoreankoreausmilitary; Song Sang-ho, "UNC, North Korea Discuss Sunken Ship," Korea Herald, July 30, 2010, URL: http://www.koreaherald.com/national/Detail.jsp?newsMLId=20100730000705; Kim Deok-hyun, "U.N. Command, N. Korea End Talks with Little Progress," Yonhap, September 16, 2010, URL: http://english.yonhapnews.co.kr/national/2010/09/16/65/ 0301000000AEN20100916010500315F.HTML; DPRK Makes New Proposals on S. Korea Warship Sinking Probe," Xinhua, October 5, 2010, URL: http://news.xinhuanet. com/english2010/world/2010-10/05/c_13543618.htm; Jung Sung-ki, "U.N. Command, N.K. fail to Set High-Level Military Meeting," Korea Times, October 27, 2010, URL: http://www.koreatimes.co.kr/www/news/nation/2010/10/113_75270.html.

^{95 -} Eunghun Lee, "[Column] Pieces of the Cheonan Puzzle," Hankyoreh Daily, August 5, 2010, URL: http://www.hani.co.kr/arti/english_edition/e_opinion/433660.html.

statement (referring to the North Korean markings on a North Korean manufactured weapons) asserted by Lee assumes that an international team consisting of South Korea, the United States, the United Kingdom, Australia, and Sweden, would conspire to do such a thing. Lee and Suh published a paper on July 15, 2010, that made many assertions that simply made little sense from an evidentiary stance when compared to the assessments of the JIG investigation. For example, in the paper (among many other things that they state), the two articulate, "First, the JIG failed to produce conclusive, or at least convincing beyond reasonable doubt, evidence of an outside explosion."96 Again, a statement that simply is incorrect. Both the initial JIG report and the final (312 page) report clearly show how the "bubble-jet" effect occurred from the North Korean torpedo. At a press conference the two professors held in Japan, Lee reportedly said that "Some of the data produced by the investigative team may have even been fabricated to justify its claim."97 Again, a completely unsupportable accusation, and one that assumes highly qualified teams from five democratic nation-states intentionally conspired to build false evidence.

ROK-U.S. Military Responses to the Sinking of the Cheonan

Soon after it became apparent that North Korea was responsible for the sinking of the Cheonan, the South Korean government began making important moves to counter possible future North Korean provocations in the NLL and proliferation of WMDs that provide cash for military forces and the North Korean elite. Washington also played a major role in

⁹⁶⁻ Seunghun Lee and J.J. Suh, "Rush to Judgment: Inconsistencies in South Korea's Cheonan Report," Nautilus Institute, Policy Forum 10-039, July 15, 2010, URL: http://www.nautilus.org/publications/essays/napsnet/policy-forums-online/security2 009-2010/rush-to-judgment-inconsistencies-in-south-korea2019s-cheonan-report.

^{97- &}quot;Researchers Question Probe into Sinking of S. Korean Naval Ship," Breitbart, July 9, 2010, URL: http://www.breitbart.com/article.php?id=D9GRHFT00&show_article=1.

this renewed emphasis on readiness for provocations, not only as a vocal supporter of these moves, but as a participant in what would prove to be important military exercises. In June of 2010, South Korea announced that for the first time, it would be the host nation for a Proliferation Security Initiative (PSI) exercise simulating interdiction of ships carrying illegal weapons.98 Officials in Seoul announced that South Korea was looking to become one of the 20 nations (out of 95 participating countries) that hold membership in PSI's Operational Experts Group.99 In June the U.S. and South Korean navies also formally agreed to work closer together in joint anti-submarine exercises. Admirals from the two navies also agreed to bolster sharing of intelligence (some of it likely very sensitive) on North Korean submarines. 100

There are several examples of stepped up readiness and military drills meant to send a strong message to North Korea following the sinking of the Cheonan. During the last half of June, South Korea and the U.S. agreed to eventually stage joint (and combined) naval drills off the west coast of the Korean Peninsula in what would be a show of force for North Korea. 101 In July, South Korean and U.S. naval forces (as well as smaller units from other forces) conducted a joint (and combined) exercise off of the east coast of the Korean Peninsula. The exercise included the American aircraft carrier USS George Washington, in what was also seen as a major show of force - but the exercise was condemned by some for not

^{98- &}quot;Int'l Exercise to be Staged off Busan," Chosun Ilbo, June 22, 2010, URL: http://english. chosun.com/site/data/html_dir/2010/06/22/2010062201285.html.

^{99- &}quot;S. Korea Seeks Leading Role in Multinational Drill Slammed by N. Korea: Official," Yonhap, June 20, 2010, URL: http://english.yonhapnews.co.kr/national/2010/06/20/ 95/0301000000AEN20100620001500315F.HTML.

^{100 - &}quot;S. Korean, U.S. Navies Agree on Closer Cooperation Against N.K. Subs," Yonhap, June 16, 2010, URL: http://english.yonhapnews.co.kr/national/2010/06/16/97/03010000 00AEN20100616006900315F.HTML.

^{101- &}quot;S. Korea, U.S. to Hold Naval Drills in Late June," Yonhap, June 18, 2010, URL: http://english.yonhapnews.co.kr/national/2010/06/18/73/0301000000AEN201006 18002100315F.HTML.

being staged off the west coast where the provocation initiated by North Korea occurred (an exercise off the west coast with a U.S. aircraft carrier was conducted in late November 2010). The exercise near the east coast of the Korean Peninsula involved about 20 ships and 200 aircraft, and included anti-submarine simulations. 102 In an even stronger show of force, in August, South Korea conducted a large anti-submarine exercise near the west coast of the Korean Peninsula that involved naval, air, and ground forces. The exercises included all four services and including live-fire drills, anti-submarine simulations, and troop landings. 103 During October of 2010, as announced during June, South Korea hosted a multinational PSI exercise simulating the interdiction of WMDs. Fourteen nations (including the United States) took part in the exercise - which was obviously aimed at stopping WMD proliferation from countries like North Korea (and others). 104

Conclusions and Implications

An assessment of the actions conducted by the South Korean government following the sinking of the Cheonan shows that military and

^{102 -} See Jun Kwanwoo, "U.S., South Korea Start War Games at Sea," AFP, July 25, 2010, URL: http://news.yahoo.com/s/afp/20100725/wl_asia_afp/skoreankoreausmilitary; Song Sang-ho, "S. Korea, U.S. Wrap up Drills," Korea Herald, December 1, 2010, URL: http://www.koreaherald.com/pop/NewsFlashRight.jsp?newsMLId=20101201000886; Kim Deok-hyun, "S. Korea, U.S. Stage Anti-Submarine Exercises in East Sea," Yonhap, July 26, 2010, URL: http://english.yonhapnews.co.kr/national/2010/07/26/27/03010 00000AEN20100726007900315F.HTML.

^{103 -} See Song Sang-ho, "S. Korea to Begin Maritime Exercise in West Sea Today," Korea Herald, August 4, 2010, URL: http://www.koreaherald.com/national/Detail.jsp?news MLId=20100804000757; "South Korea Prepares Against Maritime Intrusion on Day 2 of Naval Exercises," Yonhap, August 6, 2010, URL: http://english.yonhapnews. co.kr/national/2010/08/06/24/0301000000AEN20100806004800315F.HTML.

¹⁰⁴ - "S. Korea Hosts Maritime Drill to Stop Transfer of WMDs," Yonhap, October 13, 2010, URL: http://english.yonhapnews.co.kr/national/2010/10/13/17/0301000000AEN20 101013000900315F.HTML.

policy officials followed a pragmatic, deliberate, and transparent investigation into the naval tragedy. President Lee's decision very soon after the provocation to bring in international teams was admirable, and added to the credibility of the final results - which were agreed on formally by the representatives of all five of the participating democratic nations. Following the compelling results of the JIG investigation, instead of conducting a retaliatory strike against North Korea (which would have been very popular with some in South Korea but would have hurt Seoul's credibility in the international arena), Lee took the results to the UNSC. Despite the predictable watered down statement that came out of the UNSC (thanks largely to China), the result has been a clear consensus among nearly every democracy on Earth that 1) North Korea conducted the unprovoked attack on the Cheonan, and 2) punitive action needed to be taken against Pyongyang.

Seoul's punitive actions aimed at Pyongyang have been political, economic, and military. The economic measures that South Korea has taken against the North will have an impact on the coffers of the elite in both the short run and the long run. Stepping up of propaganda campaigns aimed at the North and disallowing passage of North Korean ships through South Korean waters where they had previously been allowed to navigate are also important moves that send a strong message to the DPRK leadership. And of course, increased exercises focused on anti-submarine warfare and anti-provocation activities - sometimes conducted with the United States - are just as important as South Korea's increased participation in PSI. By participating in PSI, South Korea has the potential to hit North Korea where it hurts - in the pocketbook. The profits from the sales of WMDs and illicit and counterfeit goods go directly into the coffers of the elite in North Korea. 105

¹⁰⁵- For more information on North Korea's illicit and illegal activities, see "Sanctions are Going to Hurt," JoongAng Ilbo, July 24, 2010, URL: http://joongangdaily.joins.com/

The United States took important actions following the sinking of the Cheonan as well. Of course, American naval experts participated in the JIG investigation. In addition, the actions taken by the U.S. Government discussed earlier were important because they showed the Americans were behind the South Koreans in their resolve. Joint and combined naval exercises with South Korea will also help increase readiness and capabilities against possible future provocations. Washington showed that it took the North Korean action seriously and intended to take punitive action against Pyongyang for its irresponsible state behavior by increasing sanctions directly aimed at illicit activities (illegal drugs, counterfeit currency, etc.) and WMD proliferation during July and August of 2010. The increased sanctions reportedly were aimed at specific bank accounts and front companies that deal in proliferation and/or illicit activity. 106 Of course, in my view, it is still disappointing that to date, the U.S. State Department has not yet relisted North Korea on the list of nations supporting terrorism. This would be an important move and may yet still occur - but has not as of the writing of this essay.

And what of North Korea? It is a reasonable expectation that North Korea can and will initiate more provocations. In fact, on November 23, 2010, the North Koreans once again attacked in the NLL area - this time shelling one of the five UN controlled islands with artillery. The attack resulted in deaths and injuries to both military and civilian personnel. 107 The artillery attack on November 23, 2010, is more proof that North

article/view.asp?aid=2923620.

¹⁰⁶- For an example of the types of increased sanctions the United States initiated against North Korea, see "U.S. Identifies 200 N. Korea-Linked Bank Accounts, 100 of Them Likely to be Frozen," Yonhap, July 23, 2010, URL: http://english.yonhapnews.co.kr/ news/2010/07/23/0200000000AEN20100723001200315.HTML.

¹⁰⁷ - For details of the attack on one of the islands near the NLL on November 23, 2010, see Jack Kim and Lee Jae-won, "North Korea Shells South in Fiercest Attack in Decades," Reuters, November 23, 2010, URL: http://www.reuters.com/article/idUSTRE6AM0YS 20101123.

Korea will continue to create violent provocations in the NLL. What strategic and military planners must keep in mind is that, as I discussed earlier, one of the four key aspects of nearly all provocations North Korea conducts is that they involve continuously changing tactics and techniques. Thus, while one can expect the North Koreans to conduct more provocations in or near the NLL, one can also expect that the tactics, techniques, and procedures for these operations will likely be quite different from those carried out in the past. This makes planning for provocations, and perhaps as importantly, deterring them, an extremely challenging undertaking for those in policy and planning circles.

If one expects that North Korea will unilaterally ease tensions in order to get sanctions dropped, or to improve relations either with the United States or South Korea, I would say that this is extremely unlikely. As long as the DPRK assesses that it can advance its foreign policy through brinkmanship and provocations (and there are no signs that the leadership in Pyongyang has stopped believing this), we can expect North Korea to take a variety of actions to "push the edge of the envelop." The sinking of the Cheonan most certainly set back relations on the Korean Peninsula and within the region by at least a year. But Kim Jong-il and his inner circle knew this when they planned the violent attack. Much of what has occurred since that tragic day on March 26 was no doubt anticipated by the generals and admirals in North Korea - and in fact was planned for even as they deployed specially equipped submarines into the waters of the NLL on a violent mission against a South Korean ship. Thus, until Pyongyang ends its rogue-state behavior, containment of its capabilities and deterrence against its many asymmetric threats is the only practical policy for maintaining security and stability on the Korean Peninsula.

Article Received: 11/4 Reviewed: 12/6 Revised: 12/13 Accepted: 12/15

Bibliography

- "A Provocation by General Kim Kyok-sik Plotting Comeback in Pyongyang?" Joong Ang Ilbo. March 16, 2009. URL: http://nk.joins.com/news/view.asp? aid=3335047&cont=news_polit.
- "60% Approve of Sanctions Against N. Korea." Chosun Ilbo. May 27, 2010. URL: http://english.chosun.com/site/data/html_dir/2010/05/27/201005270 0524.html.
- "Cheonan Probe Results to go to 30 Major Nations." Donga Ilbo. May 19, 2010. URL: http://english.donga.com/srv/service.php3?bicode=050000&biid= 2010051961128.
- "Cheonan Sinking Likely Caused by Bubble Jet from Explosion." Hankyoreh Daily. April 17, 2010. URL: http://english.hani.co.kr/arti/english_edition/e_ national/416519.html.
- "China Declines S. Korea Offer to Join Int'l Probe Into Sunken Ship." Kyodo News. June 10, 2010. URL: http://home.kyodo.co.jp/modules/fstStory/index. php?storyid=506041.
- "DPRK Fires Artillery Again Near Disputed Sea Border: Gov't." Xinhua. January 28, 2010. URL: http://english.cctv.com/20100129/102716.shtml.
- "Full Text of President Lee's National Address." Yonhap. May 24, 2010. URL: http://english.yonhapnews.co.kr/national/2010/05/24/42/030100000 0AEN20100524003400315F.HTML.
- Green, Chris. "Q&A Reveals Cheonan Disaster Details." Daily NK. May 20, 2010. URL: http://www.dailynk.com/english/read.php?cataId=nk00100&num= 6395.
- Han, Sarah Jackson, Jung Young, and Greg Scarlatoiu. "Posters Show Smashed Ship." Radio Free Asia. July 15, 2010. URL: http://www.rfa.org/english/ news/korea/poster-07152010143832.html?searchterm=None.
- Hwang, Doo-hyong. "U.N. Condemns Attack of S. Korean Warship Without Naming N. Korea." Yonhap. July 8, 2010. URL: http://english.yonhap news.co.kr/national/2010/07/10/17/0301000000AEN201007100009 00315F.HTML.
- "Investigation Result on the Sinking of the ROK's 'Cheonan'." Republic of Korea, Ministry of National Defense. May 20, 2010. URL: http://www.global security.org/military/library/report/2010/100520_jcmig-roks-cheonan/ 100520_jcmig-roks-cheonan.pdf.

- Jeong, Yong-soo. "North Korea's Military Strengthens its Grip." JoongAng Ilbo. April 21, 2009. URL: http://joongangdaily.joins.com/article/view.asp? aid=2903832.
- "Joint Investigation Report on the Attack on the ROK ship Cheonan." Republic of Korea, Ministry of National Defense. September 14, 2010. URL: http://www.cheonan46.go.kr/95.
- Jun, Kwanwoo. "U.S., South Korea Start War Games at Sea." AFP. July 25, 2010. URL: http://news.yahoo.com/s/afp/20100725/wl_asia_afp/skoreankorea usmilitary.
- Jung, Sung-ki. "More Weight Put on Outside Impact for Ship Sinking." Korea Times. April 13, 2010. URL: http://www.koreatimes.co.kr/www/news/ nation/2010/04/205 64153.html.
- Kim, Deok-hyun. "S. Korea, U.S. Stage Anti-Submarine Exercises in East Sea." Yonhap. July 26, 2010. URL: http://english.yonhapnews.co.kr/national/ 2010/07/26/27/0301000000AEN20100726007900315F.HTML.
- Kim Deok-hyun. "U.N. Command, N. Korea End Talks with Little Progress." Yonhap. September 16, 2010. URL: http://english.yonhapnews.co.kr/national/ 2010/09/16/65/0301000000AFN20100916010500315F HTML
- Kim Deok-hyun. "U.N. Command to Probe Whether N. Korea Violated Armistice." Yonhap. May 21, 2010. URL: http://english.yonhapnews.co.kr/national/ 2010/05/21/12/0301000000AEN20100521002400315F.HTML.
- Kim, Min-seok and Ser Myo-ja. "Cheonan Probe Detects TNT Type." JoongAng Ilbo. May 14, 2010. URL: http://joongangdaily.joins.com/article/view.asp? aid=2920461.
- Kim, So-hyun. "Reconnaissance Bureau is Heart of N.K. Terrorism." Korea Herald. May 26, 2010. URL: http://www.koreaherald.com/national/Detail.jsp? newsMLId=20100526000675.
- Kim, Tae-hong. "Google Earth Torpedoes North Korean Lie." Daily NK. June 1, 2010. URL: http://www.dailynk.com/english/read.php?cataId=nk00100 &num=6444.
- Kirk, Donald. "Why North Korea Cheonan Sinking Gets Wrist Slap from U.N." Christian Science Monitor. July 12, 2010. URL: http://www.csmonitor.com/ World/Asia-Pacific/2010/0712/Why-North-Korea-Cheonan-sinkinggets-wrist-slap-from-UN.

- Lee, Myung-bak. "Opening Remarks by President Lee Myung-bak at a Meeting with Top Commanders of the ROK Armed Forces, May 4, 2010." Office of the President, Republic of Korea. May 4, 2010. URL: http://english. president.go.kr/pre_activity/speeches/speeches_view.php?uno=3119 &board no=E03.
- Lee, Seunghun, and J.J. Suh. "Rush to Judgment: Inconsistencies in South Korea's Cheonan Report." Nautilus Institute, Policy Forum 10-039. July 15, 2010. URL: http://www.nautilus.org/publications/essays/napsnet/policy-forums -online/security2009-2010/rush-to-judgment-inconsistencies-in-south -korea2019s-cheonan-report.
- Lee, Sung-jin. "Cheonan Sinking Rumor Proudly Circulating in North Korea." Daily NK. April 27, 2010. URL: http://www.dailynk.com/english/read. php?cataId=nk01500&num=6286.
- Lee, Tae-hoon. "External Impact Likely Cause of Ship Sinking." Korea Times. April 15, 2010. URL: http://www.koreatimes.co.kr/www/news/nation/2010/ 04/113_64242.html.
- "Military Intelligence Immediately Suspected N. Korea in Ship Sinking: Source." Yonhap. April 22, 2010. URL: http://english.yonhapnews.co.kr/national/ 2010/04/22/10/0301000000AEN20100422007000315F.HTML.
- Miller, Reid G. "S. Korea Sinks N. Korea Ship About 30 N. Korean Sailors Believed Killed." Seattle Times. June 15, 1999. URL: http://www.thefree library.com/S.+KOREA+SINKS+N.+KOREAN+SHIP+--+ABOUT+30+ NORTH+KOREAN+SAILORS...-a064245394.
- Moon, Gwang-lip. "Poster in Pyongyang Recalls the Cheonan." Joong Ang Ilbo. July 15, 2010. URL: http://joongangdaily.joins.com/article/view.asp?aid= 2923225.
- "Most South Koreans Skeptical About Cheonan Findings, Survey Shows." Chosun Ilbo. September 8, 2010. URL: http://english.chosun.com/site/data/html_ dir/2010/09/08/2010090800979.html.
- "N. Korea Sharply Increased Underwater Military Training in 2009: Sources." *Kyodo News*. May 16, 2010. URL: http://www.breitbart.com/article.php? id=D9FNSBB00&show article=1.
- "N. Korean Artillery Fire was Time-on-Target Drill." Chosun Ilbo. January 29, 2010. URL: http://english.chosun.com/site/data/html_dir/2010/01/29/ 2010012900402.html.

- "N. Korean Leadership 'Closely Involved in Cheonan Sinking'." Chosun Ilbo. May 27, 2010. URL: http://english.chosun.com/site/data/html_dir/2010/05/ 27/2010052701465 html
- "N. Korean Submarine 'Left Base Before the Cheonan Sank'." Chosun Ilbo. March 31, 2010, URL: http://english.chosun.com/site/data/html_dir/2010/03/ 31/2010033101024.html.
- "N. Korea's Kim Picks Hawk for Top Military Post." AFP. February 20, 2009. URL: http://asia.news.yahoo.com/090220/afp/090220064136asiapacificne ws.html.
- "N.K. Torpedo Had Quality Assurance Mark in Catalog." Donga Ilbo. June 22, 2010. URL: http://english.donga.com/srv/service.php3?bicode=050000&biid= 2010062293198.
- Oh Kyu-wook. "Testimonies from Survivors." Korea Herald. March 28, 2010. URL: http://www.koreaherald.co.kr/NEWKHSITE/data/html_dir/2010/ 03/29/201003290037.asp.
- Pak, Pyong-chin and Na Ki-chon. "Sinking of ROK's Cheonan Attributed to General Reconnaissance Bureau of North." Segye Ilbo (in Korean). April 10, 2010. URL: http://www.segye.com/Articles/Main.asp.
- "72 Pct. Say N.K. Caused Cheonan Sinking." Donga Ilbo. May 22, 2010. URL: http://english.donga.com/srv/service.php3?bicode=050000&biid=20 10052219238.
- Ramstad, Evan. "Standoff Over Ship Escalates." Wall Street Journal. April 25, 2010. URL: http://online.wsj.com/article/SB10001424052748704446 704575205400833858626.html?KEYWORDS=EVAN+RAMSTAD.
- "Russian TV Blames N. Korea for Cheonan Sinking." Chosun Ilbo. September 16, 2010. URL: http://english.chosun.com/site/data/html_dir/2010/09/16/ 2010091601080.html.
- "Sanctions are Going to Hurt." Joong Ang Ilbo. July 24, 2010. URL: http://joongang daily.joins.com/article/view.asp?aid=2923620.
- "Security Council Condemns Attack on Republic of Korea Naval Ship 'Cheonan,' Stresses Need to Prevent Further Attacks, Other Hostilities in the Region." United Nations Security Council, Department of Public Information, News and Media Division. July 9, 2010. URL: http://www.un.org/News/ Press/docs/2010/sc9975.doc.htm.

- "Seoul to Invite More Foreign Experts to Probe Naval Disaster: PM." Yonhap. April 7, 2010. URL: http://english.yonhapnews.co.kr/news/2010/04/07/020 0000000AFN20100407004200315 HTML
- Shin, Joo-hyun. "North Korean Submarine Helmsman Breaks 14-Year Silence." Daily NK. June 1, 2010. URL: http://www.dailynk.com/english/read. php?cataId=nk02500&num=6445.
- Song, Sang-ho. "S. Korea to Begin Maritime Exercise in West Sea Today." Korea Herald. August 4, 2010. URL: http://www.koreaherald.com/national/ Detail.jsp?newsMLId=20100804000757.
- Song, Sang-ho. "UNC, North Korea Discuss Sunken Ship." Korea Herald. July 30, 2010. URL: http://www.koreaherald.com/national/Detail.jsp?newsMLId= 20100730000705.
- "South Korea Prepares Against Maritime Intrusion on Day 2 of Naval Exercises." Yonhap. August 6, 2010. URL: http://english.yonhapnews.co.kr/national/ 2010/08/06/24/03010000000AEN20100806004800315F.HTML.
- "South Korea Seeks Leading Role in Multinational Drill Slammed by N. Korea: Official." Yonhap. June 20, 2010. URL: http://english.yonhapnews.co.kr/ national/2010/06/20/95/0301000000AEN20100620001500315F.HT MI.
- "South Koreans Solidly Blame N. Korea for Cheonan Sinking." Chosun Ilbo. October 20, 2010. URL: http://english.chosun.com/site/data/html_dir/ 2010/10/20/2010102000428.html.
- "The Naval Clash on the Yellow Sea on June 29, 2002 Between South Korea and North Korea: The Situation and ROK's Position." Ministry of National Defense, Republic of Korea. July 1, 2002. URL: http://www.global security.org/wmd/library/news/rok/2002/0020704-naval.htm.