Korea United: North & South Set Aside Differences to Demine

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Korea United: North & South Set Aside Differences to Demine

Following a historic summit between leaders from North and South Korea, efforts are underway to clear a path through the DMZ. In the South, efforts are also being made to clear the paths civilians use in areas outside the DMZ.

By Keith Feigenbaum, MAIC

In a land scarred by over a half-century’s worth of fierce political divisions and lingering suspicions, agreement and coexistence have come to be as rare as the landmines are plentiful. Such is the troubled state of Korea—from the isolationist Communist North, through the neutral (and heavily mined) demilitarized zone (DMZ), to the revived republic in the south. Despite the troubled history of this divided peninsula, steps have been taken recently to put aside ideological differences and focus on the estimated 1.12 million mines in the 4 km-wide DMZ, as well as the tens of thousands of mines in “rear areas” situated outside the DMZ.

In June 2000, leaders from North and South Korea met in a historic summit in Pyongyang. The meeting between South Korean President Kim Dae-jung and North Korea’s Kim Jong-il led to efforts to reconstruct the Kumgang (Seoul to Shiniuju) railroad and to create a four-lane highway that would link the two countries. Based on the leaders’ desire to create this link, the two sides’ militaries set out in September 2000 to address the unique mine situation.

**Efforts Underway**

Unlike many mine-affected countries, the vast majority of mines found in the Korean have had minimal affects on civilian populations. The Korean Campaign to Ban Landmines (KCBL) estimates that at least 1,000 civilians have fallen prey to mines washed from the DMZ in flooding. Conversely, Koreans have the DMZ to thank for its role as a buffer against the 95 percent of mines suspected to be in Korea. Of South Korea’s estimated 1.2 million mines, only about 68,000 have been located outside the DMZ in rear areas.

Rachel Stahl, a senior analyst for the Center for Defense Information, writes, “The landmine problems facing North and South Korea differ from those encountered in other countries afflicted with large numbers of mines. For the most part, mines in Korea are concentrated in well-designated fields along the DMZ and surrounding areas and do not affect farming, industry or other segments of normal life..." The enduring danger from landmines in Korea, once the known fields are removed, ought to be much less than in countries such as Cambodia and Vietnam."

Of course, while the landmine situation may differ from that of other affected countries, threats such as unmapped mine fields, floods that carry mines out of mapped areas (and often outside the DMZ) and the unknown nature of the mine problem in North Korea add an air of uncertainty to the overall situation.

**Demining in Rear Areas**

While the DMZ is widely known to be a dangerous, mine-affected area, the effects of mines on other regions of the Koreas are less publicized. Meanwhile, the efforts on areas outside the DMZ in North Korea are shrouded from the outside world. But, in South Korea, landmines have been identified in areas frequented by civilians.

The mines found in these areas, more so than those located in the DMZ, pose a definite threat to civilians as they have been displaced through flooding or are unpaved.

A November 2000 edition of The Korea Herald reported that the environmental group Green Korea United (GKU) identified large numbers of landmines "planted in and around Seoul and other large cities, as well as national and provincial parks.” GKU has not only identified mine-affected areas in the following South Korean provinces and cities (number of mine-affected areas in parentheses): Yangpyong and South Kyongang (4), South Chonghae (3), Pusan and South Cholla (2), and Seoul, Taegu, Ulsan, Kangwon, North Kyongbok, and North Cholla (1 each).

GKU Secretary General Lim Sam-jin told the Herald, “In most of the mined areas, mine warning signs are easily found near villages, meaning the safety of civilians is threatened."

In response to these threats, the South Korean Joint Chiefs of Staff (JCS) announced in February 2001 that it would remove all mines in rear areas by 2006—the same year South Korea and the United States plan to sign the Mine Ban Treaty, contingent on the development of acceptable mine alternatives. The JCS expects to begin this effort by clearing about 6,000 APLs (the only type of mine reported to be found in rear areas) from these locations: two former air defense bases on Mt. Chunghin in Pusan and in Ungno-ri in Hadong County, South Kyongbok Province, Haedae in Pusan, Mt. Kumma in Songnam, Kyonggi and Kwangju.

The JCS expects the upcoming demining efforts to put a significant dent in the already reduced number of mines outside the DMZ.

In a Herald article from Dec. 23, 2000, a South Korean Joint Chiefs of Staff (JCS) official said, “The army completed the removal of some 1,100 AP mines planted on top of Mount Kumho [sic] this year, where Nike missile radar systems were located. We have cleared a total of 6,800 mines in seven spots [since 1996] to reduce the number of landmines planted in the rear areas to around 68,000.”

To aid the military in demining Korea’s rear areas, GKU, GCBL, and the Japan Campaign to Ban Landmines (JCBL) have also reportedly agreed to begin efforts to map mine fields. According to KOBI, Coordinator Cho Jai-keok, the efforts will include surveys of three mine-affected areas that pose a threat to the lives of civilians and soldiers: two of the 21 locations identified by GKU as mine-affected, U.S. Air Force bases surrounded by AP mines and “civilians restricted area” located from 3 km to 30 km south of the DMZ.

**Roadrail-Highway Construction Route**

On September 18, a force of about 2,800 South Korean soldiers set out to take on the difficult task of ridding the rail and highway construction route of its estimated 100,000 mines. Of the 2,800 officers, 700 were dispatched from field engineer battalions to begin mine clearance work with a deadline of December 2000 in place (since postponed to September 2001), an official from the South Korean Defense Ministry told the Herald. Meanwhile, the North Korean military was also reported to have begun clearing efforts on September 4, removing trees and other obstacles.

Adding complexity to the mine situation is the fact that of the estimated 100,000 mines in the construction route, only 3,000 are in confirmed areas. This, along with the short timeframe allotted for clearance efforts, caused demining to be suspended in mid-December. South Korean defense officials expect work to resume following the spring thaw in March 2001, Lt. Gen. Sun Young-jai of the South Korean Army told the Herald on Sept. 19, 2000: “Our schedule for the mine clearance is flexible as we are mapping priority on the safety of soldiers. We have prepared various safety equipment and methods for our soldiers.”

**Demining the DMZ**

A variety of demining methods—nosed by a variety of sources—have been identified as potential clearance methods to be used in creating a path through the DMZ. The South Korean Defense Ministry told the Herald in August 2000 of its plans to initiate a six-stage clearance program (see box on next page for elements of this program).

The equipment used by deminers was expected to consist of a mix of foreign and Korean trucks and vehicles. “We have designed remote-controlled armored bucketers’ with thick steel plates and bulletproof windows attached to heavy equipment such as excavators, bulldozers, cranes and water spritzers to be used for mine removal,” Lt. Gen. Sun Young-jai told the Herald. With these safety measures, soldiers will be able to do most of their work without setting foot on the ground, thereby.
Southeast Asia
Air Combat Data

The Defense Security Cooperation Agency's Tom Smith details the United State's efforts to create an informational and relational database for mine/UXO identification in Southeast Asia and its importance in targeting landmines.

by Tom Smith,
Defense Security Cooperation Agency, Office of Humanitarian Demining

One of the greatest challenges in the global effort to remove the deadly debris of war and conflict is the collection of records kept by the combatants from either side in the conflict. In that regard, the United States has realized the importance of, and is making available, data from a variety of sources to assist with the survey and clearance work in Southeast Asia.

Anticipated Mine Clearance Procedures:
- Use of water sprinklers to uncover mines
- Insertion of 15-meter-long plastic pipes filled with dynamite and detonators into suspected areas (for mines up to 10 cm underground)
- Use of excavators and bulldozers to remove plants and dig up earth (for mines 20 to 30 cm underground)
- Final inspections by soldiers to ensure the removal of all mines.

Since 1994, the humanitarian demining offices in the Defense Security Cooperation Agency (DSCA) and U.S. Pacific Command, in conjunction with the Federal Resources Corporation and MR Technology Solutions, have been developing an informational/relation database derived from the separate declassified tapes of allied air combat and combat support operational activities conducted during the war in Indochina. The output of this analysis will provide nations in the region with accurate target and ordnance data so that host countries can set priorities for UXO clearance operations and assess the probability of UXO contamination in areas identified for economic development.

These combat missions were conducted in Cambodia, Laos, and Vietnam from 1965 to 1975. The original data system was developed by IBM in the early 1960s and captured daily air combat information on the Vietnam conflict in the National Combat Command Information Processing System (NIPS). The data (classified Top Secret) was maintained by the Joint Chiefs of Staff and in 1976 declassified and delivered to the National Archives for safekeeping.

Four major databases are being reviewed for information that will assist host nations in determining the scope and scale of air bombardment, helping to prioritize bomb and mine clearance operations:

Files Accessed & Data Period
Combat Activities File (CACTA)
October 1965 - December 1970
Southeast Asia Database (SEADAM)
January 1970 - June 1975
Strategic Air Command's Combat Activities report (SACCOMCT)
June 1965 - August 1973
Herbicide Data File (HERBS)
July 1965 - February 1971

Other databases to be reviewed include the Combat Naval Gunnery Files, Mining Activity Files, and other files relating to friendly and opposing force base camp and artillery data.

Data in the air combat files includes specific mission numbers, type and number of aircraft, location of target, latitude/longitude coordinates, ordnance type, number of ordnance dropped, and additional information on downed aircraft.

The goal of this combined effort is to provide host nation mine action offices with geospatial information (maps, digital, and other data) to support humanitarian demining surveys, setting priorities for demining operations, training, and assessment of the mine and UXO threat to economic development activities. The recovered data are being incorporated into geospatial databases for analysis by the host nation mine action centers using Geographical Information Systems (GIS).

Information for Laos has been retrieved, incorporated into a relational database, and installed at the headquarters of the Lao National Unexploded Ordnance Program (UXO LAO) in the capital city of Vientiane. The air combat information is displayed with vector or raster geospatial data and used to plan UXO clearance operations and to assess the probable impact of UXO on economic development projects.

Herbicide mission data has also...
The use of this kind of data, and the integration with facilitating technologies, is unprecedented and is a clear demonstration of the value that technology can play in enhancing demining efforts, reducing costs, and building cooperative efforts between nations. The skills being learned through this process and the knowledge gained will most certainly be of value in other countries and other situations. This and other like initiatives will help ensure that the world will become mine safe sooner rather than later.

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Assessment
In order to assess the depth of Pakistan’s landmine problem, 1997 Nobel co-laureate Rae McGrath, an authority on landmines, visited Human Survival and Development (HSD) in the summer of 2000 at the behest of the Swiss Federation for Mine Clearance and Swiss

Pakistan: The Landmine Problem in Federally Administered Tribal Areas

The ravages of the decade-long armed conflict in Afghanistan between the Soviets and anti-communist forces were not confined to Afghanistan. Rather, its ill effects spilled over to neighboring countries. One effected country of note was Pakistan, which was used as a base for war activities. Pakistan served as a home to armed depots and camps for training guerrillas, and as a passageway for logistics supplies and other activities for the coordination of the war effort. In addition, millions of refugees crossed the Afghanistan-Pakistan border in search of safe harbor, rendering the border weaker and weaker throughout the war.

One of the most detrimental effects of the Afghan war on Pakistan was the thousands of landmines left behind in Federally Administered Tribal Areas (FATA). Soviet troops dropped mines and bombs in FATA border towns in order to intimidate the local population and prevent any support of anti-communist forces. Although the Afghan war broke out in December 1979, it wasn’t until the early-1980s that the landmine problem surfaced in the FATA. Of the seven tribal Agencies of the FATA, Bajaur and Kurram were the most effected, counting an alarming number of casualties.

Bajaur and Kurram have witnessed some of the worst casualties, which affected not just soldiers but women and children, as well. An entire disabled population now exists—a change that has derailed the economic fabric of the areas. While the FATA was socially underdeveloped previous to the war, it has regressed further as a result of mines. The region’s inadequate health services must deal with a public health situation of tragic proportions.

Agricultural land has been rendered unproductive. Once productive, farmers have resorted to selling their properties (at the ICRC workshop) to survive. Refugees turned to begging on the streets.

by Faiz Muhammad Fayyaz, Executive Director, Human Survival & Development (HSD)

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