

Peacemakers Along the DMZ: Non-Self Destruct Landmines in the Republic of Korea

The need for landmines in Korea will remain the same without a change in the terrain or the proximity of either the threat or the enemy, unless we successfully find a viable, fully fielded alternative.

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Introduction

AP landmines have caused thousands of deaths and injuries to innocent civilians and peacekeeping forces long after the conclusion of conflicts.¹ They have prevented economies from growing and contributed to political and societal breakdown throughout the world. Non-Governmental Organizations (NGOs) and Canada, who spearheaded the 1997 Treaty to Ban Landmines, have framed the problem as a humanitarian issue, while the world's only superpower, the United States, has called for exceptions in the treaty based on legitimate concerns of national security. The United States refused to sign the treaty due to legitimate military and national security requirements.

The International Committee of the Red Cross (ICRC) reported that the United States has ratified a measure to protect civilians from weapons of war, known as the Protocols of the Geneva Convention of 1977, "which reaffirmed and refined principles of humanitarian law mandating that armed conflicts be conducted so as to inflict a minimum of suffering. The use of weapons causing unnecessary suffering or superfluous in-

jury and whose damaging effects are disproportionate to their military purpose was prohibited, and parties in a conflict were mandated to distinguish between civilians and combatants. According to the Convention, landmines could be directed only at military objectives, with all feasible precautions taken to protect civilians. Remotely delivered mines would not be used unless their locations were accurately recorded or fitted with an effective neutralizing mechanism. Records verifying the location of mine fields were mandated..." (ICRC 1996).

The United States ratified the Convention on Conventional Weapons (CCW) Amended Mines Protocol in May 1999. It required that mine fields containing non-self destructing AP mines be marked and monitored and that all AP mines be marked and detectable by standard detection equipment. John Troxell claims that these restrictions are consistent with the standard operating procedures of the U.S. Armed Forces, and that it strikes an appropriate balance between humanitarian concerns and military requirements (Troxell 2000).²

While landmines continue to maim and kill large numbers of civilians around the world, they can, through deterrence,

prevent war, in particular by protecting American and South Korean forces and civilians from being attacked by North Korea, thereby avoiding thousands of potential casualties.³ An argument for keeping the mine option is that the mines are manageable and can be regulated so that they maintain a military legitimacy and utility but do not become instruments against civilians (Rosenfeld 1995).

Although most of the minefields that compose the Korea Barrier System (KBS) have been installed by Republic of Korea (ROK) forces, some have existed as far back as the Korean War. Infrequently, spring floods may move some of the landmines from the DMZ to outlying areas. Occasionally casualties occur from mines inserted during the war but swept to unmarked areas near or within the DMZ. Soldiers are also rarely injured or killed while patrolling in the DMZ from these unmarked mines. The ROK Army upgrades, maintains and repairs the obstacles and barriers, marking the minefields. This continued maintenance by the ROK helps to diminish the prospect of further deaths or injuries.

The marked landmines have enormously benefited the South Korean populace. If North Korea does attack the South, it could use the Seoul corridor, as it did during the Korean War. This natural corridor, including the Seoul inner city and suburbs, have an outlying population of over 22 million men, women and children. Without the KBS, and the

landmines that make up an integral part of this system, the 155 casualties since 1990 would be dwarfed by the enormous and catastrophic injuries and deaths caused by an unhindered invasion force.

During the current observance of the 50th anniversary of the Korean War, a large part of the defense of the Republic of Korea (ROK) relies on Non-Self Destruct "dumb" landmines (NSDL), which have been largely phased out of the U.S. inventory. Some NGOs think NSDLs are a threat against civilians, but this paper will show the public that, in an area dividing two states that are technically at war, when countries act in a responsible manner using NSDL, they can help to protect non-combatants by creating an environment of force protection and security, thereby preventing invasion and massive non-combatant casualties.

Military and Cost Effectiveness of NSDL

Past international agreements have so far been unsuccessful in totally limiting AP landmines, in part because these mines have been considered legitimate weapons of war when used in accordance with the rules of armed conflict. Traditionally, landmines have been used to protect military bases, missile sites and demilitarized zones.

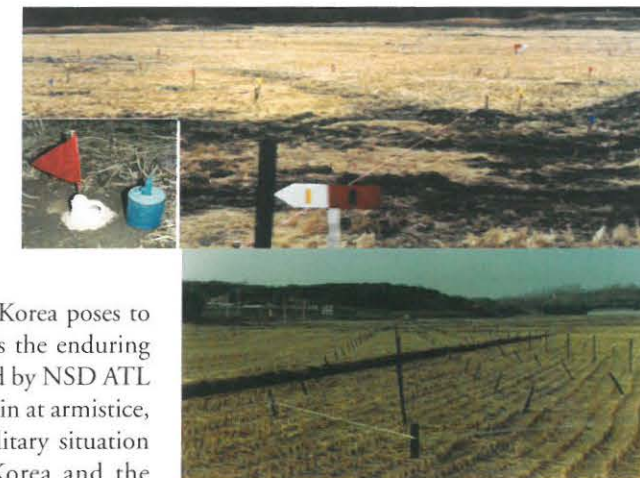
Most nations and groups seem to use them because they are a cheap and readily accessible means of defense and because they are an easy way to protect and control national borders and territories. Stephen Biddle believes that landmines serve an important purpose for the military: "They enable defensive positions to be held successfully by smaller forces, permitting commanders to use their available resources more efficiently. Mines are used to force attackers to reduce frontages and to direct those echelons into prepared engagement areas where defensive weapons can be cited for maximum effect. They increase an attacker's losses, both by inflicting direct damage on attacking soldiers and vehicles and by inducing attackers to slow down in the presence of enemy fire. They decrease the morale of the enemy, force a military force to move with extreme caution and reduce

military efficiency" (Biddle 1994). Overall, mines provide an adequate protection to military personnel in the field.

The constant and long-term threat that North Korea poses to the ROK demands the enduring protection afforded by NSD ATL and APL. We remain at armistice, not peace; the military situation between North Korea and the ROK has not changed.⁴ In fact, the North Korea military continues to grow in size, and improve by acquiring modern systems, and it continues to move the majority of its force in proximity to the Demilitarized Zone (DMZ). All of these actions potentially reduce warning time of a North Korean attack, further necessitating constant readiness. We continue to need NSD ATL and APL until acceptable alternatives are fielded and in place.

United Nations Command/Combined Forces Command (UNC/CFC) war plans depend heavily on the extensive employment of tactical obstacles to disrupt, turn, fix and block enemy-mounted maneuvers in ways that enhance our direct and indirect fire systems. The combat multiplication that the Korea Barrier System (KBS) affords our defending forces is fundamental to halting an attack north of Seoul with the forces currently available. Mixed mine fields consisting of both NSD ATL and APL are the backbone of the KBS. The effectiveness of these mixed mine fields is not derived from the ATL alone. It is erroneous to consider ATL as a pure system—they are doctrinally and pragmatically inseparable from their APL counterpart. Any discussion of a war plan requirement for ATL also carries an implicit requirement for APL. ATLs are rarely employed without accompanying APL.

NSD APLs enable the Command to maintain an appropriate level of high readiness by having a portion of the mines installed today with minimal risk to non-combatants. The overwhelming majority of mine fields are in the General Outpost Line (GOP) and the Forward Edge



■ The KBS is a critical component in support of the combined forces command (CFC) for the Defense of the Korean Peninsula. The Republic of Korea (ROK) is very skilled in the employment and construction of the KBS. Holes for every mine are pre-dug, marked and fitted with a mold.

of the Battle Area (FEBA) areas, which are not accessible to noncombatants. Maintaining installed mine fields along the GOP allows ROK Army units to complete the defensive preparations of the remaining FEBAs in minimal time if hostilities occur. Again, the planning is based on the premise that we will get 1–3 days' unambiguous warning of a North Korea attack. Without the existing mine fields being installed, there is absolutely no way that they could be installed in 24–72 hours. Further, the mine fields along the GOP serve as a visible and very real demonstration of UNC/CFC's readiness and resolve to defend the ROK against aggression.

Non-Self Destruct Landmines (NSDL) vs. Self-Destruct Landmines (SDL)

NSD APLs are employed to achieve three primary functions. First, NSD APLs are used to fix, disrupt or block an enemy dismounted attack. NSD APLs are employed along dismounted avenues of approach and are positioned so that they are covered by direct and indirect artillery. Second, NSD APLs are employed in areas of limited weapons coverage to break an enemy's dismounted assault on the defender's position. Third, NSD APLs are used in conjunction with anti-tank landmines (ATL) as part of mixed



■ The Korea Barrier System (or KBS) consists of tactical obstacles to support the defense of the Republic of Korea. It is an extensive, in depth and integrated series of obstacles and barriers, including mine fields, concertina wire and dragon's teeth.

mine fields. Here, the NSD APLs are employed in a manner that protects the ATLs from easy detection and removal.

The employment of NSD APL-pure mine fields is absolutely essential to the success of the close fight. NSD APL-pure mine fields positioned along enemy dismounted avenues of approach allow the unit to disrupt, fix or block enemy infantry attacks in a way that enhances the effects of other direct and indirect fire systems. In the same way, employing NSD APL-pure mine fields as protective mine fields is critical to breaking and repelling an enemy infantry assault on a unit position. It enhances force protection and allows the unit to concentrate the bulk of its fire elsewhere to defeat the larger attack.

Self-destructing APLs and ATLs, as currently manufactured, are ill-suited to replace conventional NSD APLs and ATLs for several reasons specific to Korea. Self-destructing mines are mechanically employed by ground, air and field artillery systems. Even when fired on flat terrain, 5-15 percent of these mines end up with an "on edge" orientation. That is to say that they do not lie flat on the ground; rather, they come to rest on one edge. Mines resting in this configuration are rendered ineffective. The terrain in Korea is steep slopes and defiles with relatively few flat areas. The percentage of mines resting "on edge" will rise significantly on Korean terrain. More than 10% of mines "on edge" degrade the effectiveness of the mine field. Also specific to Korea are the long winter season and annual summer monsoons. Self-destructing mines do not fare well in snow deeper than 10 cm. The mines frequently come to rest "on edge," and tripwire employment on the AP mines is frequently hindered by the snow. Additionally, as the snow melts, the mines move and believe they are being tampered with, causing them to activate. Mud and heavy rain, common fallouts of the Korean monsoon season, create similar effects on the self-destructing mines.

SDL mixed systems are not a viable replacement for NSDLs in this theater. They do not provide the same level of advanced readiness and deterrence during armistice and do not provide the same

military value during combat operations. Finally, the current family of SDL systems requires dedication of scarce delivery means such as artillery, USAF aircraft and helicopters that are critically needed elsewhere for destruction missions against a numerically superior enemy.

The long duration effect that NSDLs have on enemy maneuver is an essential component of the UNC/CFC scheme of defense. They allow ROK forces to fight this initial battle from successive lines of defense in two ways. Since the effectiveness of NSDLs does not expire with time, engineer units can install the mine fields and other defensive works for successive lines of defense while combat units continue to fight the close battle along the GOP. Also, the persistent effect of NSDL mixed mine fields makes them militarily valuable well beyond the immediate close fight. Because they remain lethal, NSDL mixed mine fields give the defending commander a unique ability to attack the entire depth of the enemy with a single system. NSDL mine fields greatly reduce the effectiveness and sustainability of a North Korea attack by making it difficult to quickly shift and commit reserve forces, breaking the tempo of the attack and disrupting critical re-supply operations. They also allow friendly force commanders to position forces as required on the battlefield, enemy and situation dependent.

Finally, NSDLs are preferred over SDL systems in the initial phases of defensive preparation simply because the equipment needed to install them rapidly on a broad front—manpower—is more readily available. While the SDL systems may be more effective in some instances, they require committing assets such as artillery, USAF aircraft and helicopters to deploy mines rather than conducting their primary missions. These scarce assets will likely already be over-committed in the initial phases of hostilities. Tying up valuable artillery, aircraft and helicopters to employ mine fields significantly degrades our ability to accomplish other critical battlefield functions, such as counter-fire, deep attacks and command and control, on which success also rests. Our current SDL mixed systems do not enable the Command to

maintain such a deterrent and would not provide a visible deterrent.

Costly and Ill-suited Landmine Alternatives

The United States is searching aggressively for alternatives to protect its AT mines, such as actively exploring the use of AP mine alternatives in place of self-destructing mines and exploring the development of other technologies that could result in alternatives that would enable the United States to eliminate its landmines entirely.

Presidential Decision Directive/National Security Council (PDD/NSC)-64 mandates the Department of Defense (DoD) to end use of all "pure" APLs outside of Korea by 31 December 2003, aggressively pursue APL alternatives (APL-A) for Korea by 31 December 2006 (objective), and seek alternatives to AP submunitions in mixed AT systems and/or the entire mixed AT system.

However, Charles Krauthammer, a noted political columnist, believes that the old "dumb" mines the United States does not manufacture are still important "in maintaining the peace in Korea along the DMZ to deter the world's most heavily fortified, most aggressive and most unpredictable country—North Korea. Since no one lives in the DMZ, the only people who are going to get blown up treading on American mines are North Korean infiltrators or North Korean battalions headed south to kill our soldiers. Today, 37,000 U.S. troops and their UN and South Korean allies face a million North Korean troops only 27 miles from Seoul. In the event of an attack, the North's overwhelming numerical advantage can be countered only by slowing its advance by AP landmines," (Krauthammer 1997). John Troxell adds that American adversaries will seek, in future wars, to either operate in complex terrain or attempt to offset U.S. advantages. "AP landmines and mixed anti-tank systems will be critical in such a fight...that without AP mines, U.S. soldiers will be placed at increased risk" (Troxell 2000). Gino Strada believes that most of the land mine injuries to civilians are the result of increasingly indis-

criminate use of small antipersonnel mines by irregular or poorly disciplined armies in the developing world (Scientific American 1996). The United States uses landmines in a responsible manner to prevent non-combatants from becoming injured or killed.

Today, the reality is that success of this theater in deterring and, if necessary, defeating a North Korean attack depends very heavily on the employment of APLs. There are *no* acceptable substitutes at present. Our use of landmines is based mainly on the threat, the proximity of the threat, limited threat attack warning and the terrain in this theater. The need for landmines will not change without a change in the terrain or the proximity of either the threat or the enemy, unless we successfully find a viable, fully fielded alternative.

Eliminating NSDL will tip the balance in favor of humanitarian concern over military effectiveness that could produce drastic results for U.S. and ROK soldiers as well as Korean non-combatants. We must all remain mindful of the President's statement in PDD 64: "The DoD will ensure that alternative technologies provide comparable military effectiveness, safety of use, and minimal risks to non-combatants".

Summary and Conclusion

NSDLs have helped to produce peace and security in the past 50 years. There have been no civilian, American, or ROK casualties as a result of these landmines. NSDLs are also militarily effective and cost-effective. In keeping the peace, the United States and the Republic of Korea are responsible for meeting war-fighting requirements to stop an invasion by the North. To that end, they provide a deterrent effect to invasion, and a continual protection, which is needed to keep the peace. The alternatives to NSDLs are much costlier, less effective, ill suited and would not contribute to eliminating any deaths.

Landmines used by responsible governments in monitored military situations are an effective method of achieving peace without producing casualties to non-combatants. U.S. policy of using landmines has produced safer, humani-

tarian results in Korea. Once South and North Korea unite under one government, landmines can become a thing of the past in this area. The United States would in all likelihood help to demine these fields, as it has been doing all over the world with its demining programs. It has contributed more than \$500 million to eliminate landmines in 35 countries over the past 10 years. Until then, it is necessary that both the United States and ROK continue to use landmines to defend the integrity of South Korea and its citizens, while giving the maximum protection to U.S. and ROK soldiers and increasing the probability of mission success, which is peace between the two Koreas. ■

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Endnotes

- 1 According to the 2001 Landmine Monitor Report, the ROK Ministry of Defense claims that 155 people have died of mine accidents since 1990, including 75 civilians. In 2000, one soldier died and 12 were injured in landmine incidents in the DMZ and Korean Army bases. There were six civilian casualties in Korea including two children, none of the accidents occurred in acknowledged minefields.

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2 According to COL William Van Horn and LTC Andy Semple, the Joint Chiefs of Staff believe that the loss of anti-personnel mine without a credible alternative "will result in unacceptable risks to U.S. forces." Both of these active duty officers believe that land mines are a tremendous combat multiplier and, if used responsibly, according to the Convention on Conventional Weapons, would properly address humanitarian concerns. "The AP mines that the U.S. uses are self-destructive (except along the DMZ separating north and south Korea) and pose no hostility to humanitarian concerns," (Van Horn and Semple 2000).

3 John Troxell claims that the United States has been working for the eventual elimination of land mines by reducing their numbers available in the world, making them safer (self-destructive, and less available to non-governmental entities. The United States has backed demining efforts, and has committed approximately \$80 million annually. It has also set deadlines for the Department of Defense to find alternatives to cope with situations in which its strategists still find the mines useful, such as in Korea. "The U.S. government has appropriated more than \$375 million to demining activities since 1993, with a goal of eliminating the threat of land mines to civilians worldwide by 2010," (Troxell 2000).

4 "LT GEN Maxwell Taylor, Commanding General Eighth U.S. Army on the occasion of the 27 July 1953 Armistice signing stated: "There is no occasion for celebration or boisterous conduct. We are faced with the same enemy, only a short distance away, and must be ready for any move he makes...These words are as appropriate today as they were in 1953," (Kirkbride, 2001).

*All photos courtesy of Korea Institute for Defense Analysis and the Center for Army Analysis.

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