

Legal Aspects on Japan's Ballistic Missile Defense (Draft/not for quote)

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The ballistic missile, Taepo Dong 1 (D-1), launched by North Korea without any pre-notification, flew over Japanese territory and crashed into the Pacific Ocean on 31 August, 1998. But, North Korea announced later on that it was a satellite launching.

Japanese government took this incident as a direct military threat and made two political decisions; the one is to launch its own information gathering satellite¹⁾, and the other is to begin the study of Ballistic

- 본고는 1999년 10월 서울에서 “새 천년의 항공우주법 및 정책의 주요 과제와 방향”이라는 주제로 개최된 제9회 항공우주법 국제학술세미나대회에서 발표된 논문임

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1) Japan is planning to launch its own information gathering satellite which will be around the earth at a height of 500km, and install 2 satellites with radar sensor and 2 optical satellites, which have 1 meter resolution, by the fiscal year 2002. The

Missile Defense (BMD). The issues have discussed over its necessity and earlier adoption among experts for a long time, but the decision has been postponed by taking into consideration of the observation of the principle of peaceful use of outer space and the influences to the neighboring countries.

There is currently no effective means to counter a ballistic missile strike, but BMD systems are being studied. Japanese government has decided to launch its information gathering satellites so as to get intelligence on North Korea's launch of ballistic missiles as early as possible. At the same time, the Japanese government recognizes North Korea's ballistic missiles as the military threat directly related to Japanese security, and has reluctantly decided to start a study of BMD systems.

This article examines some fundamental legal issues related to Japanese BMD.

I. Security and Military Threat

1. Military Capability and Intention

The basic concept of security is to deter against external military threats and to deal with attacks from other countries in case it happens. Military threat is composed of military capability and intention of attack. Without this intention, threat will not exist even if a nation has powerful military capability, on the other hand even if there is an intention of attack, it is impossible to attack other nations without any military capability.

satellite will be aimed to gather important information of neighboring countries for risk management of military threat, disaster or accident.

Estimation of rival military capability is a secret issue of every nation, but for example, India or Pakistan have developed nuclear weapon and the threat of the two countries will be limited to the range of their missiles to carrying it. United States maintains powerful military capability, but Japan doesn't recognize U.S. military capability as a threat, because of the Security Treaty and relationships between the two countries. To ensure national security, every nation has paid much attention to estimate potential rivals' military capability, and at the same time, they have tried to reduce their military capability through various measures.

As for the intention of armed attack, they try to conjecture it through communications between military personnel, keeping transparency of military forces through joint military maneuvers, security dialogues and so on. And their intentions can be confirmed by taking Confidence Building Measures (CBMs). As for the reduction of level of weapons, which compose a base of the military capability, many nations proceeded with disarmament that is finally aimed for deprivation of weapons, or, with maintaining their arms control, many nations deterred from military conflicts especially nuclear war.

In case neighboring countries will not reduce their military capability and a nation can not conjecture a rival intention of armed attack, it is natural to take necessary countermeasures against use of force of rival countries. Japanese government has therefore decided the new policy to deal with North Korea's TD-1, which consists direct military threat to Japan. That is to say, the government made decision to launch its own information gathering satellite to improve her ability to gather intelligence relating to the use of force of North Korea. In addition, Japanese government determined to set-up study of BMD systems to reduce the threat of theater ballistic missiles (TBM) like TD-1.

U.S. estimates that Taepo Dong 2 (TD-2) could reach major cities and military bases in Alaska and the smaller, western most islands in the Hawaiian chain. Light weight variations of the TD-2 could fly as far as 10,000km, placing at risk western U.S. territory in an arc extending northwest from Phoenix, Arizona, to Madison, Wisconsin.²⁾ The reason for U.S. to enter its missile talks with North Korea is to estimate North Korea's military capability and to confirm her intention of armed attack. And her development of MBD systems is an important activity of U.S. for its own security issue.

2. Proliferation of weapons of mass destruction and of missile

The proliferation of nuclear, biological, and chemical (NBC) weapons and the missiles that can deliver them pose a major threat to the security of nations in post cold war era. Over 20 countries possessor are developing NBC weapons, and more than 20 countries have TBMs or cruise missiles to deliver them.³⁾

Among weapons of mass destruction, 1972 Biological Weapon Convention and 1993 Chemical Weapon Convention have respectively prohibited to develop, keep and use of each weapon. As for nuclear weapons, Nuclear Non-Proliferation Treaty (NPT) prohibits all non-nuclear member states from developing nuclear weapon. But NPT can not restrict those countries from developing nuclear weapon, like India and Pakistan that are not member of NPT. Some of NPT member states are also suspected as nuclear weapons possessor. Comprehensive

2) *Rumsfeld Commission Report on Ballistic Missile Threat*, July 15, 1998, P.2. Rumsfeld Commission was established in accordance with U.S. Defense Authorization Act of 1997.

3) William S. Cohen, *Annual Report to the President and the Congress*, Secretary of Defense, 1999, P.71.

Nuclear Test Ban Treaty (CTBT) which prohibits nuclear test is still ineffective.

In July 8, 1996, International Court of Justice (ICJ) had announced an advisory opinion of the legality of use of nuclear weapon that it would not be judged as unlawful straightforwardly when nuclear weapons are used defensively.

U.S. and Russia have restricted ballistic missiles each other by concluding bilateral treaties. 1972 Strategic Arms Limitation Talks 1 (SALT-1) prescribes the limitation of ballistic missiles, and 1991 Strategic Arms Reduction Treaty 1 (START-1) requires each side to have reduced its strategic missile forces to a certain level. 1972 Anti-Ballistic Missiles (ABM) Treaty and 1976 ABM protocol confirmed its restriction and limitation to the numbers of ABM that intercepts strategic ballistic missiles. As for ABM, not more than 100 ABM launchers and ABM missiles (article 3), and prohibition of development, test and station of space based ABM (article 5) are prescribed. Thus, nuclear strategy of Mutually Assured Destruction, MAD, was established between U.S. and Russia.

During the cold-war era, the nuclear strategic stability has been maintained under the MAD. But serious problems of the proliferation of missile and actual use of TBM are caused by rogue states and that has focused on in post cold-war era.

There were many definition of TBM, however, inter-continental ballistic missile (ICBM), which has a range of more than 5,000km, and submarine-launched ballistic missile (SLBM), which has a range of more than 3000km were classified as strategic ballistic missiles. Then other shorter-range missiles are classified as TBMs. Nodong 1 (with a range of

800 to 1000km) and TD-1 (with a range of 1,800km), that North Korea has developed, are TBMs, however at the same time, Japan considers that these missiles are classified as strategic ballistic missiles for her.

Iraq had launched Scud-type TBM and its improved Al-Hussein missile for a strategic purpose during the Gulf War. And then, Israel had tried to intercept those Iraqi missiles with Patriot missiles, however, it was found that interceptors by Patriot were not effective. Patriot system used at that occasion was developed mainly to work against aircraft attacks. This fact shows that defense systems other than those composed with elements against TBM are useless.

There is not yet any international law, which regulate ballistic missile development. But, many countries like U.S., U.K., France, Russia, Germany, Japan and so on, which are anxious for the problem of ballistic missile proliferation, set up the Missile Technology Control Regime (MTCR) in 1987.⁴⁾ MTCR is a guideline of every member states that regulates transferring technologies and components of missile that might contribute to construction of nuclear missile capability; Regime prohibits transferring ballistic missiles, which has a range of over 300km and are capable of carrying warhead over 500kg and components for the missile.

In 1993, TBM related technology for light-weight warhead carrying bio-chemical weapons has added to regulating lists of MTCR. There are no international regulations to restrict North Korean's transfer of ballistic missiles because she is not a member state of MTCR. While it has pointed out that North Korea had transfer Ghauri missile technology to

4) 29 countries join the regime and the chair-country will change every year, and the general meeting will be opened in the chair country annually.
France acts as the Point of Contract (POC) and POC meeting will be held monthly in Paris.

Pakistan, and gained nuclear technology from Pakistan in return. Pakistan is not a member of NPT, therefore she need not to follow the rules of restricting transfer of nuclear technology.

North Korea is believed to have already deployed Nodong1 and TD-1. TMD system is considered to be the only one capable of protecting nation from theater ballistic missile strikes, which is equipped with weapons of mass destruction. Japan was forced to make new political decision of starting the study of BMD system to counter North Korea's military capability and she sometimes has announced the use of them.

II. The United State's Ballistic Missile Defense

1. Changes from SDI to BMD

In 1983, American president Reagan had doubts about MAD strategy, and announced a plan of BMD, that is multi-layered defense system aimed to meet Soviet ICBM. It was in 1985 that the concept of BMD had become known as Strategic Defense Initiative (SDI). SDI is a project to destroy strategic ballistic missile after launching with making full use of new space-based weapons in each phase, as boost phase, post-boost phase, mid-course phase and terminal phase.

Then, Soviet had objected about SDI because it would change MAD strategy ineffective. But as a consequence of consultations between two countries, the study of SDI elements in laboratory was approved within the limits of not affecting MAD. Soviet also had started studying SDI elements, but she gave up studying for lack of resources. And the cold-war was ended as generally known. After the Cold War, international society had escaped from exchange of nuclear weapons between the two countries, however the danger of accidental nuclear

strike still remained.

In 1991, president Bush announced a plan of Global Protection Against Limited Strikes (GPALS), which is a global defense plan intended to deal with the limited and accidental ballistic missile strike. In other words, GPALS aimed to cope with accidentally launched ICBM from Russia and China and TMD from rogue states. After that, president Clinton made two plans of NMD and TMD to cope with the proliferation of ballistic missile.

The purpose of NMD is said to protect the United States from ICBM strike from nations except Russia. As I mentioned above, North Korea's TD-2 is believed to be capable of reaching Hawaii and Alaska and to be able to fly as far as more than 10,000km, and U.S. NMD system will cope with it. NMD system is said to be consisted of main elements such as Ground Based Interceptor (CBI), Battle Management Command, Control and Communications (BMC3), Ground Based Radar (GBR), Space Based Infrared System (SBIRS) and Upgraded Early Warning Radar (UEWR).

American TMD system aims at protecting military bases operated overseas and allies from TBM strike of rogue states. That is, U.S. TMD system deployed in U.S. military bases overseas is aimed to defend the U.S. forces in Europe or NATO allies from Libyan TBM strike. Therefore, U.S. considers to deploy TMD systems at military bases in allied countries, and appeals to allies to join joint research and development of TMD systems. Israel and a few nations have started joint research project on the TMD systems.

Japan is going to carry out an examination of adopting the U.S. TMD system through the U.S.-Japan joint study and research.

2. Concept of U.S. TMD systems

TMD system is composed of upper-tier system which intercepts TBM in the upper atmosphere including outer space, and lower-tier system which intercepts TBM in the atmosphere at a height of 100km and the latest cruise missile at a lower altitude.

Theater High Altitude Area Defense (THAAD) and Navy Theater Wide (NTW) can be classified into the upper-tier system. THAAD system is a system that combined with Defense Support Program (DSP), early warning satellite on the geo-stationary orbit, and THAAD missile. NTW is a system that Standard Missiles carrying Lightweight Exo-Atmospheric Projectile (LEAP) launched from a ship equipped Aegis system would intercept TBM in the upper-tier.

It is the lower tier system that intercepts TBM at the terminal stage. Patriot Advanced Capabilities 3 (PAC-3) with a range of 20km and at a height of 20km, Navy Area Defense System (NADS) using SM-2Block IV A missile launched from Aegis ship, and Medium Extended Air Defense System (MEADS) can be classified into the lower tier system. Now, the upper and lower tier systems appointed by the U.S. BMDO as the major defense acquired and development programs are five, MEADS, NADS, NTW, PAC-3, and THAAD.

It would be most expensive and difficult to develop a system intercepting TBM flying at high velocity. In this connection, the seeker characterization flight (SCF) of SM-2Block IV A in 1997 January,⁵⁾

5) Office of Assistant Secretary of Defense (Public Affairs), *News Release of January 24, 1997.*

PAC-3 in March 1999, and THAAD in July 1999, had reported to successful complete.

In August 1999, the U.S. State Department announced that THAAD system, which was successful in intercepting tests twice will be omitted the rest of tests program and to enter into the final stage of its development and prototype within 2000.⁶⁾ The competition of research and development between other upper-tier systems, NTW, is quite hard. The deployment of U.S. NTW is scheduled in 2007.⁷⁾

3. Relationship between TMD and ABM treaty

ABM treaty was signed between U.S. and Soviet Russia in 1972, expressing their commitment to strengthening strategic stability and international security, and emphasizing the importance of further reductions in strategic offensive arms. The treaty prohibited each side of deployment of ABM launchers which developed to intercept strategic ballistic missile, so that the treaty would be denied the possibilities of survival of each side in exchanging of nuclear strikes, to remove the factor and uncertainty of one side's anticipate strike, and to deter their arms race between U.S. and Soviet Union.

It is agreed by MAD that ABM treaty permits each side to have limited ABM, the interceptor of strategic ballistic missile, so there is a problem that development of Anti-Theater Ballistic Missile (ATMB) in TMD system would be same as the development of ABM. According to ABM treaty, the problems related to the interpretation of articles shall be consulted within Standing Consultative Commission (SCC). Needless to

6) Office of Assistant Secretary of Defense (Public Affairs), *News Release of August 19, 1999*.

7) Ibid.

say, after the collapse of the Soviet Union, ABM treaty was formally succeeded to Russia, Ukraine, Belarus and Kazakhstan.

U.S. proposed a new standard of classification on ATBM and ABM, and asks for Russia's approval in case that TMD systems, which are under development, would not be against ABM Treaty.⁸⁾ As for the standard of the lower tier system, it is said that the two sides came into an agreement relatively in a short period of time. Lower tier TMD system is a system with demonstrated interceptor missiles not faster than 3km/sec. If the velocity of a ballistic target missile will not exceed 5.0 km/sec, and the flight range of a missile will not exceed 3500 km, the elements of the prototype TMD system, such as missiles, radar, and launchers, are considered to cope with the ABM treaty.

The problem was the standard of the upper tier system. President Clinton had set a new standard of TBM, and tried to classify it into two: that if a missile can intercept strategic ballistic missiles, it is ABM, and if a missile can not do so, that is ATBM.

On March 21, 1997, president Clinton and president Yeltsin agreed Joint Statement concerning the ABM treaty at Helsinki, Finland.⁹⁾

In SCC negotiations on the problem of demarcation between TMD systems and ABM systems, U.S. Russia, together with Belarus, Kazakhstan and Ukraine, successfully finished negotiations on demarcation with respect to lower-velocity TMD systems.

Neither side has plans before April 1999 to flight test, against a

8) On Clinton's proposal, see, A New Threat to the ABM Treaty: the Administration's TMD Proposal, *Arms Control Today*, Jan./Feb., 1994, pp.11-16.

9) *Joint Statement Concerning the Anti-Ballistic Missile Treaty*, March 21, 1997

ballistic missile target missile, TMD interceptor missiles subject to the agreement on demarcation with respect to higher velocity TMD systems. Neither side has plans for TMD systems with interceptor missiles faster than 5.5 km/sec for land-based and air-based systems or 4.5 km/sec for sea-based systems.

The elements for the agreement on higher-velocity TMD systems are:
The velocity of the ballistic target missiles will not exceed 5km/sec.
The flight range of the missile target missiles will not exceed 3500km.

United States congress takes the position that when Soviet Union dissolved, ABM treaty disappeared its independent existence, so the treaty should be abolished. And it is recognized that as far as U.S. Senate is denying consent to certain ABM treaty related agreements, like a classification between ABM system and TMD system, and saying that United States will not be bound by ABM treaty.

U.S and Russia haven't make final conclusion whether the classified ATBM be against ABM treaty or not, but, at least, as far THAAD missile and LEAP, the consent will be formed in the direction of not against ABM treaty sooner.

III. Japan's BMD and right of self-defense

1. Commencement of study on BMD system

United States has asked Japan to cooperate in the study and research of SDI, but Japan was prudent in judging it. Japan has been engaged in a BMD dialogue with the United States since 1987 when the two countries signed an Agreement Concerning Japanese Participation in Research for the Strategic Defense Initiative. In December 1993, a

U.S.-Japan TMD Working Group (TMD WG) was created under the Security Sub Committee, Security Consultative Committee (SSC-SCC) to provide a forum for regular discussion of TMD and TMD-related matters such as regional political implications and treaty compliance.

In October 1994, a Government of Japan-led U.S.-Japan Bilateral Study on Ballistic Missile Defense was initiated; the study provided extensive simulation and systems analysis to identify and evaluate various missile defense alternative architectures. The results identified and evaluate specific Japanese TMD-related technologies associated with the U.S. NTW TBMD program and their related capabilities that would enhance U.S. TMD systems development.

Then, Japan and U.S. signed the exchange of notes and the memorandum of understanding (MOU) on joint technology research for NTW TMD systems to defend the country against the threat of using TD-1 and its deployment from North Korea in August 16, 1999.¹⁰⁾ These agreements call for the two countries to offer requisite information and equipment necessary for the joint technical research of NTW for each other. This decision was made on the basis of the Japan and U.S. Mutual Assistance Treaty.

According to the agreements, two countries will apply advanced Japan and the U.S. technologies to improve the capacities of four major guided missile components: ① A seeker, which uses infrared to distinguish and home a target ballistic missile, ② A nose cone, which protects the seeker from the atmosphere and frictional heat, ③ Advanced kinetic warhead, which destroys ballistic missile warhead directly, and ④ Second stage rocket motor of three stage missile. Among those components, infrared seekers will be made experimentally, but rests of them will only be

10) The Yomiuri Shimbun

limited to the design stage.

The term of its research will be for 2 years and it might by extend if necessary. As for the cost of the research, each of them pay their own expenditure within the limits of their own budgets and, doesn't offer their funds to other part. Any information resulting from the research will be shared with both countries. In case of transferring the technology to the third countries, the two countries has to acquire the consent of the another, in order not to conflict with the Japanese three principles on weapon export.

The memorandum of understanding and the exchange of notes were signed between Japan and United States to start the joint technical research formally, and these actions of the two countries would send message aimed to deter the use and deployment of North Korea's TD-1.

Japanese geography is the predominant factor to be considered in designing the architecture requirements and options for defense of Japan. There is a sea barrier of about 1,000km between most of Japan and North Korea. To traverse this distance, a TBM launched against Japan must travel a substantial part of the way exo-atmospherically. The extended period of flight that the North Korean TBMs spend in the exoatmosphere provides upper tier TBMD systems ample engagement opportunities (shoot-look-shoot coverage in many defended areas) and deployment flexibility (ships can be positioned for either ascent, midcourse or descent phase defense).¹¹⁾

It has not been reported when Japan would be able to deploy BMD

11) U.S. Department of Defense, *Report to Congress on Theater Missile Defense Architecture Options for Asia-Pacific Report to Congress on Theater Missile Defense Architecture Options for Asia-Pacific Region*, March 14, 1999, p.6.

system. And, in case the BMD system is deployed, it is not clear whether its BMD system will work effectively or not. But if Japan is equipped with BMD system, North Korea may change its strategy and at least, BMD system will contribute the Japanese people to maintain their safety and security.

2. Issues related to the right of self-defense

Article 5 of the UN Charter prescribes that the conditions to invoke the right of self-defense is in the case of 'if an armed attack occurs', but the article was interpreted differently. There are two different opinions in the interpretation of the provision. The one is that a nation can exercise their right of self-defense has to be limited in case that an armed attack occurred.

The other is that a nation is permitted to exercise the right when the opponent country has started the readiness of armed attack. Attacks made by TBM, as is capable to carry weapons of mass destruction, may possibly result in a large scale and irrecoverable damage, therefore it is important to decide which interpretation will be adopted.

Japanese government has strictly observed article 9 of the Constitution and in case of invoking the right of self-defense and exercising use of force, Japan has taken a policy limited to three preconditions as follows: ① There is imminent infringement of Japanese sovereignty, ②. There is not other appropriate measures to remove the danger, and ③. There is a minimum level of force when it is used.¹²⁾

Because Japan is a member of the United Nations, the action of

12) Answer at the Closing Committee of the House of Councilor, October 14, 1972.

'imminent infringement' is equal to an armed attack against Japan, and when an armed attack is occurred, Japan will begin to use of force against hostile country. However, Japanese government has not clarified about the moment of 'armed attack'. According to the director general of the cabinet legislation bureau's reply at the diet, the moment is between the start of the military attack for Japan and, at least, before damages caused by the attack.¹³⁾

According to the minister of foreign affairs reply at the diet, the situation should be judged by the international situation, the intention expressed by the opponent, and measures of attack.¹⁴⁾ That is, in case that Japan is attacked by other nation, the case is a systematic and intentional armed attack and it is clear and able to recognize objectively.¹⁵⁾

Related to TMD, in case the ballistic missile is launched against Japan, in judging of the fact that Japan is damaged by armed attack, it should examine the moment of 'causing damages by missiles' or 'becoming clear that the missile will be directed to Japan', in advance. It is difficult to judge in a very short time when a launched missile is detected, whether the attack is systematic and intentional or the missile is launched by accident. To prepare for such cases, Japan has to connect hot line, which is set up between U.S. and Russia by the same reason, with possible objective nations.

In addition, Japanese government has expressed that it is within the framework of right of self-defense to attack against the opponent missile sites if there is no other means.¹⁶⁾ However, she has denied possessing

13) Answer at the Budget Committee of the House of Representative, March 18, 1970.

14) Answer at the Budget Committee of the House of Representative, March 18, 1970.

15) Answer at the Security Special Committee, November 9, 1981

16) Answer at the Cabinet Committee of the House of Representative, February 29, 1956

long-range missiles that can counter the launching sites, because the government considered that the attack by ballistic missiles against Japan was not realistic for a long time. That is, it spiritually is against Japanese constitution to possess weapons to threaten and attack other country.¹⁷⁾

Japan has, therefore, no military capability to attack missile launch site in opponent country and no intention of possessing any long-range missiles.

IV. Conclusion

Legal aspects related to Japanese study of BMD, which has just been started for study, has been considered in this article. It can be conjectured that NTW system is considered to be adopted for Japan's BMD. But it is uncertain that in what system of BMD will be introduced and when the system will be deployed in Japan. In case that Japan adopt NTW system, Japan has to examine how to combine with Aegis system, for example, whether the existing Aegis radar system is correspond to NTW system or not, and how to equip standard missiles into Aegis ships.

Japan has to study not only the aspect of hardware, but also software. Even if BMD system is deployed in Japan, the conclusion of the timing of exercising the right of self-defense is still unclear. As aforementioned, Japan is negative in possessing the long-range missile capable of attacking missile launch sites of neighboring countries.

Therefore, if Japan is attacked by TMD and is damaged by the failure of BMD interception, theoretically no other measures of self-defense will exist. If such situations happen, the value of the BMD system will be

17) Answer at the Cabinet Committee of the House of Representative, March 19, 1959

lowered. Taking into consideration of the development and deployment of BMD system, it is essential to study and carry out a further examination of both sides of hardware and software, especially, to find decision of uncertain problems on the aspects of software sooner.