Briefing on the Cheonan Situation  
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1. Background

On March 26, 2010 at approximately 21:22, an apparent explosion took place beneath the ROKS Cheonan causing it to break apart. At the time of the incident, the Cheonan was located 1 mile southwest off of Baengnyeong island. The Cheonan is a 1,200 ton patrol craft of the 2nd Fleet of the ROK NAVY. It was put into operation on 1989.

The stern sank few minutes later and the bow sank 3 hours later at around midnight March 27. Total crew of 104 officers and sailors were on the Cheonan, 58 were rescued and 46 were later found dead or missing. The stern of the Cheonan was recovered on April 15, and the bow was recovered on April 24.

The ROKG launched the Joint Civilian-Military Investigation Group(JIG) on March 31 to identify the cause of the sinking of the Cheonan scientifically and objectively. The JIG was composed of 74 civilian and military experts from Korea, US, Australia, UK and Sweden(25 Korean civilian experts, 22 military experts, 3 National Assembly recommendees, 24 foreign experts). The group was further broken down to 4 teams -- Scientific Investigation, Explosive Analysis, Ship Structure Management, and Intelligence Analysis Team.

After going through vigorous investigation, analyses and validation, the JIG announced the investigation results on May 20, 2010.

President Lee Myung-bak gave a public address on the Cheonan incident and laid out various international and domestic measures against NK.

2. Issues and Findings

The findings of the investigation answered, in a scientific and analytical manner, two critical questions: one, what caused the sinking of the Cheonan? And two, who is responsible for the actions that took place on March 26?

With regard to the cause of the incident, the JIG found that beyond a reasonable doubt that first, external explosion caused the Cheonan to break. Second, it was a torpedo. And third, the torpedo was manufactured by NK.

With regard to who was responsible, the JIG stated that overwhelming evidence points to the conclusion that the torpedo was fired by a NK submarine and that there is no other plausible explanation.
a. Cause of the incident

(External explosion caused the Cheonan to split apart and sink)

First, JIG concluded that \( \Delta \) there was an underwater explosion outside the ship, \( \Delta \) bottom left side of the gas turbine room in the bow, and \( \Delta \) proceeded from the bottom left side to the top right side of the ship.

Configuration measurements corroborate JIG’s conclusion. The site of separation is where the gas turbine room is located. There is an upward deformation of the bottom as well as the top shell.

Analysis of the damaged part of the hull shows that first, there was significant upward bending of the CVK (Center Vertical Keel), compared to its original state. Second, left side of the severed plane bent and rolled upwards, while right side of the severed plane area detached as if it was torn out. Third, the funnel was detached as if they were popped out.

Forensic and structural evidence show that suggested possible causes for the Cheonan to break, e.g. running aground, fatigue fracture, faulty maintenance, or internal explosion are groundless.

(The external explosion was from a torpedo)

Second, the JIG concluded that a strong underwater explosion generated by the detonation of a torpedo below and to the left of the gas turbine room, followed by a strong bubble-jet effect caused the Cheonan to split apart and sink.

Normally when a torpedo explodes underwater near a vessel, shock waves followed by gas bubbles are created. This gas bubble contracts and expands putting great amount of pressure on a ship forcing it to bend up and down. Then the bubbles collapse to create a water jet that rises above the surface to form a column of water, subsequently causing the vessel to break apart. Evidence and testimony show that this was what happened.

Investigation of the inside and outside of the ship shows that evidence of water pressure and bubble effects on the bottom of the hull, extreme pressure on the fin stabilizer, and wires cut with no traces of heat.

The seismic and infrasound wave analysis corresponds to a shock wave and bubble effect generated by an underwater explosion.

Statements from survivors and witnesses, medical examinations, and forensic evidence corroborate the existence of a water column. The survivors testified that they had heard a "Boom" sound followed by another "Boooom" like sound after 1-2 seconds. A sentry on the shore of Baengnyong island stated that he witnessed an approximately 100-meter-high "pillar of white flash" for 2~3 seconds. Medical examinations on the deceased service members, showed no trace of fragmentation or burn injury, but fractures and lacerations were observed. Explosive compounds were found not only on the bottom of the vessel but also at the funnel and other areas of the ship.
Simulations of an underwater explosion show that a detonation with a net explosive weight of 200-300kg occurred at a depth of about 6-9m, approximately 3m left of the center of the gas turbine room results in a similar deformation as the Cheonan.

Finally, as conclusive evidence that can corroborate that there was a torpedo, on May 15, 2010 at approximately 09:25, the JIG have collected propulsion parts, including propulsion motor with propellers and a steering section from the site of the sinking.

It used dredging ships as seen in the slide to fork out traces of evidence in the area.

JIG has concluded that this torpedo was responsible for sinking the Cheonan. Explosive compounds of Aluminum Oxide (white powder) that were found on the propeller blade match those found on the ship. The level of corrosion of the evidence was identical to that of the bow and stern of the Cheonan. The location of evidence was around the point of explosion.

(The torpedo was manufactured by NK)

Third, The JIG concluded that the torpedo responsible for sinking of the Cheonan was manufactured by NK.

The torpedo parts recovered perfectly match the schematics of the CHT-02D torpedo included in introductory brochures provided to foreign countries by North Korea.

The markings in Hangul, which reads “1 bun” (or No. 1 in English), found inside the end of the propulsion section, is consistent with the marking and pattern of a previously obtained North Korean torpedo.

NK’s CHT-02D, a heavyweight torpedo with a diameter of 21 inches, a weight of 1.7 tons and a net explosive weight of up to 250kg. As simulations show, it is capable of sinking the Cheonan.

b. NK responsible for deploying the torpedo

(Overwhelming evidence points to the conclusion that the torpedo was fired by a NK submarine and that there is no other plausible explanation)

NK possesses submarines capable of infiltration and various torpedoes which can deliver the same level of damage that was delivered to the Cheonan. NK has a fleet of about 70 submarines, comprised of approximately 20 Romeo class (1,800 tons), 40 Sango class (300 tons) and 10 midget class submarines including the Yeono class (130 tons). It also possesses torpedoes of various capabilities including straight running, acoustic and wake homing torpedoes with a net explosive weight of about 200 to 300kg.

Intelligence sources confirm that one Sango and one Yeono class submarine 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. Furthermore, intelligence sources confirmed that all
submarines from neighboring countries were either in or near their respective home bases at the time of the incident.

Intelligence sources believe that the NK submarine circled around the West Sea, and that it has undergone maneuver exercises before taking action. They also believe that the CHT-02D was fired from a Yeono class submarine.

The torpedo responsible for the attack and subsequent sinking of the Cheonan was manufactured by NK.

3. Response Measures

In response to the conclusion of the JIG based on scientific and objective investigation, President Lee made an address to the nation on May 24. Minister of Foreign Affairs, National Defense and Unification followed with statements outlining specific measures.

The President condemned NK's action as a military provocation against Korea. It is a military provocation which violated the UN Charter and contravened the existing agreements reached for the sake of peace and stability on the Korean Peninsula including the Armistice Agreement, and the Basic Agreement between South and North Korea.

In order to prevent such a provocation from recurring and to hold NK accountable, President Lee outlined key measures that Korea would take. Prohibit NK vessels from making passage through the shipping lanes within Korea's waters. Suspend inter-Korean trade and exchange. However, humanitarian assistance to children and infants will continue. Kaesung I.C. operations will be duly considered taking its unique characteristics into consideration. Take this issue to the UNSC. We will work with the members of the UNSC in holding NK accountable.

President Lee also made it clear that Korea will not tolerate any provocative act by the North and that it will maintain the principle of proactive deterrence. Should NK militarily invade Korea's territory, territorial waters and airspace, Korea will immediately exercise the right of self-defense.

President Lee urged NK to apologize for its provocation and immediately punish those responsible, and to change and start thinking what is truly good for the regime and its people.

Finally, the President stressed that the overriding goal of Korea is not military confrontation, but attaining real peace and stability on the Korean Peninsula, bringing about prosperity for all Koreans, and realizing the vision of peaceful reunification of the Korean Peninsula. He stressed that the Korean Peninsula must not be left standing as the last danger zone of Northeast Asia, and that the Koreas must take the initiative and resolve this problem. The Peninsula must become a new cradle of world peace.

He concluded by underlining the importance of solidifying national security readiness and strengthening public awareness. He stressed that the ROK-US joint combat readiness will be further strengthened on the basis of strong ROK-US alliance.
Following President Lee’s address, Ministers of Unification, National Defense, and Foreign Affairs outlined in greater detail the actions of the Korean government.

Inter-Korean measures include prohibiting NK vessels from entering Korean waters and ports, suspending inter-Korean trade, denying South Koreans permission to visit NK other than Kaesung I.C. and Keumgang tourism site, denying permission on new investment and expansion of current ones, and suspending, in principle, assistance projects to NK except humanitarian assistance to vulnerable groups. The Ministry of Unification made it clear that Korea will maintain Kaesung industrial complex but that it will take stern measures if NK chooses to threaten the safety of South Koreans.

Military measures include resuming psychological warfare, conducting an anti-submarine operation exercise in the immediate future, participating and conducting PSI(Proliferation Security Initiative) maritime interdiction exercises both within the region and beyond. Korea will take further military and non-military measures depending on NK’s response and attitude.

Diplomatic measures include pursuing all possible diplomatic responses in the close cooperation with allies, friends, partners and international organizations, taking the Cheonan matter to the UNSC, strengthening implementation of UNSC resolutions 1718 and 1874, and encouraging others to do so. Korea and the US are in close consultation in charting a way forward and intend to use the Foreign Minister’s Meeting between Minister Yu Myung-hwan and Secretary Clinton on May 26, Foreign Affairs and Defense Ministers’ (2+2) Meeting in July, and the Summit on the occasion of the G-20 in Canada in June to further coordinate our response.

Korea will continue to work with Japan in coordinating bilateral and multilateral responses, discuss with NATO, EU, ASEAN, and actively consult with other partners like China and Russia. Korea will look to major diplomatic events like the G8, G20, and ASEM to bolster the international community's measures against NK.

4. Conclusion

The JIG has provided clear and convincing evidence that shows beyond a reasonable doubt that the NK torpedo which exploded right beneath the Cheonan was responsible for its sinking. Also, scientific evidence, strong and corroborated intelligence overwhelmingly point to NK having fired the torpedo. There can be no other plausible explanation.

Close Korea and US cooperation has been key in drawing out such a strong conclusion. Assistance from the US along with UK, Australia, Sweden, and Canada has been invaluable in the investigation process.

Korea and the US are keeping close coordination in charting a specific course ahead. Statements from the White House released after the conclusion of the investigation and President Lee’s public address show that the two countries are united in condemning NK and further strategizing a way ahead. Continuation of such close coordination will also be important in deterring NK from taking further provocative actions.
The measures which President Lee and the Ministers have laid out demonstrate a comprehensive set of various unilateral, like-minded, and multilateral measures.

It is critical at this juncture for the international community to be united in condemning NK and send a strong and clear message to NK that such provocative actions cannot be condoned in our civilized world. As peace-loving nations, we should not be drawn to verbal or physical brawls. But there are times when the international community needs to make a stand to secure peace and security. I believe that the strong voice of the international community will be crucial in correcting NK behavior and truly guaranteeing peace and security. /END/