

# **Military Confidence Building on the Korean Peninsula: Possible First Steps Toward Cooperation**

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The Korean Peninsula is one of the world's most tense military confrontational sites. Nearly 2 million North Korean, South Korean, and U.S. troops face each other along the 255-km long military demarcation line. Confidence building measures (CBMs), particularly military ones, that address the security needs of both countries could decrease the danger of conflict and help create an environment where a peace regime might be negotiated. In spite of the present high level of mutual distrust, steps can still be taken to prepare for future development and implementation of CBMs. This paper defines some simple and specific first steps toward CBMs that might be useful on the Korean Peninsula.

## **A Summary of Arms Control on the Korean Peninsula**

Inter-Korean relations have been quite volatile since the 1953 armistice. Relations cycle between outright conflict and Ministerial-level agreements for cooperation. Between 1954 and 1985, North Korea made 205 arms control proposals and South Korea made 55.<sup>2</sup> The proposals included CBMs, operational and structural arms control, and disarmament. In some cases, the two countries offered proposals more for political propaganda purposes than for arms control. Because of the political conditions in the two countries, none of these proposals resulted in concrete actions. The December 1991 "South-North Agreement on Reconciliation, Non-Aggression, Exchanges, and Cooperation" (known as the Basic Agreement) appeared to be a diplomatic breakthrough. The Basic Agreement, which contains provisions for confidence building, military transparency, and operational arms control, soon stalled and is currently frozen.

There is a consistent philosophical difference between South and North Korean proposals for arms control. South Korean, European, and American analysts have examined the history of the Conference on Security and Cooperation in Europe (CSCE) process and promoted the application of CBMs and operational arms control to the Korean Peninsula. In contrast, Chung-In Moon described North Korean perspectives on arms control as being based on Europe's experience during the 1920s with little analysis of the last 20 years in Europe.<sup>3</sup> The South argues that confidence must be built before structural arms control or disarmament can occur. The North argues that arms reduction, primarily in the number of active military personnel, will result in increased confidence.

<sup>1</sup> Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy under Contract DE-ACO4-94AL85000.

<sup>2</sup> Cha, Young-Koo; *Arms Talks on the Korean Peninsula: A Korean Perspective*, Korean Journal of International Studies, XXI, Vol.2 (Summer 1990), pp. 231-248.

<sup>3</sup> Moon, Chung-In; *Arms Control On The Korean Peninsula*, Yonsei University Press (Seoul, Korea), 1996, pp. 36-41.

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## Opportunities For Military Confidence Building

Extrapolations of European experience to Korea should be done selectively. A feature of arms control in Europe that may have application in the Korean context is "transparency." The fundamental purpose of transparency measures is to share selected information about activities that previously were shrouded in secrecy. Military activities or resources are not limited by transparency. Transparency measures can be part of a formal agreement or be performed on an as-needed basis as a confidence building measure. Techniques to achieve transparency fall into two broad categories: *non-technical* (e.g., declarations, on-site observers) and *technical* (e.g., the use of sensors to monitor activity, analysis of physical samples). The use of technical tools to implement transparency is often called *cooperative monitoring*. A side benefit to implementing transparency measures is that direct contact between adversaries helps to counter the dehumanizing effects of prolonged hostility.

James Goodby assessed the evolving South-North positions in operational and structural arms control.<sup>4</sup> Young-Koo Cha and Kang Choi examined transparency along with other potential CBMs for the Korean Peninsula.<sup>5</sup> Both studies found a number of similarities in the positions of South and North Korea. South and North Korea agree on the basic principle of constraining certain military operations and dispositions. Their differing views of the threat, however, result in very different applications of that principle. In spite of these different perceptions, the two sides agree that:

- The demilitarized zone (DMZ) should be truly demilitarized and made a zone of peace.
- Communication links should be established to avoid inadvertent conflict.
- Military exercises should be declared in advance of performance.
- Both governments should mutually declare their intention to avoid the use of force.

Cha and Choi concluded that transparency measures, accompanied by some constraint measures, are the best choice for future initiatives to develop military confidence between South and North Korea. They recommended that transparency measures be introduced first because excessive secrecy about military status can damage relations by fostering even greater suspicions. Measures that provide transparency in pertinent areas of military affairs help reduce suspicions by providing opportunities for communicating non-hostile intentions.<sup>6</sup> Although transparency is an excellent first step to take, it is not a cure-all nor does it change military realities. The goal of transparency should be a balance between secrecy and the acknowledgment of legitimate mutual security concerns.

To date, North Korea is resistant to transparency in military matters. On-site inspection of military activities has been rejected as an infringement on sovereignty. Only strong international

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<sup>4</sup> Goodby, James; *Confidence and Security Building in the Korean Peninsula: The Negotiating Agenda*, Project on Arms Control and International Security, proceedings of the American Association For the Advancement of Science (AAAS) annual meeting, Washington, D.C., June 11-14, 1992, pp. 171-194.

<sup>5</sup> Cha, Young-Koo; Choi, Kang; *Land-based Confidence Building Measures in Northeast Asia: A South Korean Perspective*, The Korean Journal of Defense Analysis, Vol. VI, No. 2, winter 1994, pp. 237-260.

<sup>6</sup> Prvoslav, Daviniv; Opening Statement, Disarmament Topical Paper, No. 13, National Security and Confidence Building in the Asia-Pacific Region (New York: UN, 1993), P.6.

pressure convinced North Korea to provide the International Atomic Energy Agency (IAEA) access to its nuclear facilities. Given the centrally controlled political system in North Korea, transparency measures that are not carefully defined may be perceived by the leadership as presenting a threat to the state. Therefore, proposals to North Korea to implement specific transparency measures should demonstrate pragmatic benefits. Including justification with the transparency proposal would help North Korea recognize the potential benefit of selective openness in military activities.

#### **Four Conceptual CBMs on the Korean Peninsula**

Relations between South and North Korea are poor but have been worse. Bilateral contacts still occur. The multilateral Korean Peninsula Energy Development Organization (KEDO) project to build nuclear reactors is progressing. South Korean companies continue to establish commercial links with the North. Military confrontation, however, remains a serious risk. Given the suspension of direct official talks between South and North, are there steps that either might take that would contribute to the long-term goal of building confidence?

Based on the analysis by Cha, Goodby, et.al. of common themes in South and North Korean arms control proposals, four conceptual transparency measures for military activities are presented here. After the presentation of the conceptual CBM, a first step that South Korea could conceivably take is defined for each option. A second step, that could become cooperative, is then defined for each option.

Communication of these first steps to North Korea is possible in spite of current political tensions. Formal diplomatic interactions are often concerned with setting legalistic precedents. For many years, North Korea rejected direct official interaction with South Korea because of the implication that it recognized South Korea as a sovereign entity. There are alternatives to traditional diplomatic communication. Third parties, including the news media, can function both as communication channels and advocates. An independent review of confidence building proposals by a credible third party may contribute to North Korean acceptance. The Internet offers a new mode of communication that can be performed discretely and unofficially. All the information associated with the second step of the conceptual CBMs presented in this paper can be transferred unilaterally through the Internet. North Korea could then access the information without the obligation to make comment.

The analysis of the following and other options for military transparency may present an opportunity for political confidence building. North Korean academics and technical experts might be invited to participate in a joint study of military confidence building options. Alternatively, North Korean academics could perform such analysis independently but present the conclusions in a multilateral forum.

#### **1) *Reduce Dangerous Military Activities In The DMZ***

**ISSUE:** Military incidents within the DMZ are a frequent source of tension.

**CONCEPTUAL CBM:** Restrict troops to observation posts in the DMZ and declare travel to those posts.

**COOPERATIVE MONITORING OPTION:** Use ground sensors to perform the function performed by military security patrols.

**POSSIBLE FIRST STEP:** Establish an experiment to assess performance and reliability of a variety of intrusion detection sensors in a realistic Korean environment.

#### **BACKGROUND COMMENTS:**

Security patrols operate routinely in the DMZ. Military intrusions occur that violate the terms of the 1953 Armistice Agreement. Such incidents are relatively common and adversely affect bilateral relations. An accidental violation of the Armistice may be interpreted as having greater political significance than the reality. If security troops in the DMZ were restricted to observation posts, there would be far less potential for conflict between rival patrols. The security troops would continue to function as observers at the post and also form a rapid-reaction force to respond to potential violations.

An experiment in monitoring with sensors would contribute to the development of options for transparency. There are several direct benefits associated with monitoring experiments:

- Preparation of options for when future political conditions are more favorable
- Development of indigenous technical capability
- An opportunity to assess operational issues in monitoring
- Increased confidence with monitoring technology and procedures

The experiment should operate for an extended period (6 months to a year) to evaluate the effect of climate and aging on the monitoring hardware. The experiment should also test alternative modes of communication to transmit data to a monitoring center for evaluation.

**POSSIBLE COOPERATIVE STEP:** Establish communication links with interested parties and share data from the experimental system.

This step would serve to acquaint the North Koreans with cooperative monitoring and transparency. An impartial review of the experimental system and test results by a credible party should make the transparency option seem more realistic to North Korea. The independent review might encourage North Korea to participate in future experiments.

## **2) *Transparency in the Storage of Heavy Weapons***

**ISSUE:** Uncertainty about the location and status of heavy weapons raises concern about aggressive intent.

**CONCEPTUAL CBM:** Declare heavy weapons in storage sites and announce when weapons leave or enter.

**COOPERATIVE MONITORING OPTION:** Monitor the perimeter around a storage site to detect and report the movement of heavy weapons leaving or entering.

**POSSIBLE FIRST STEP:** Establish an experimental system at a realistic site to assess sensor system performance and reliability.

**BACKGROUND COMMENTS:**

The status and location of heavy weapons (e.g., tanks, artillery, rocket launchers) are a security concern. The uncertainty is that an exercise or routine military movement may transform into an attack. A declaration of pending movement is a declaratory CBM. This cooperative monitoring option supports the declaration by providing transparency into the location and status of heavy weapons. The number, capability, or ability to use these weapons are unaffected. Canada pioneered monitoring concepts for stored weapons as a NATO-Warsaw Pact CBM in Europe.

The strategy for this experiment is similar to the previous one for intrusion detection. The type of monitoring sensors will be different but the experimental system should operate for an extended period to evaluate performance and reliability. Credibility in distinguishing significant events from unimportant background activity and reporting that information to a monitoring center is important.

**POSSIBLE COOPERATIVE STEP:** Establish communication links and share data from the experimental system with interested parties.

The strategy is the same as with the previous option for dangerous military activities. Third parties could again perform the role of neutral reviewer of the experimental system.

**3) *Transparency in Military Movements***

**ISSUE:** Military movements raise concerns about preparations for attack.

**CONCEPTUAL CBM:** Permit regularly scheduled or challenge aerial overflights to monitor ground activities.

**COOPERATIVE MONITORING OPTION:** Install commercially available sensors on an unarmed aircraft.

**POSSIBLE FIRST STEP:** Perform analysis of sample imagery to determine what capability is necessary.

**BACKGROUND COMMENTS:**

Large military training maneuvers and movements are destabilizing when there is a low level of trust between countries. Permitted aerial overflight provides a means to implement transparency without restricting capability. Aerial monitoring is less intrusive and creates fewer political implications than ground-based sensors or observers. The *Open Skies Treaty* between members of NATO and the former Warsaw Pact and the 1991 bilateral agreement between Hungary and Romania are useful precedents. Several papers have investigated the concept of cooperative aerial monitoring in Korea.<sup>7,8</sup>

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<sup>7</sup> Koo, Bon-Hak; *Open Skies in the Korean Context*, proceedings of the Arms Control in the North Pacific Workshop, Royal Roads Military College, Victoria, B.C., Canada, Feb. 19-21, 1993, pp. 128-141.

<sup>8</sup> Smithson, Amy; Cheon, Seong; *"Open Skies" Over the Korean Peninsula: Breaking the Impasse*, Korea and World Affairs, Spring 1993, pp. 57-77.

A country contemplating the use of aerial monitoring needs to understand what technical capability is necessary to make a substantive contribution to transparency. A useful first step would be to assess various methods of aerial sensing to decide which ones should be used. Although the Open Skies Treaty is frequently cited as an example, the monitoring techniques used were negotiated specifically for that treaty. The Open Skies Treaty should not be viewed as either the only technical approach or as an upper limit of sensor capability. Airborne monitoring equipment is available commercially today that has greater capability than that available during Open Skies negotiation. Higher resolution synthetic aperture radar is particularly pertinent to the Korean environment because rain, snow, fog, and haze are frequently present.

**POSSIBLE COOPERATIVE STEP:** Publish and distribute analysis of sample imagery.

The concept of permitted and reciprocal aerial overflight for monitoring is not beyond the realm of possibility since North Korea opened three commercial air routes over its territory in 1996. Even if motivated solely by financial remuneration, this action is unprecedented in North Korea's history.

South Korean publication of the sensor study and imagery analysis would contribute to North Korea's understanding of this option for transparency. The document could be directly or indirectly distributed to North Korea for review. Third parties can again play a useful role as independent reviewers of the analyses.

The United States performed a similar project for the Open Skies Treaty. The Defense Special Weapons Agency (DSWA) produced a book containing actual imagery along with a description of the monitoring equipment and procedures used to collect the images.<sup>9</sup> The United States distributed the book to interested parties to increase understanding of the Treaty and provide a reference tool.

#### **4) *Transparency in Missile Production***

Transparency measures are potentially applicable to topics as controversial as the production of long-range missiles. Both South and North Korea have an interest in ballistic missile production. The U.S. has held bilateral talks with North Korea on missile development, production, and sales with the goal of persuading it to accept the guidelines of the Missile Technology Control Regime (MTCR).<sup>10</sup> The 1980 ROK-U.S. missile development agreement restricts South Korean missiles to a maximum range of 180 km. South Korea has cited the need to modernize its aging ballistic missile force for defensive purposes. This program would involve indigenous development and

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<sup>9</sup> Defense Special Weapons Agency (formerly the Defense Nuclear Agency), Arms Control & Test Limitation Division, 6801 Telegraph Road, Alexandria, Virginia, USA, *Open Skies Imagery Portfolio*, published November 1994.

<sup>10</sup> The MTCR was created in 1987 to define common export guidelines for missiles and related technologies. The original threshold for control was ballistic missiles and unmanned aerial vehicles capable of delivering a 500 kg payload to a range of 300 km. In early 1993, this threshold was lowered to include any missile believed to be intended to deliver a nuclear, chemical, or biological warhead.

production. After meetings with ROK representatives in 1996, the U.S. has indicated that it would relax the restrictions of the 1980 agreement and support South Korea's entry into the MTCR.

**ISSUE:** Production of long-range missiles raises regional concern about aggressive intent.

**CONCEPTUAL CBM:** The MTCR does not limit domestic deployment of long-range missiles or reduce regional concerns about their use. A significant CBM would be for both South and North Korea to renounce the possession and production of long-range missiles. Long-range missiles could be defined by the MTCR guideline of 300 km. Under this assumption, production of the North Korean SCUD-B missile and the proposed replacement for the South Korean NHK-2 missile could conceivably be permitted. North Korean Production of SCUD-C, No Dong, and Taepo Dong missiles would be banned.

**COOPERATIVE MONITORING OPTION:** Install sensors at production facility gates to distinguish between short and long-range (i.e., over 300 km) missiles.

**POSSIBLE FIRST STEP:** Conduct a study to define the physical characteristics of missile systems that comply with the range restriction and assess how these characteristics can be detected and measured by sensors.

#### BACKGROUND COMMENTS:

Monitoring technology, given appropriate intrusiveness, can successfully monitor missile production. The 1987 Intermediate Range Nuclear Forces (INF) Treaty between the U.S. and the Soviet Union provides a useful precedent for the selective monitoring of a production facility. Intrusiveness is the key factor in any missile production monitoring system. A study to identify and define the physical characteristics of missiles consistent with the 300 km range limitation would permit production monitoring options to be identified and proposed.

**POSSIBLE COOPERATIVE STEP:** Publicly demonstrate options for monitoring missile production identified in the study with a functional model.

A "laboratory-scale" experimental model to demonstrate the procedures and technologies of a conceptual missile production monitoring system is a way to correct misconceptions. It will also demonstrate how much intrusiveness would be present and how much transparency can be achieved. The U.S. built a detailed and functioning table-top model of a proposed system to monitor missile production as an orientation tool. The model was shown to the Soviets during the negotiation of the INF Treaty (see Figures 1 and 2). National leaders benefit from an intuitive understanding of the role of monitoring and the INF model was demonstrated to President Reagan in 1987.



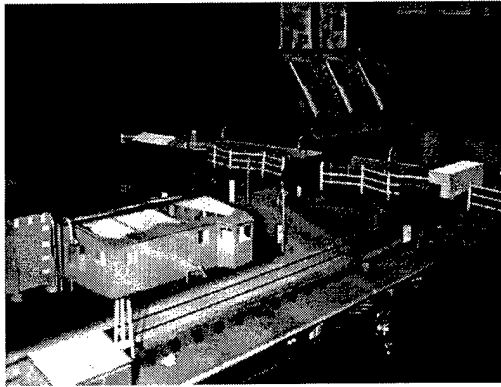


Figure 1: A Functioning Table-Top Demonstration Monitoring System For Missile Production

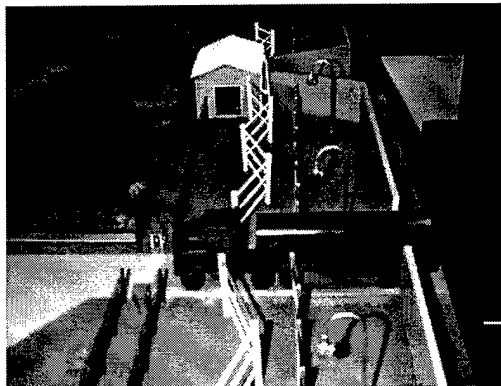


Figure 2: A Close-up Of Monitoring At A Production Facility Gate

## Conclusions

A number of regional security analysts see opportunities for constructive measures to decrease military tensions on the Korean Peninsula. To date, political conditions have not permitted the successful negotiation and implementation of any significant measures. This paper presented four conceptual options for CBMs with first steps that could evolve into South-North cooperation. The concepts for military CBMs presented in this paper are intended to stimulate discussion and require further study.

Parties can experiment with cooperative monitoring concepts to achieve transparency before entering into either a formal or informal relationship. Experiments familiarize participants with both the procedures and technology for monitoring and can be a form of confidence building themselves. Collaborations can provide neutral ground for interaction among technical communities and produce results that will aid national leaders in the implementation of potential future agreements. Collegial relationships that develop among participants can also contribute to confidence.

Progress in building confidence is more likely to occur when all parties understand they will not necessarily be worse off as a result of implementing military transparency. Explanation of key concepts and assumptions should be included with proposals. Alternative means to formal diplomatic exchanges, such as the Internet, now exist which may permit a quiet, yet effective, process of information exchange and consensus building.

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