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Congress Steps Back from Nukes

Victoria Samson, Research Analyst

This op-ed first appeared Nov. 5, 2005, in the Topeka Capital Journal.

The United States just took one small step away from the brink. Congress has opted against funding research for a nuclear weapon that would target underground bunkers. This decision squelched a program that would likely have created a new nuclear warhead, something that is particularly incongruous at a time when nations around the world are fervently trying to convince the leaderships of North Korea and Iran that their countries do not need nuclear weapons. However, this wisdom on the part of the U.S. government may prove to be temporary.

The nuclear bunker-buster, also known as the Robust Nuclear Earth Penetrator (RNEP), was trumpeted by its supporters as a way to negate hardened or deeply-buried targets. There is scientific controversy as to whether this bomb could reach far enough underground to actually destroy bunkers. Doubts also swirled around the likelihood of having the proper intelligence re-

garding the bunkers' whereabouts and the need for using a nuclear warhead against a facility that could be eradicated via troops on the ground or massive conventional bombs.

"Kudos to Congress for standing up and holding the White House accountable. Yet its job is not over. Also being discussed is a program called the Reliable Replacement Warhead, which may or may not require developing a new nuclear warhead design. It could very well prompt the same sorts of concerns that the RNEP had caused."

Other critics worried about the consequences of such a nuclear weapon, both immediate and long-term. It would release a nuclear force 70 times stronger than the bomb used on Hiroshima, and would probably kick up a cloud of radioactivity more or less equal to

that of an above-ground blast. This would cause catastrophic effects to any U.S. personnel in the area, not to mention innocent civilians.

Even more alarming would have been the message a new nuclear weapon would have sent. It would indicate that Washington felt insecure enough to develop one, despite having a massive arsenal left over from the Cold War of 5,300 operational nuclear warheads, with roughly 5,000 others held in inactive status. If the United States decided it needed a wider variety of nuclear options, how could it tell other countries that they did not merit the same?

There is also the fear that having a new nuclear weapon would inevitably lead to testing, breaking a decade-long moratorium. Finally, opponents' unease about the nuclear bunker-buster had much to do with the concern that it would lower the bar for using a nuclear weapon.

Congress took up the heated discussion about the RNEP in its

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China Security

China Security: New Journal

China Security is a policy journal dedicated to bringing diverse perspectives to Washington on vital traditional and non-traditional security issues that impact China's strategic development and its relations with the United States. The inaugural issues of *China Security* examined the debate on China's nuclear policies and the upcoming January issue will explore China's space program. The journal can be found at www.wsichina.org; for a subscription please email info@wsichina.org.

Opening the Debate on U.S.-China Nuclear Relations

China's Nuclear Strategy: A New Strategic

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Wounded Soldiers Pay: a Financial Management Horror Story

Winslow T. Wheeler, Director, Straus Military Reform Project

A version of this article originally appeared Nov. 3, 2005 on CDI's website and in Mother Jones.

For years the Government Accountability Office and the Department of Defense Inspector General have attempted, and failed, to audit the Pentagon's books. The reports, while substantively horrifying, usually make dry, slow reading – with only the occasional scintillating example of the consequences, such as lost air defense missiles, tug boats, and billions of dollars.

No more. A conscientious captain of the 106th Finance Battalion of the 1st Infantry Division, Capt. Michael J. Hurst, wrote a report in March 2005 that explains in dramatic terms some of the consequences of the Pentagon's gross financial management incompetence.

In late 2004, he and his unit started discovering problems in the pay made available to wounded soldiers being evacuated from Iraq. The commander of the 106th ordered a study of the wounded from the entire 1st Infantry Division. The audit team found a litany of horror stories, including the following:

➤ Some soldiers evacuated to the Landstuhl Regional Army Medical Center in Germany and Walter Reed Army Medical Center in Washington were declared AWOL from their units and their pay was docked.

➤ Other soldiers were being paid deployment entitlements they were no longer earning, thereby accruing debt they were not aware of and had great difficulty paying back; soldiers

even became the target of collection agencies assigned to them by the Army pay system.

➤ The Army maintains eight different pay-tracking systems, none of them up to date, comprehensive, nor able to share data automatically. Thus, the Army has no way of definitively knowing the actual number of mis-paid and otherwise abused and harassed wounded soldiers.

➤ The only way to fix the chaos is for finance or personnel clerks to manually correct the data for each individual soldier in each of the wayward pay tracking systems.

➤ One of the latest personnel reforms imposed from above has been to eliminate the very same personnel and finance occupational specialties in the Army and convert those positions into civilian jobs, for which the Army refuses to pay a salary sufficient to attract qualified, competent people.

➤ Existing laws and regulations are extremely complex, and there is no Army training program to explain them all to soldiers, commanders, or clerks (civilian or military).

➤ There appears to be no agency in the Army charged with oversight of this nightmarish system. ■

The full report from Capt. Hurst is available on CDI's Straus Military Reform website, www.cdi.org/smrp, or by contacting Winslow Wheeler.

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battle over the budget for the upcoming fiscal year. The White House, perhaps wanting to hedge its bets, divided its overall request for the bunker-buster between the Department of Defense (DOD) and the Department of Energy (DOE) budgets, adding confusion to the debate. The House and Senate both refused funding for the related DOD program, but were divided over the portion asked for in the DOE appropriations bill. The Senate's Energy and Water Committee wanted to allow the \$4 million requested for the RNEP, but the House did not.

Finally, as part of the general budget negotiations, the chairman of the Senate's Energy and Water Committee, Pete Dominici, R-N.M., announced on Oct. 25 that the money would not be permitted for the bunker-buster. While the committee's decision was couched in terms of acceding to a request from the Bush administration – Dominici asserted that the DOE had asked that “this research should evolve around more conventional weapons rather than tactical nuclear devices” – this likely had much to do with Congress' unease over the program and the cloud of controversy it generated.

Kudos to Congress for standing up and holding the White House accountable.

Yet its job is not over. Also being discussed is a program called the Reliable Replacement Warhead, which may or may not require developing a new nuclear warhead design. It could very well prompt the same sorts of concerns that the RNEP had caused.

Stay tuned to see if this new sanity displayed by Congress holds up. ■

Of Bugs and Bombs

Haninah Levine, Research Assistant & Joseph N. Deblinger Intern

How is an improvised explosive device like the flu? Fighting the two killers will take the same kind of thinking.

The Department of Defense is planning to step up its offensive against improvised explosive devices (IEDs), the top killer of U.S. troops today. A Nov. 3 article in the *Los Angeles Times* cited the desire of some Pentagon officials to see “an effort like the nationwide Manhattan Project ... to deal with the IED threat,” and reported that leadership of the Pentagon’s Joint IED Defeat Task Force may soon be handed from a one-star to a three- or four-star general or admiral.

There is no doubt that the military needs better tools for fighting these increasingly deadly explosives. Rather than the sprint to build a nuclear bomb, though, the fight against IEDs will resemble the ongoing fight against the influenza virus – another “primitive,” adaptable and lethal enemy. Like the fight against influenza, the campaign against IEDs must be designed to confront an evolving threat. Furthermore, just as flu vaccines cannot replace a global strategy for public health, IED countermeasures will never substitute for a broad strategy for winning asymmetric wars.

Improvised explosive devices are not defined by any common technological principle. An IED is anything which blows up but was not built in a large factory; the specifics of how this is achieved vary widely. For example, IEDs may be detonated by remote controllers, timers, or pressure triggers.

This lack of standardization is the weapon’s secret strength against

technological countermeasures. A counter-IED technology which defeats one type of IED will be useless against another; a jammer which disables a remotely-detonated IED is useless against timers, and improved armor can be pierced by shaped charges.

Tactical countermeasures are less vulnerable to evolving attack methods. Varying traffic routes and schedules, for example, is a tactic which may have been neglected in

“Like the fight against influenza, the campaign against IEDs must be designed to confront an evolving threat.”

Iraq, while drills in spotting and avoiding IEDs prepare drivers to make split-second decisions.

Tactical innovation has its limitations, too, though. Only a finite number of routes connect one location to another, and unpredictable schedules do nothing to foil booby-traps.

An analogy between technology and biology illustrates how the diversity of IED technology enables insurgents to adapt to new defenses. The resilience of insurgent technology is, literally, an evolutionary capability, fueled by the wealth of variation within the insurgent “gene pool.”

Whereas a large-scale weapons-manufacturer ensures that all the bombs it produces are identical, insurgent bomb-making workshops must make do with the materials and expertise at hand. Each workshop puts out a product with different capabilities and limitations; some products will prove more re-

sistant than others to the defenses employed against them.

If one workshop’s bombs succeed where others’ have failed, the others will do their best to imitate it. The “fittest” technique will “reproduce,” continuing to spread until new defenses favor a new “breed” of bombs.

Similarly, influenza’s resilience arises not from any genetic sophistication, but rather from extreme simplicity and “unreliability.” Unlike more complex organisms, the flu virus has no sophisticated molecular mechanisms to keep errors from creeping in when its genetic material is copied. Every time the virus reproduces, the risk of a “mistake,” or mutation, is relatively high.

This unreliability works to the virus’ advantage. If the immune system, or a scientist, finds a new way to fight the flu, a mutated strain may be able to resist the attack. New strains of the flu evolve from year to year, and therefore a new flu shot is needed every winter.

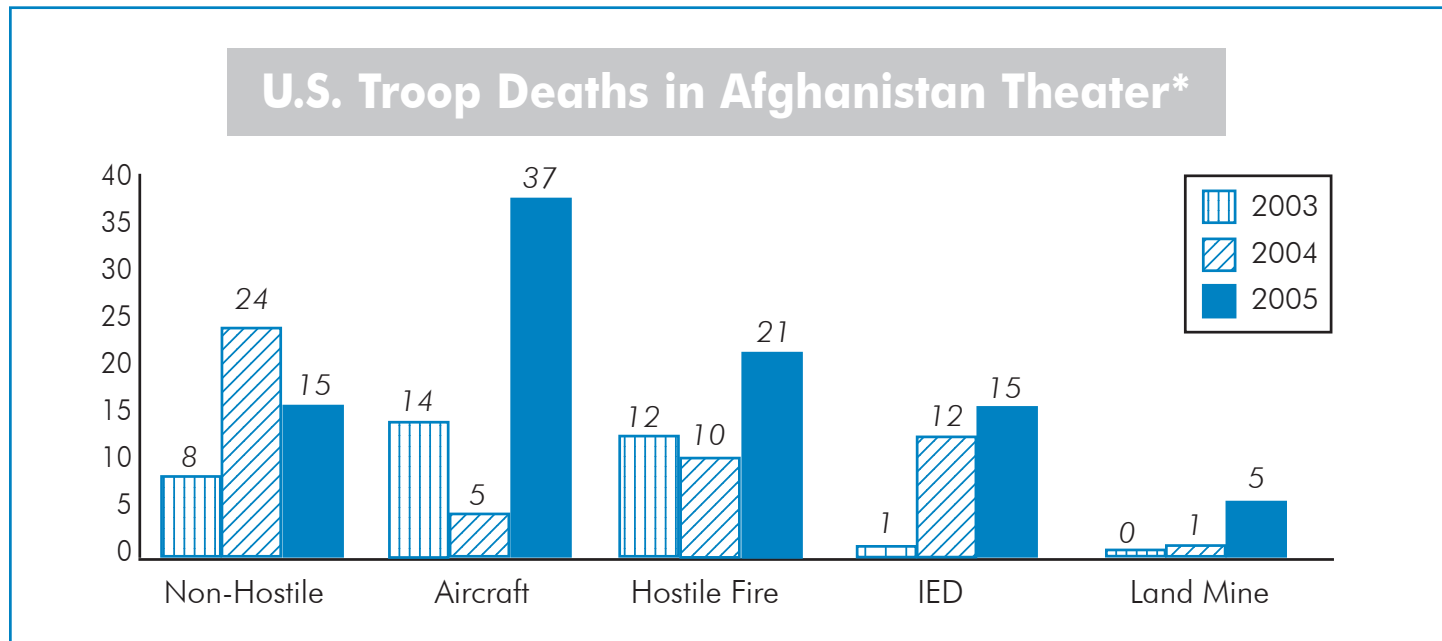
While the Department of Defense is right to invest in combating the IED threat, talk of a “Manhattan Project” to defeat IEDs poses a misleading model. Instead of hoping that some “silver bullet” will make the IED problem go away, the designers of the new task force should examine the lessons of campaigns against influenza.

The new IED task force must be designed, like the flu vaccine manufacturing process, for “rapid response,” with a continuing emphasis on quickly developing new countermeasures to confront new threats. Both bugs and bombs demand broader responses that can

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Afghan Rebel Insurgency More Deadly in 2005

Joseph Button, Research Assistant & Ronald and Winifred Force Intern



The insurgent war against a resurgent Taliban has had its deadliest year in 2005 since Operation Enduring Freedom began in 2001. U.S. troop deaths have exceeded previous casualty totals from past years and recent developments show that the Afghan National Police Force is taking the brunt of insurgent Taliban assaults.

Improvised explosive devices (IED), suicide bombings and classic guerilla warfare tactics highlight the new and old strategies used by the insurgent Taliban forces this year.

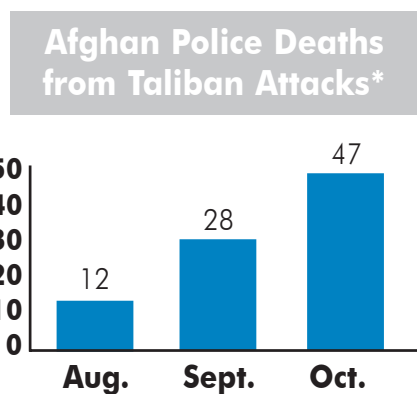
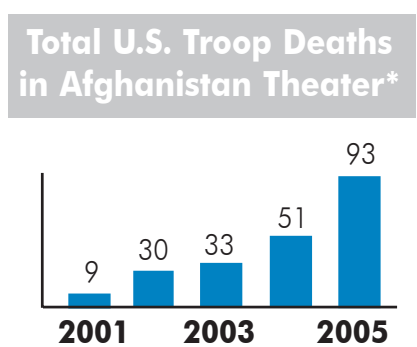
Analysts have declared the increase in IED attacks and suicide bombings as evidence that "Iraqi insurgency" tactics have spread to Afghanistan's rebel forces that were ousted in late 2001.

Recently, Afghan police have been suffering the most from Taliban attacks. From August to September, a four-fold increase in ambush attacks on Afghan police forces has

revealed a favorite soft target of the Taliban militant agenda. In October, rebel attacks killed 47 Afghan police compared to only 12 in August.

The U.S. forces moving deeper into the heart of the insurgent battleground in the mountainous south-eastern regions suffered a two-fold increase in deaths from hostile fire in 2005 thus far. Increased death rates from IED attacks and land mine explosions also contributed to this rising toll. The largest escalation came from aircraft deaths and specifically from gunned down transport helicopters. As of Nov. 15, 93 troops fighting the war in Afghanistan have died this year, compared to 51 in 2004.

Despite this deadly surge of Taliban attacks, U.S. Marine Gen. James Jones said that al-Qaida is marginalized in the country and the Taliban is not far behind. Army Col. Kevin Owens added to this sentiment saying "I'm confident things are heading in the right direction



and I'm also confident that we are starting to gain irreversible momentum." ■

* Sources: Graph data was compiled using DOD sources and the author's own computations; www.icasualties.org, www.defenselink.mil and www.cjtf76.army.mil.

A Landmine by Any Other Name . . .

Rhea Myerscough, Research Assistant

In December 2005, the Pentagon will decide whether or not to commence production of a new generation of munitions systems developed as alternatives to traditional anti-personnel landmines. Pending this decision, production of these new systems could begin as early as March 2007. This production would be the first new landmine production to occur in the United States since 1997.

However, analysts, policy-makers, and the international community have decried this announcement since the new landmine systems slated for production are not compliant with the 1997 Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction, or the Mine Ban Treaty. Although the United States has not ratified the Mine Ban Treaty, until recently, U.S. landmine policy has been to gradually move towards compliance; going ahead with production of the new landmine systems would represent a complete derailment of this goal.

The administration of President Bill Clinton outlined its landmines policy in Presidential Decision Directive (PDD) 64, issued in May 1998. The PDD featured three main goals: to aggressively seek alternative technologies to replace traditional anti-personnel landmines, to end the use of all anti-personnel landmines outside of Korea by 2003, and to sign the Mine Ban treaty by 2006, provided suitable landmine alternatives had been developed.

The George W. Bush administration's policy on landmines, announced on Feb. 27, 2004, represents a significant shift away from

Total Cost of Landmine Alternative Programs (Numbers in Millions)			
	Budgeted 1999-2004	Future Production Requests	Total
IMS	\$172	\$1,300	\$1,472
Spider	\$135	\$401	\$536
Total	\$307	\$1,701	\$2,006

Source: Human Rights Watch, "Back in Business? U.S. Landmine Production and Exports."

Clinton-era policy. The new policy focuses on eradicating persistent mines specifically, instead of all anti-personnel mines in general. Most notably, the policy makes no mention of ratifying the Mine Ban Treaty and, by comparison, declares U.S. readiness to, "continue to develop non-persistent (self-destructing/self-deactivating) landmines that will not pose a humanitarian threat after use in battle." The Bush policy also extends the deadline for eliminating persistent anti-personnel mines from Korea until 2010. (For further in-depth discussion, see "The Bush Administration's Landmines Policy," on the CDI website.)

Even before the Mine Ban Treaty, the United States had started pursuing landmine alternatives. The May 1996 alternatives program was originally created as a two track system. Track One was designed to develop alternatives to anti-personnel landmines for use in Korea, while Track Two was designed to develop better ways to perform the traditional functions of landmines, such as barrier defense and area denial, essentially phasing out traditional anti-personnel mines. The main sys-

tems to come out of the two alternatives tracks, and those slated for production decisions by the Pentagon, are Spider and Intelligent Munitions System (IMS).

The main point of contention with the new landmine alternatives is not their persistence, but their indiscriminate nature. Both Spider and IMS consist of mine fields monitored by a soldier via computer. Once a potential target enters a monitored area, a soldier makes the decision whether to activate the weapon. Since these mines can be command-detonated, the weapons might not be defined as landmines by the 1997 Mine Ban Treaty.

However, according to the Department of Defense, both the Spider and IMS system can also operate "autonomously," that is, like a landmine. Once a soldier flips a switch, they become conventional victim-activated anti-personnel mines. In this mode, neither system can tell the difference between the boot of a soldier and the foot fall of a child, and this feature makes the systems prohibited under the Mine Ban Treaty.

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China Space Program: the Quiet Revolution

Eric Hagt, Director of the China Project of the World Security Institute

Hyper-publicity surrounded the launch of Shenzhou 6 this past October. An estimated 500 million people viewed its live broadcast, with ads going for \$250,000 per 5 second slot. And yet, for all the talk of China's impending threat to U.S. dominance in space, many in the United States could care less.

At first glance, why should they? Compared to the space race between the United States and the Soviets in the 1950s and 1960s, China's program is noticeably plodding.

But China does not see itself in a race with other space-faring nations. Its space program is proceeding with resoluteness, perfectionism and with stubborn independence from external competition. Rapid and spectacular achievements are at best secondary to the higher purpose of its space program—to be a symbol of China's bold ambition to become a science and technology superpower in the 21st century.

This ambition lies at the heart of China's long-term development plan: to sustain economic growth and increase comprehensive national power. These are the tools to build a stable future for China, but they are also the pillars upon which the legitimacy of the government rests. The space program provides inspiration for Beijing's long-term goals, as well as serving as a focus for national pride and a means of building international prestige.

At the same time, space exploration is certainly more for China than merely a symbol. It has led to significant advances in areas such as computing, electronics, systems integration, material and avionic sciences. Those advances are critical to the long-term program articulated in China's 2049 Action Plan, China's

50-year campaign to promote a nation-wide leap of knowledge in the sciences. Strong educational policies have succeeded in graduating 600,000 engineering students in 2004, the highest in the world, and almost 10 times more than the 76,000 graduates in the United States. Notably, the space program's core aim is to inspire the nation's youth to study science and engineering. As a testimony to these policies, 70 percent of China's space sector is presently under the age of 35, far younger than NASA's aging workforce.

Publicly, China proffers economic benefit as the main justification for its space program. The space sector, including all spin-offs, is presently valued at about \$14.8 billion, though due to U.S. clampdown on space technologies, China's share of the satellite industry has dwindled.

But more importantly, China's achievements in space demonstrate the country's ability to galvanize the political and economic will to realize these long-term goals. And therein lay both reprieve and a potential challenge for the United States. There is relief because China's space program is not about a direct competition with the United States; nor primarily about building China's military strength. But there is also a challenge because China is proving it has the determination to realize its vision of national development, and that China may overtake United States as a technological superpower along the way.

The strategic threat of China's space program perceived by many in the United States has some validity. It is opaque in almost all respects and the military is certainly involved in the civilian-manned space

program, as well as undertaking space efforts of its own.

China's growing presence in space also is driven by its concerns about U.S. missile defense programs, which could negate China's small, immobile ballistic nuclear force. American cooperation in space and missile defense with China's neighbors, including Japan and India, also plays on China's own insecurities, and bolsters those in China who perceive encirclement by the United States.

And China's improving technological prowess in space does afford it substantial potential military capability. Yet, it would be wrong to see its manned space program as primarily motivated by military interests. First, military uses in human spaceflight are limited and much more effectively performed by unmanned satellites. But also, China has stated publicly and internationally its opposition to weaponizing space, which Beijing sees as detrimental to its own security. And thus any military application of space would likely only be a hedge against challenges to its national security.

The focus in the United States on the military challenge presented by China's space program is misguided. China is not in a military or strategic race with the United States. China is in a race with itself; the end goal of which reaches beyond the United States. China is committed to its transformation into a world-class power in technology, and the manned space program is central to achieving that transformation.

There are numerous reasons why China could fail in this endeavor, but the Chinese leadership is clear about using space as the means. The challenge for the United States is not in the short term, but in the long term – when the balance of technological prowess may well tilt in China's favor. ■

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The United States will have spent over \$2 billion once production of the proposed systems is complete, yet will still have failed to comply with the obligations of the Mine Ban Treaty, remaining noticeably outside of the growing international consensus against landmines. As of September 2005, 154 nations had signed and 147 nations had ratified the Mine Ban Treaty.

The renewed production and use of landmines prohibited under the Mine Ban Treaty could also pose problems for the United States when undertaking joint military operations with states parties to the Ottawa Convention. States parties would be legally unable to work with the United States if it was engaged in producing prohibited landmines.

Although the Bush administration is committed to pursuing these alternatives, Congress is not so sure. The FY 06 Defense Appropriations Bill includes language that may temper the upcoming Pentagon decision, by requiring the secretary of the Army to conduct a review and provide a report to selected congressional committees of the potential indiscriminate effects of these new landmines.

Even though a report has yet to be produced, the effect of this language could be telling. Some members of Congress and many non-governmental organizations are not keen on U.S. pursuit of landmine alternatives that ignore obligations laid out in the Mine Ban Treaty. Pursuing these alternatives may not only cause problems for the U.S. government abroad, but could stir up trouble at home. ■

Physicist, author, and long-time supporter visits CDI offices



Long-time CDI supporter Dr. Alexander DeVolpi presents World Security Institute President Bruce Blair with copies of the *Defense Monitor* dating back to 1978 for CDI's archive. Alex, a physicist, had kept his personal copies in the library at the Argonne National Laboratory where he headed arms control and verification programs. Now retired, he is a co-author of the recently published book, *Nuclear Shadowboxing: Contemporary Threats from Cold War Weaponry* (two volumes, paperback; www.NuclearShadowboxing.info).

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stifle new strains before they emerge, however.

To prevent a global flu pandemic, improved rural medical networks must form a first line of warning and defense against emerging epidemics. Similarly, counter-IED technology will never substitute for reliable intelligence and the goodwill of Iraqi civilians.

More prosaically, attacks on convoys can be reduced by minimizing the logistical "tail" of U.S. forces.

The bulk of the military's supplies, including fuel, are brought into Iraq overland from Kuwait; these convoys present large, slow-moving, predictable targets for insurgent attacks.

The goal of "taking the war to the terrorists" is not being achieved if the military's greatest challenge is stopping our armored vehicles from being torn to pieces. An improved IED task force is needed, but it will be only one weapon in the war for Iraq. ■



CENTER FOR DEFENSE INFORMATION
OF THE WORLD SECURITY INSTITUTE
1779 MASSACHUSETTS AVE., NW, Ste. 615
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