

# what wrongs our arms may do

*The Role of Nuclear Weapons  
in Counterproliferation*

AUGUST 2003

Martin Butcher, Director of Security Programs

PHYSICIANS FOR SOCIAL RESPONSIBILITY



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## ACKNOWLEDGEMENTS

The author would like to thank Theresa Hitchens of the Center for Defense Information; Jaya Tiwari and Martha Clark of Physicians for Social Responsibility; Brian Foley of Widener University; Kathy Crandall of the British American Security Information Council; Nicola Butler; Dan Plesch; Sandy

Ionno Butcher; Antonella Romano and the many other people without whose help this report could not have been written. Many people have seen this report and offered advice during its long gestation period.

## FOUNDATION SUPPORT

This report is made possible by the generous support of the Turner Foundation and the Ploughshares Fund.



## GLOSSARY

ABM Treaty – Anti-Ballistic Missile Treaty

ACEs – Areas for Capability Enhancement

ACTD – Advanced Concept Technology Development

ADW – Agent Defeat Weapon

AoA – Analysis of Alternatives

BLU-109 – a conventional earth-penetrating weapon

BLU-116 – a conventional earth-penetrating weapon (an improvement of the BLU-109)

BLU-118/B – a thermobaric weapon

BMD – Ballistic Missile Defense

BROACH – British Royal Ordinance Augmenting Charge

BW – Biological Weapon

BTWC or BWC – Biological and Toxin Weapons Convention

B61-11 – a type of nuclear earth-penetrating weapon

B83 – a candidate (to be modified) for the Robust Nuclear Earth Penetrator

CALCM – Conventional Air-Launched Cruise Missiles

CBW – Chemical and Biological Weapons

CD – Conference on Disarmament

CESD – Center for European Security and Disarmament

CINCS – Commanders in Charge

CNN – Cable News Network

CP – Counterproliferation

CPRC – Counterproliferation Program Review Committee

CRD – Capstone Requirements Document

CSBMs – Confidence and Security Building Measures

CTBT – Comprehensive Test Ban Treaty

CTR – Cooperative Threat Reduction

CWC – Chemical Weapons Convention

DCA – Dual-Capable Aircraft

DNA – deoxyribonucleic acid

DoD – U.S. Department of Defense

DOE – U.S. Department of Energy

DPRK – Democratic People's Republic of Korea

DTRA – Defense Threat Reduction Agency

EGBU-28 – a type of laser-guided conventional weapon designed to strike hardened targets

ESDP- European Security and Defence Policy

EU – European Union

FAE – Fuel-Air Explosive

FMCT – Fissile Material Cut-off Treaty

FMU-159/B – a Hard Target Smart Fuze, to provide information to support conventional penetrating weapons

FY – Fiscal Year

GBU-24 – a conventional weapon used to strike hardened targets (Navy)

GBU-28 – a conventional weapon used to strike hardened targets (Air Force)

HDBT – Hard and Deeply Buried Target

HDBTDC – Hard and Deeply Buried Target Defeat Capability

IAEA – International Atomic Energy Agency

IC – Intelligence Community

IRA – Irish Republican Army

JASSM – Joint Air-to-Surface Standoff Missile

JSOW – Joint Standoff Weapon

MIRVing – attaching Multiple Independently Targetable Reentry Vehicles (MIRVs) to ballistic missiles

MNA – Mission Needs Assessment

MOD – Ministry of Defense (U.K.)

MP – British Member of Parliament

NATO – North Atlantic Treaty Organization

NBC – Nuclear, Biological, Chemical

NBC/M – Nuclear, Biological, Chemical weapons and their Means of delivery

NIPP – National Institute for Public Policy

NNSA – National Nuclear Security Administration

NPR – Nuclear Posture Review

NPT – Nuclear Non-Proliferation Treaty

NSAs – Negative Security Assurances

NSS – National Security Strategy

NSPD – National Security Presidential Directive

NTS – Nevada Test Site

OSCE – Organization for Security and Cooperation in Europe

PBXIH-135 – a type of thermobaric explosive

PDD – Presidential Decision Directive

PENN – Project on European Nuclear Non-Proliferation

PSR – Physicians for Social Responsibility

R&D – Research and Development

RDD – Radiological Dispersal Device ('dirty' bomb)

RNEP – Robust Nuclear Earth Penetrator

SORT – Strategic Offensive Reductions Treaty

S&T – Science and Technology

START – Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms

STRATCOM – U.S. Strategic Command

TACSMS-P – Tactical Missile System Precision Penetrator

U-235 – Uranium-235

USAF – U.S. Air Force

UK – United Kingdom

UN – United Nations

WMD – Weapons of Mass Destruction

W76 – type of nuclear warhead deployed on U.S. Trident submarines



# Executive Summary

In the wake of the U.S. led invasion of Iraq, the role of American military power in the 21st century is a national, indeed, a global debate. The use of U.S. military power in a preventive war, ostensibly to disarm Iraq, has led many to question the legality, the wisdom and the effectiveness of such a policy. This policy has a name — counterproliferation — which is defined as the military component of non-proliferation. This report asks whether counterproliferation is an effective instrument for fighting the spread of nuclear, biological or chemical (NBC) weapons, and examines the use of nuclear weapons to achieve counterproliferation goals.

Counterproliferation policy and doctrine can be deeply controversial, particularly when it would require the use of preventive or preemptive military action to destroy enemy or potential enemy NBC weapons. When nuclear forces are added to the mix of forces available for use in such missions the controversy grows exponentially.

In examining the use of nuclear weapons in counterproliferation, this report considers:

- The threat to the United States and its allies from NBC weapons;
- The development of counterproliferation policy;
- The adaptation of nuclear doctrine to conform with counterproliferation needs;
- Nuclear and conventional weapons options for counterproliferation ;
- The environmental and human health effects of nuclear weapons use;
- Allied support for U.S. counterproliferation policies;
- Legal and military constraints on counterproliferation;
- Undermining the non-proliferation regime.

## THE THREAT TO THE UNITED STATES AND ITS ALLIES FROM NBC WEAPONS

President Bush is correct when he talks of a world in which the dangers of NBC weapons are more complicated than during the Cold War. Those states whose global outlook and interests do not coincide with the views or interests of the United States have sought to develop asymmetrical mili-

tary capabilities to allow them to confront American military power. There also seems to be little doubt that there is now more danger of the proliferation of NBC weapons to non-state actors, and that groups such as Al-Qaeda would be prepared to inflict mass casualties.

There is evidence that a number of states are pursuing biological and chemical weapons programs. Both the biological and chemical weapons conventions remain far from universal treaties.

Nuclear threats are more restricted in number, and indeed compared to the world of twenty-five nuclear powers that President Kennedy feared would exist by now, proliferation has been well contained. Some ninety-five percent of global NBC weapons are held by the United States and Russia. Arms control and non-proliferation regimes have done an excellent job in containing the threat and, given enhanced mechanisms, may well be able to do much more. There are, however, deep concerns about the safety and security of the stocks of such weapons in Russia, and increasing fears that terrorists will seek to acquire nuclear materials to fashion a radiological dispersal device (RDD) or 'dirty' bomb. In addition, there is still much to be feared from regional conflicts that could lead to nuclear wars.

Threats that exist, but are often exaggerated in the debate in the United States, include:

- The threat from ballistic missiles. Most nations have access only to 1960s SCUD technology, itself based on World War Two V2 rockets, all of very limited range and effectiveness.
- Storage facilities for NBC weapons in deeply buried and hardened bunkers. The vast majority of such facilities date from the Cold War and are sited in the United States, Russia or China.
- The threat from terrorist groups. However, it is important to note that no terrorist group has yet shown the capacity to mount a serious attack with NBC weapons.

## THE DEVELOPMENT OF COUNTERPROLIFERATION POLICY

To meet these NBC weapons threats, the Bush administration has placed an overarching emphasis on counterproliferation. Although counterproliferation was only named in 1993, the concept has existed since World War Two. This is not surprising since it is entirely logical for one country at war to wish to destroy the most powerful weapons available to their enemy. Counterproliferation policy and doctrine have evolved over the years to emphasize preventive or preemptive attacks on NBC weapons or facilities, a policy which gives rise to the controversy surrounding the Bush administration's security policies.

Also deeply controversial is the role assigned to nuclear weapons in counterproliferation doctrine and the Bush administration's *National Security Strategy*. That role is rooted in debates that go back to the 1940s. U.S. military planners have thought of nuclear weapons as weapons of war since General Leslie R. Groves, ran the Manhattan Project, which developed and built the very first nuclear weapons. There was a lively debate in the United States in the 1940s on the wisdom or otherwise of a preventive war against the Soviet Union. Such policies were rejected then, but have been reborn under President George W. Bush.

The Defense Counterproliferation Initiative was launched by then-Defense Secretary Les Aspin in December 1993. The initiative centered on five major points:

- Recognizing that this is a new mission, not the old Cold War mission;
- Tailoring new U.S. weapons to destroy weapons of mass destruction;
- Re-examining the strategies used against the new kind of threat;
- Focusing intelligence efforts on detecting weapons of mass destruction;
- Ensuring international cooperation in curbing the threat of such weapons.

This initiative became enshrined in national security strategies. President Bill Clinton's 1999 *National Security Strategy* (NSS) emphasized the U.S. commitment to non-proliferation efforts, with military counterproliferation efforts in a support role.

President Bush has moved these policies to the center of national policy. The 2002 *National Security Strategy of the United States of America* is radical in its prescription for a preventive or preemptive use of force in handling NBC weapons proliferation. The *National Strategy to Combat Weapons of Mass Destruction* expands upon the policies laid out in the *National Security Strategy*. This short document is an unclassified version of *National Security Presidential Directive 17 (NSPD17)*. These papers emphasize action to destroy NBC weapons in unfriendly hands. This WMD strategy is a dramatic extension of the policy of counterproliferation, and gives a far greater role than in the past to nuclear weapons within that strategy.

### THE ADAPTATION OF NUCLEAR DOCTRINE TO CONFORM WITH COUNTERPROLIFERATION NEEDS.

Counterproliferation policy has had a profound influence on U.S. doctrine for the use of nuclear weapons. From the beginning of the 1990s, the United States began to envisage the use of nuclear weapons against Third World targets. This included not just nuclear armed nations, but those whose arsenals included chemical and biological weapons. Nuclear doctrine was adapted to conform to these conclusions.

The 2001 *Nuclear Posture Review* reflects much of the neo-conservative thinking that supporters of President Bush had outlined in reports produced before he took office. It develops pre-existing themes, but takes them much farther. Deemphasizing the Russian threat, the 2001 NPR instead concentrates on the growing capabilities of various states in the biological-, chemical-, nuclear- and ballistic-missile delivery areas. It prescribes a mix of nuclear and conventional forces to counter these threats.

Missile defenses play an integral role in defense counterproliferation programs and in U.S.

defense strategy. If nuclear and other offensive weapons are the sword, then missile defenses are intended to be a shield, from the tactical to strategic level. The DoD also claims that missile defenses are an integral part of preventing proliferation, both by potential foes and by allies. This optimistic assessment ignores the fact that missile defenses are easy to penetrate, either by using sophisticated missiles with decoy warheads and other countermeasures, or by using delivery systems other than ballistic missiles.

### NUCLEAR AND CONVENTIONAL WEAPONS OPTIONS FOR COUNTERPROLIFERATION

Parallel to doctrinal and policy developments, the Pentagon and DOE weapons labs have been pressing ahead with the development of counterforce capabilities for counterproliferation missions. Capabilities are sought to destroy NBC weapons development, production and storage facilities, as well as potential targets including deployed, mobile weapons systems. In addition, a need has been identified to destroy deeply buried and hardened targets.

To this end, the Air Force is conducting the Agent Defeat Weapon (ADW) program which examines what kinds of weapons will be necessary to attack a chemical or biological weapons site, in order to destroy those weapons stored there. The administration also has initiated research on a Robust Nuclear Earth Penetrator (RNEP), and is developing conventional means for bunker-busting.

The *Report on the Defeat of Hard and Deeply Buried Targets* from DOE and DoD to Congress shows clearly that nuclear weapons are an intrinsic part of plans for defeating hard and deeply buried targets, and chemical and biological agents. The administration has asked Congress to repeal the Furse-Spratt legislation that bans the development of nuclear weapons with a yield under 5 kilotons, in hopes of modifying existing warheads to make them more 'usable.'

One earth penetrating nuclear weapon (of admittedly limited capability) is already available, and the administration has sought support for new

weapons and capabilities, including the RNEP and ‘tailored effects’ weapons under the Advanced Concepts Initiative (ACI). Old concepts developed in the 1990s under Project PLYWD are available, as are weapons such as the Davy Crockett, a tactical nuclear weapon from the 1950s and 1960s.

There are alternatives to nuclear weapons for use in counterproliferation missions. The U.S. military has been pursuing advanced conventional weapons options for counterproliferation missions since the early 1990s. These rely on new uses of explosive charges, special fuses and other new technologies. In the area of chemical and biological agent defeat, the Air Force Agent Defeat Weapon program is conducting a number of studies on conventional options for this task. These include modeling the behavior of chemical and biological agents when dispersed through attack by explosives, heat, radiation, ultra-violet radiation or even bleach, as well as their behavior when fragmented. The availability of these weapons means that the use of nuclear weapons should never be countenanced in counterproliferation missions.

#### **THE ENVIRONMENTAL AND HUMAN HEALTH EFFECTS OF NUCLEAR WEAPONS USE**

The use of nuclear weapons has been taboo since 1945 because of their unique destructive effects. The hopes of those who support the development and deployment of a new generation of nuclear weapons, whether for bunker busting or for agent defeat, therefore rest in their ability to design a weapon that will penetrate far enough below the surface to explode, destroy its target and seal in all debris where the bomb explodes.

However, the likelihood is that any attack on an NBC weapons facility would spread radioactive fallout over a wide area, greatly intensifying the medical consequences for the civilian population in the region. Such human toll would ensure an enormous political toll for any nation that chose to use nuclear weapons, particularly in a first strike. PSR physicians and analysts have shown conclu-

sively that even a relatively small use of nuclear weapons would bring catastrophic casualties that would overwhelm the medical resources of the United States, let alone of the developing countries where the use of nuclear weapons in counterproliferation missions is being considered. A nuclear weapons attack on a chemical or biological weapons facility risks the release of toxins or biological agents into the atmosphere along with radioactive fallout.

#### **ALLIED SUPPORT FOR U.S. COUNTERPROLIFERATION POLICIES**

Counterproliferation policy has begun, slowly, to be adopted in Europe by NATO and the European Union (EU). France, Britain and NATO also have adapted nuclear use doctrines and practices similar to those of the United States. If the United States is not to be forced to act alone, then support from NATO nations is likely essential. While a nuclear or conventional counterproliferation strike could be launched from U.S. territory, many of the possible targets are on the periphery of NATO, and it would be advantageous, at least, to have NATO support for attacks in the region.

NATO has fully integrated counterproliferation into its force planning, training, and its strategic concept and related papers. However, NATO and U.S. national policy differ in that NATO has not openly assigned its forces a preventive or preemptive role in counterproliferation, nor has it explicitly given a role to nuclear weapons in counterproliferation.

The European Union has a history of involvement in non-proliferation diplomacy dating back to 1990. The EU’s balanced approach to countering proliferation stands in stark contrast to the U.S. approach. An emphasis on multilateral diplomacy and cooperation through the United Nations Security Council is at the heart of this strategy. The European Union has adopted a strategy for countering proliferation that matches its institutional history of building peace through international cooperation, and is a model for global action in this area of particular concern.



## LEGAL AND MILITARY CONSTRAINTS ON COUNTERPROLIFERATION

The legality of the use of preemptive or preventive military operations to attack NBC weapons facilities is questionable. The use of nuclear weapons in such operations is even more so. The support of the United Nations is a prerequisite for any except an imminent attack, when self-defense is allowed.

It is likely that recent innovations in international law would support the position that a preventive or preemptive conventional attack authorized in advance by the UN would be politically and legally legitimate — even if there were no threat of imminent attack. The Security Council would, given an international norm against the possession and proliferation of NBC weapons, seem to have the power to decide that the possession of NBC weapons by any nation is illegal and that action must be taken to remove that capability from the nation's arsenal.

These issues, already difficult to address in the context of relations between states, become even more so in the context of modern terrorist actions and the potential for terrorists or other non-state actors to gain access to NBC weapons. It is clearly unreasonable to expect a nation to stand back and wait to be attacked with nuclear weapons if, with some foreknowledge, it could prevent that attack and thereby save thousands, even hundreds of thousands, of civilian lives. It seems that, with UN backing, conventional military operations against an NBC weapons proliferator would be well grounded in international law.

What is much less clear is whether the use of nuclear weapons could be justified under such circumstances, as current U.S. policy allows. The devastating environmental and human consequences of the use of nuclear weapons means that their use is never justified. Even in the case of the threat of use of a nuclear weapon against the United States, the U.S. possesses an advanced conventional arsenal and a capacity for the use of military force so far beyond that of any other nation, or alliance of nations, it likely can ensure the

functional defeat of an enemy NBC weapons capability with such a degree of certainty as to rule out the legitimacy of a preemptive nuclear strike.

It will be extremely difficult for a counterproliferation mission to be successful, and nearly impossible if the success must be measured in political and military terms. It will be necessary to prove an imminent threat and show that the mission will be able to be carried out without first provoking the use of those NBC weapons it is intended to deny. It will be crucial to show that the target state or non-state actor could not have been deterred, and it will be crucial to convince the wider international community of all these things. Adequate intelligence must be provided to assure destruction of all enemy capabilities.

In these circumstances the use of the military for counterproliferation missions should remain an option only of the last resort.

## UNDERMINING THE NON-PROLIFERATION REGIME

The U.S. nuclear use doctrine that has evolved over the years contradicts directly the Negative Security Assurances (NSAs) given by the United States in the context of the NPT. U.S. policy implies that nuclear weapons have some equivalence with chemical and biological weapons. For potential adversaries the message is clear: adherence to the NPT and reliance on the Negative Security Assurances of the United States are no longer viable policies. The implications for the Non-Proliferation Treaty are likely to be serious. Indeed, the imperative of U.S. nuclear doctrine for those whose interests diverge from those of the United States, is to develop and deploy a nuclear arsenal.

The norm of non-possession of nuclear weapons enshrined in the NPT is directly contradicted by current policies and doctrines. The continued possession by the United States of a large arsenal of nuclear weapons undermines that norm, and sends a confusing message to the international community. The intent to use nuclear weapons in counterproliferation missions, and to develop

new nuclear weapons for the purpose of destroying NBC weapons belonging to other nations, only deepens the confusion.

Prior to the Bush administration, U.S. administrations have for decades seen the CTBT as a non-proliferation measure that helps prevent the spread of nuclear weapons. This is no longer the case and the Bush administration is preparing a heightened state of test readiness, a necessary precursor to a resumption of nuclear testing. Any return to testing by the United States would kill the CTBT. The United States has the least to gain of any nation from a return to nuclear testing in that it already has conducted many more tests than anyone else and it has the most sophisticated test simulation facilities.

## CONCLUSIONS

The U.S. ambassador to the 2003 Preparatory Committee for the 2005 NPT Review Conference told the assembled nations that the time had passed for 'business as usual.' This is surely correct, and there is a need for an urgent examination of counterproliferation and non-proliferation policies. This examination should explore military and non-military means for preventing and rolling back proliferation, and ensure that the diplomatic and military policies pursued are compatible, and do not undermine U.S. security. This process also should ensure that military counter-

proliferation efforts serve non-proliferation ends, rather than supplanting them. This new non-proliferation paradigm is vital if the first decades of the 21st century are not to witness a renewed rush of nuclear proliferation.

It is clear that nations have a right of self-defense and, in the last resort, the possibility of the use of military force in counterproliferation missions must be retained. But this policy can never be anything more than a last resort, a final option. The Bush administration has gravely undermined the international diplomatic non-proliferation regime. Our first line of defense is therefore weakened. This has, in turn, undermined the legitimacy of U.S. counterproliferation policy. When seeking to prosecute a war, or even a limited strike, for counterproliferation purposes, it would be better for any administration to make every effort to enforce compliance with international regimes through diplomatic initiatives, and to be seen doing so with the support of the United Nations.

In doing so, support for military action in truly last resort cases would be much easier to build in the international community. It also would be better if the administration were to renounce the use of nuclear weapons themselves. The legitimacy of global efforts to eliminate NBC weapons will only benefit from such cooperation and restraint.

# Introduction

*Hear me more plainly.  
I have in equal balance justly weigh'd  
What wrongs our arms may do, what wrongs we suffer,  
And find our griefs heavier than our offences.*

(William Shakespeare, *Henry IV, Pt. 2, Act 4, Scene 1, Lines 70-3.*)

In the wake of the U.S. led invasion of Iraq, the role of American military power in the 21st century is a national, indeed, a global debate. The use of U.S. military power in a preventive war, ostensibly to disarm Iraq, has led many to question the legality, the wisdom and the effectiveness of such a move. This policy has a name — counterproliferation. This policy has been developed over more than a decade by three successive administrations, and is now at the center of U.S. security strategies. Many question the wisdom of this policy.

The central issues in the debate are perennial. Few can summarize the issues involved as eloquently as Shakespeare. In *Henry IV*, the Archbishop of York wrestles with his conscience. He finds justification to launch war, despite the suffering that may be inflicted on innocents because the wrongs that will be righted by the war provide justification in themselves. President Bush showed few public signs of wrestling with his conscience, but undoubtedly would agree with Shakespeare's Archbishop. An increasing willing-

ness to use force in pursuit of foreign policy goals has already led to war with Iraq, and it may paradoxically lead to the use of nuclear weapons in attempts to secure the disarmament of other nations.

Since the 1991 Gulf War, the U.S. military has given ever-increasing importance to counterproliferation, a comprehensive military response to proliferation, including offensive and defensive military options which can be defined as:

...the military component of non-proliferation, in the same way that military strategy is a component of foreign policy. Counterproliferation refers specifically to Department of Defense activities, both in the actual employment of military force to protect U.S. forces, and in their support of overall U.S. nonproliferation policies and goals.<sup>1</sup>

While the implementation of counterproliferation policy is now center stage in national secu-

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<sup>1</sup> *What is Counterproliferation?*, from the website of the Air War College at [www.au.af.mil](http://www.au.af.mil) on June 29, 2003.

rity policy debates, many questions remain unanswered. Is counterproliferation an effective instrument for fighting the spread of nuclear, biological or chemical (NBC) weapons?<sup>2</sup> Can the use of nuclear weapons ever be justified against proliferant states or non-state actors? Are the ‘wrongs our arms may do’ proportionate to our ‘griefs’, or the threat to us from NBC weapons?

These questions, and the role counterproliferation should play in national security policy, are the subject of this paper. The urgency of this subject matter is obvious. The crisis over Iraqi possession (or possible possession) of NBC weapons has kept a bright spotlight on these developments, and the counterproliferation policy, that was established during the 1990s. Leaked information revealing that the administration drew up targeting plans for nuclear weapons use against Iraq have highlighted the role of nuclear weapons in counterproliferation.<sup>3</sup>

Seen in this context, counterproliferation policy and doctrine can be deeply controversial, particularly when they would require the use of preventive or preemptive military action to destroy enemy or potential enemy NBC weapons. Even with the use of solely conventional means to attack a chemical or biological weapons facility in a country such as Iraq or Libya, such a move would be deeply controversial. When nuclear forces are added to the mix of forces available for use in such missions, the controversy grows exponentially.

This controversy stems in part from the way in which the possibility of preventive or preemptive military attack outside time of war undermines traditional notions of national sovereignty. While these concepts were never as absolute as

pure adherents to the Westphalian ideal might believe, it is a clear violation of international law for one state to attack another without warning and without the victim of attack having formed intent or made preparation to begin a war. The sovereign right of princes enshrined in the 1648 Treaty of Westphalia has been progressively eroded by the development of the United Nations (UN) and international law since World War Two. UN and North Atlantic Treaty Organization (NATO) operations in the former Yugoslavia, particularly the war with Serbia over Kosovo in 1999, has dramatically undermined state sovereignty in favor of international standards of human rights and democracy. However, it has not shifted so far that the United States, or any other state, has the right to attack another country simply for suspected possession of NBC weapons.

The addition of nuclear weapons for counterproliferation aims increases the controversial nature of U.S. national security policy. Despite this, it has been U.S. policy since at least the mid-1990s to reserve the option to attack the full range of NBC facilities with nuclear weapons. This is a major change from Cold War concepts that, on the strategic and tactical level, saw nuclear weapons as a deterrent. Counterproliferation doctrine is more in keeping with the ideas described later in this report, which informed nuclear use doctrine in the late 1940s and early 1950s, and under which the U.S. could have launched nuclear attacks on potential proliferant states.

While the public has noticed only that presidents continually proclaim reductions in strategic nuclear weapons, the roles assigned to nuclear forces have grown without any real debate. Consequently, the likelihood of nuclear weapons use

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<sup>2</sup> Throughout this paper, the NATO term ‘NBC weapons’ has been used in preference to WMD, except where quoting others. The term WMD is inexact at best and deliberately disingenuous at worst. The creation of a comparison between the three very different classes of weapon allows the United States, and other nuclear powers, to argue that their continued possession of nuclear weapons is legitimate while there is even a possibility that other states possess biological and chemical weapons. The NATO term is a value-free description and seems to the author to be the sensible term to use. An alternative, CBRN — chemical, biological, radiological and nuclear — weapons, would include a fourth category — radiation dispersal devices or ‘dirty’ bombs.

<sup>3</sup> Arkin, William, *The Nuclear Option in Iraq: The U.S. has lowered the bar for using the ultimate weapon*, *Los Angeles Times*, January 26, 2003.

in regional wars and tactical roles has grown too. In current policy, nuclear weapons are seen as a means to be used when necessary, with little significance placed on their tremendous destructive capability. So commonplace is this thinking to military planners that retired General Wesley Clark was able to tell a CNN audience that:

I don't think the United States would consider tactical nuclear weapons unless there were targets that would require tactical nuclear weapons. The use of tactical nuclear weapons wouldn't be warranted just in response to American casualties... for example, there was a deeply buried-underground command center that we thought contained stocks of these chemical weapons... and it took a tactical nuke ... under those circumstances we might well feel the constraints were off...<sup>4</sup>

This reverses fifty years of political thinking on nuclear weapons. Since the bombings of Hiroshima and Nagasaki there has been a taboo on their use. The combination of explosive power and radioactive contamination inherent to nuclear weapons has been seen as too terrible to use. To be sure, political and military figures have recommended the use of nuclear weapons in Korea, during the Cuban Missile Crisis, and during the Vietnam War. They have always, however, been overruled<sup>5</sup>.

The risk that nuclear war would be inevitable if nuclear weapons were allowed to spread unchecked was recognized in 1968 when the United States led the negotiation of the Non-Proliferation Treaty (NPT). Proliferation and the ever increasing threat of nuclear use was thought to be too dangerous to be allowed. So the United States and the other nuclear weapon states promised to relinquish their nuclear weapons if others would

fore swear them. This basis for arms control and disarmament is now at risk from the new nuclear use policies pursued by the Bush administration. Those policies enhance the military and political value of nuclear weapons, while treating them as a battlefield weapon little different from any other.

The conclusions emerging from the Bush administration's *Nuclear Posture Review* (NPR), the *National Security Strategy* (NSS) and the *National Strategy to Combat Weapons of Mass Destruction* (NSWMD) have significantly altered U.S. policy regarding the prevention of proliferation and use of NBC weapons. The leaked language of the NPR, specifically the paragraphs concerning contingency planning for nuclear attacks on seven 'rogue states', including Iraq,

caused much surprise in public and even policy-making circles. Moving further, in the *National Security Strategy* and the *National Strategy to Combat WMD* the administration laid out a policy that emphasizes the use of military force to prevent the proliferation and the use of NBC weapons. This administration pays lip-service to diplomacy, but places little or no faith in the diplomatic process of non-proliferation. The Bush administration has elevated the Clinton policy of counterproliferation from a military support for non-proliferation to the central theme not only of non-proliferation policy, but of national security policies as a whole.

The net effect is likely to be that a potential U.S. enemy will be encouraged to develop a

An increasing willingness to use force in pursuit of foreign policy goals has already led to war with Iraq, and it may paradoxically lead to the use of nuclear weapons in attempts to secure the disarmament of other nations.

<sup>4</sup> Clark, General Wesley (ret.), former Supreme Allied Commander Europe, CNN Late Edition, October 21, 2001.

<sup>5</sup> For example, General MacArthur and his successor General Ridgeway asked for permission to use nuclear weapons in Korea. In 1951 the Air Force practiced nuclear bombing runs from Okinawa over the Korean peninsula. Cummings, Bruce, See "Spring Thaw for Korea's Cold War?," *Bulletin of the Atomic Scientists*, April 1992.

nuclear capability at the earliest possible time to deter U.S. attack. Since non-nuclear status under the NPT is no longer a protection from U.S. nuclear attack, the incentive to go nuclear grows. And because military force is now the U.S. policy of first resort to prevent proliferation, any proliferators will figure that going nuclear early and in secrecy to establish a deterrent relationship with the United States is the best path. North Korea has already exhibited a strong understanding of this logic:

“No one can vouch that the U.S. will not spark the second Iraqi crisis on the Korean Peninsula,” North Korea’s state-run *Minju Joson* newspaper said. The DPR will “increase its national defense power on its own without the slightest vacillation no matter what others may say,” the paper said.<sup>6</sup>

Moreover, the new American policy in the *National Security Strategy* and the *National Strategy to Combat WMD* at least implies that proliferation is not the problem, but only proliferation to enemies or adversaries of the United States. This represents a serious weakening of the basis for non-proliferation as a whole.

The danger of undermining the NPT is only enhanced as other nuclear powers such as the United Kingdom and France move to follow U.S. doctrinal developments. Further, the NATO alliance traditionally has moved to adopt U.S. concepts into alliance doctrine, and this is known to be happening with the nuclear aspects of counterproliferation.

A debate on developing new nuclear weapons capabilities for use in counterproliferation missions has featured as a large part of congressional discussion, and will continue to do so while the Bush administration seeks funds to develop these new capabilities. There has been virtually no public debate on the development of counterproliferation policy and related changes in

nuclear use doctrine. While such a debate has occurred in specialist academic and military circles, this paper provides essential background for a wider audience. It gives the information necessary for an understanding of the reasons for the U.S. administration’s determination to preemptively combat the spread of nuclear, biological and chemical weapons, and its desire to develop new nuclear weapons for this purpose.

In Chapter One, the paper questions the Bush administration’s assessment of the NBC weapons threat to the United States. It examines the threat of ballistic missile attack using NBC weapons. It examines the state of proliferation, and assesses whether the need for a dramatic shift in policy that places counterproliferation at the heart of national security strategy is truly necessary. Does the U.S. strategy contain and reduce proliferation, or rather act as a stimulus to the spread and use of NBC weapons? Is the threat growing worse as the administration asserts?

In Chapter Two, the paper goes on to examine the roots and development of the concept of counterproliferation. It analyses, compares and contrasts counterproliferation as created under the Clinton administration and then revised under President Bush. In doing so, the chapter also explores whether counterproliferation is the most appropriate policy for confronting NBC proliferation.

In Chapter Three, the development of nuclear policy is examined. The doctrine as influenced during the 1990s by the needs of counterproliferation is reviewed. This analysis includes the United States, the U.K. and France, as well as the NATO alliance.

Chapter Four surveys the weapons options and military policies to be implemented under counterproliferation. It examines the range of missions that are likely to be carried out, and the tools available to the United States. In particular, the chapter focuses on whether there can be justification for the use of nuclear weapons under any circumstances.

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<sup>6</sup> AP Seoul, March 25, 2003, North Korea Warns of ‘Second Iraqi Crisis’ on Korean Peninsula.

Chapter Five is an analysis of the likely collateral human and environmental effects of the use of nuclear weapons against conventional targets and against chemical and biological weapons targets. The understanding of such effects is central to the legitimacy of the use or threat of use of nuclear weapons in counterproliferation.

Chapter Six outlines the conventional technology options that exist for counterproliferation missions. The range of weapons available and their appropriateness for missions such as chemical and biological agent defeat also are assessed.

Chapter Seven examines both legal and military constraints on counterproliferation missions. Questions addressed include: can preventive strikes be justified? Is the use of nuclear weapons ever proportionate? When might the United States have the right to act without the support of the UN Security Council? Are there circumstances under which military strikes could be useful? When is non-proliferation diplomacy the most sensible policy option?

In Chapter Eight, the paper examines the compatibility of counterproliferation with non-pro-

liferation, and asks whether a reliance on preemptive or preventive military action as a first resort is damaging global efforts to prevent proliferation.

The concluding Chapter Nine assesses the changes in policy that would make both non-proliferation and counterproliferation more effective, as well as more acceptable to the international community. It asks what the U.S. needs to do to bring the international community fully on board with counterproliferation and suggests ways in which counterproliferation could be an essential counterpart to more traditional non-proliferation diplomacy.

At this critical juncture in global affairs, we are called to question ourselves, and ask what wrongs our arms may do. Perhaps most importantly, we need to examine ways in which our nuclear arms and our policies and practices for their use harm our own security interests. Does counterproliferation really belong center-stage, or should it be in a supporting role to the lead actor — non-proliferation diplomacy?





# Chapter One:

## *NBC Weapons Threats to the United States and its Allies*

**T**he U.S. military, in terms of both conventional and nuclear forces, is now clearly without equal in the world. American capability to intervene to protect either economic or political interests is truly global in reach. Those whose global outlook and interests do not coincide with the views or interests of the United States have sought to develop asymmetrical military capabilities to allow them to confront this military power. Analysis of the nature of proliferation, and of the reason why states and non-state actors seek to acquire NBC weapons, is essential to an understanding of whether U.S. and allied policy for countering proliferation is in any way effective. An understanding of U.S. policy also is needed.

There is a serious question as to whether there is more danger of proliferation amongst states now than in the past, and whether that proliferation is likely to lead to the use of NBC weapons in conflict. The nature of evolving NBC threats from states and non-state actors is open for debate. The current focus within the United States on missiles as a means of delivering NBC

weapons also provokes serious questioning from many analysts.

When President Bush talks of a world in which the dangers of NBC weapons are more complicated than during the Cold War, he is right. There also seems to be little doubt that there is more danger of the proliferation of NBC weapons to non-state actors, and that there are groups, such as the Al-Qaeda network, which would be prepared to inflict mass casualties to achieve their aims. President Bush has made clear his fear of the threat of an NBC weapons attack on the United States. In his 2002 State of the Union address, he said that:

States like these, [Iran, Iraq and North Korea] and their terrorist allies' constitute an axis of evil, arming to threaten the peace of the world. By seeking weapons of mass destruction, these regimes pose a grave and growing danger. They could provide these arms to terrorists, giving them the means to match their hatred. They could attack our allies to attempt to blackmail the

United States. In any of these cases the price of indifference would be catastrophic.<sup>7</sup>

The threat of the use of nuclear, biological and chemical weapons also has been stressed by the Department of Defense (DoD):

Threats from the proliferation of nuclear, biological and chemical (NBC) weapons come from states and non-state groups... The growing availability of NBC- and missile-related technologies and expertise and the sophistication of some of these technologies also highlight the threat. In addition, NBC weapons increasingly are seen as asymmetric means to counter the West's superior conventional military capabilities.

... [a]bout a dozen states, including several hostile to the West, are actively pursuing offensive biological and chemical warfare capabilities... Moreover, the relative ease of producing some chemical or biological agents has increased concern that use of chemical or biological weapons may become more attractive to terrorist groups intent on causing panic or inflicting large numbers of casualties.<sup>8</sup>

In the United States, these concerns were thrown into high relief for the public by the anthrax letters sent to a variety of targets, including Senator Tom Daschle in Washington D.C., CBS TV and NBC TV News in New York, and others following the September 11 terrorist attacks. DoD had already anticipated the use of chemical and biological agents by non-state actors:

There is a growing potential for the production of new and more complex chemical and biological agents, which are more challenging for defense measures and medical treatment. While most of these agents exist only in the laboratory, their continued development raises the possibility of their acquisition by states of proliferation concern.

Preparation and effective use of biological agents as weapons is more difficult, at least with respect to non-state actors, than the popular literature may suggest. However, even crude delivery systems could have significant operational repercussions for military forces.<sup>9</sup>

There is evidence that a number of states such as Libya, Iran, Iraq and North Korea, which are traditionally seen as enemies of the United States, are pursuing biological and chemical weapons programs. There are, in addition, deep concerns about the safety and security of stocks of such weapons in Russia – which despite being a signatory of the Biological Weapons Convention maintained an active program of developing and producing biological weapons well into the 1990s.<sup>10</sup> There are also increasing fears that terrorists will seek to acquire nuclear materials to fashion a radiological dispersal device (RDD) or 'dirty' bomb. These bombs use conventional explosives to spread radioactive contamination. They are not true weapons of mass destruction, but could cause mass panic if exploded in, for example, downtown Washington D.C.

Nuclear threats are more restricted in number, and indeed compared to the world of 25

<sup>7</sup> Bush, President George W., *State of the Union Address*, January 29, 2002.

<sup>8</sup> U.S. Department of Defense, *Proliferation: Threat and Response*, Section I, NBC Proliferation Challenges, January 2001, p. 3.

<sup>9</sup> *Ibid.*, p. 4.

<sup>10</sup> For more detail on stockpiles of chemical and biological weapons held by states and non-state actors, see PSR Fact Sheets on the Biological Weapons Convention, the Chemical Weapons Convention, and on "Country Stocks of Biological and Chemical Weapons," at [www.psr.org](http://www.psr.org).

nuclear powers that President Kennedy feared would exist by now, proliferation has been well contained. However, the situations in South Asia and in the Middle East show that there is still much to be feared from regional conflicts that could lead to nuclear wars. The existence of unsecured nuclear weapons in the former Soviet Union provides perhaps the most likely access for terrorists to such weapons. Other avenues might include the sale of weapons or materials by Pakistan or North Korea, as both states have at best a patchy record in regard to proliferation. Unemployed scientists from the former Soviet weapons programs also could provide their expertise to a terrorist group or state.

The fear is that the consequences of nuclear use by states or non-state actors would be so terrible that preventing such use is really the only viable solution. A secondary fear is that U.S. freedom of action will be constrained if an adversary obtains a nuclear weapon and is therefore able to deter military action. The administration's viewpoint was well expressed at the end of 2002:

Weapons of mass destruction could enable adversaries to inflict massive harm on the United States, our military forces at home and abroad, and our friends and allies. Some states, including several that have supported and continue to support terrorism, already possess WMD and are seeking even greater capabilities, as tools of coercion and intimidation. For them, these are not weapons of last resort, but militarily useful weapons of choice intended to overcome our nation's advantages in conventional forces and to deter us from responding to aggression against our friends and allies in regions of vital interest. In addition, terrorist groups are seeking to acquire WMD with the stated purpose of

killing large numbers of our people and those of friends and allies — without compunction and without warning.<sup>11</sup>

However, it is important not to overstress current threats and to try to achieve a realistic picture of the dangers for the United States and its allies in coming years.

### THE BALLISTIC MISSILE THREAT<sup>12</sup>

A vast amount of public and political attention has been focused on the threat of ballistic missile attack on the United States. This debate has become extremely partisan and appears to be based as much on ideology as on facts. It is certainly important to analyze the potential threat of ballistic missile attack on the United States, and to address any threat by practical and effective arms control or defense means. It must also be asked whether this is the most likely means of delivery of NBC weapons against the United States? And is this threat growing as the administration and other missile defense partisans insist?

Excepting Russia and China, there is no nation that can currently strike the United States from their territory, and even Europe is only vulnerable at the periphery. China has a very small ICBM force and Russia's force is expected to decline significantly in coming years. Indeed, the major threat from Russia is likely to be that of accidental launch as their infrastructure decays. In any case, neither is likely to launch an attack



*A SCUD missile*

<sup>11</sup> Introduction, *The National Strategy To Combat Weapons of Mass Destruction*, December 17, 2002.

<sup>12</sup> For a detailed treatment of these issues see Cirincione, Joe, *The Declining Ballistic Missile Threat*, Testimony before the Danish Parliament, April 24, 2003, at [www.ceip.org](http://www.ceip.org).

unless they themselves are the subject of a massive and imminent U.S. threat. The intelligence community currently estimates that:

The United States and its interests remain at risk from increasingly advanced and lethal ballistic and cruise missiles and Unmanned Aerial Vehicles (UAVs). In addition to the longstanding threats from Russian and Chinese missile forces, the United States faces a near-term ICBM threat from North Korea. And over the next several years, we could face a similar threat from Iran and possibly Iraq.

Short- and medium-range missiles already pose a significant threat to U.S. interests, military forces, and allies as emerging missile states increase the range, reliability, and accuracy of the missile systems in their inventories.

And several countries of concern remain interested in acquiring a land-attack cruise missile (LACM) capability. By the end of the decade, LACMs could pose a serious threat to not only our deployed forces, but possibly even the U.S. mainland.<sup>13</sup>

However, the intelligence community has also stated that:

U.S. territory is more likely to be attacked with [chemical, biological, radiological and nuclear] materials from nonmissile delivery means — most likely from terrorists — than by missiles, primarily because nonmissile delivery means are less costly, easier to acquire, and more reliable and accurate. They can also be used without attribution.<sup>14</sup>

Joe Cirincione of the Carnegie Endowment for International Peace provides a detailed analysis of ballistic missile proliferation and his assessment is that the situation is actually improving, not getting worse:

The blurring of short, medium, intermediate, and intercontinental ranges for the world's missile inventory often results in the misinterpretation of the oft-quoted assessment that over 25 nations possess ballistic missiles. This statement is true, but only the United States, China, and Russia possess the ability to launch nuclear warheads on land-based intercontinental missiles. This has not changed since Russia and China deployed their first ICBMs in 1959 and 1981 respectively.

- Analysis of global ballistic missile arsenals shows that there are far fewer ICBMs and long-range submarine-launched ballistic missiles (SLBMs) in the world today than there were during the Cold War.
- The number of intermediate-range ballistic missiles (IRBMs), i.e. missiles with a range of 3,000 – 5,000 km has decreased in the past 15 years by an order of magnitude.
- The overall number of medium-range ballistic missiles (MRBMs), i.e. missiles with a range of 1,000 – 3,000 km, also has decreased. Four new countries, however, have developed or acquired MRBMs since 1989.
- The number of countries trying to develop ballistic missiles has also decreased and the nations still attempting to do so are poorer and less technologically advanced than they were the nations 15 years ago.

<sup>13</sup> Tenet, George, *The Worldwide Threat in 2003: Evolving Dangers of a Complex World*, Testimony before the Senate Select Intelligence Committee, 11 February 2003. Available at: [http://www.cia.gov/cia/public\\_affairs/speeches/dci\\_speech\\_02112003.html](http://www.cia.gov/cia/public_affairs/speeches/dci_speech_02112003.html) on May 15, 2003.

<sup>14</sup> National Intelligence Council, "Foreign Missile Developments," September 1999, p. 8.

- The number of countries with short-range ballistic missiles (SRBMs), i.e. missiles with ranges up to 1,000 km, has remained fairly static over the past 20 years and is now decreasing as aging inventories are retired.
- Today, fewer nations potentially hostile to the United States and Europe are trying to develop MRBMs as there were 15 years ago (1980s: China, Iraq, Libya, Soviet Union; 2002: China, Iran, North Korea).
- The damage from a ballistic missile attack on the U.S. territory, U.S. forces and European allies today with one or two warheads is also lower by orders of magnitude than fifteen years ago when thousands of warheads would have destroyed the country, even the planet.<sup>15</sup>

A NATO official, Cornelius Wolterbeek, made clear in a 2001 seminar that missile threats to NATO nations are based on aging technology. In the short-range category, he said that North Korean and Iraqi short-range ballistic missiles "...all ...represent, or are based on, the original SCUD missile and its upgraded version... They are based on technologies of the sixties."<sup>16</sup> As for medium-range missiles like the North Korean Nodong, Wolterbeek said that, "A Nodong is a SCUD B on a larger scale... It uses old SCUD technology..." In terms of multi-stage (potentially intercontinental ballistic missiles), Wolterbeek stated that only India with the Agni missile is likely to add to the number of countries with this capability in the near future. Otherwise, he states that "...no missile system in the 'countries of concern' ... would be able to match this system in the near future."<sup>17</sup> The SCUD missile was originally developed by the Soviet Union, but its design was derived from the German V-2 rocket developed during World War II.

As Cirincione and Wolterbeek make clear, the overall threat is diminishing while one or two hard cases remain to be cracked. Indeed, the only technology currently proliferating is a World War II-era design updated in the 1960s. This should be viewed as a tremendous success for non-proliferation efforts.

A missile attack on the United States is an extremely unlikely event, and it is necessary to question the priorities of an administration which is ready to

invest billions in a last ditch defensive measure — the missile defense program — while it refuses to engage in non-proliferation measures. It seems that the potential for the use of missile defenses in counterproliferation strikes is the key to this conundrum. This question is discussed in Chapter Four.

#### NBC WEAPONS AND BUNKERS

Another major element of administration concern is the proliferation of bunkers in which NBC weapons and facilities can be sheltered safe from attack. The Department of Defense (DoD) has an ongoing research effort to develop weapons that can destroy such targets (see Chapter Four). But what is the threat? A paper from the National Defense University has described the threat as follows:

Hard and deeply buried targets (HDBT) pose a serious challenge to the nation's war fighting capabilities. HDBTs include super-hardened surface targets and deeply buried bunkers or tunnels.

Indeed, the only technology currently proliferating is a World War II-era design updated in the 1960s. This should be viewed as a tremendous success for non-proliferation efforts.

<sup>15</sup> Cirincione, Joe, *ibid.*

<sup>16</sup> *NMD: The End of Deterrence? Report of a Seminar in The Hague*, June 29, 2001, organized by IPPNW Netherlands, IPPNW, and the Netherlands Atlantic Commission, p. 23.

<sup>17</sup> *Ibid.*, p. 24.

These targets are exceptionally well protected because they contain the essential capabilities needed to carry out national-level decisions. They also protect assets considered most dear. Examples include national leadership shelters, critical communications nodes, command and control systems, and weapons of mass destruction production, assembly, and storage.

Possessing the capability to hold these targets at risk is a crucial element of any war plan or military strategy. Those nations engaged most fully in the Cold War saw great utility in developing and maintaining HDBTs. All across the former Soviet Union, China, North Korea, and former Warsaw Pact countries, hardened facilities were established to protect key infrastructures.

The technologies needed to create HDBTs were refined and well understood. While these hardened facilities were initially created to protect against U.S. and NATO nuclear attack, they proved very effective against advances in precision strike weaponry. The message from the Gulf War and conflicts in the Balkans is to harden or deeply bury essential capabilities or risk losing them to superior U.S. forces. As a result, there has been a proliferation of HDBTs worldwide, and the intelligence community believes there are now over 10,000 such targets, many of which the U.S. cannot hold at risk with a standoff capability.

Although ground troops could be employed to overwhelm such facilities, their response may not be swift or assured enough to strike multiple targets simultaneously to deny adversaries access to their weapons of mass destruction. The proliferation of HDBTs is

particularly troublesome in the Third World where several countries are pursuing weapons of mass destruction and are protecting the associated delivery systems through various hardening and deeply burying techniques. For example, North Korea has spent years building a labyrinth of tunnels capable of storing men and materials in preparation for an invasion into South Korea. According to reports, many of these tunnels are 300 feet deep and are wide enough to allow movement of heavy equipment. Collectively, 8,000 troops per hour can move through these tunnels during an attack on South Korea.

In Libya, there are efforts underway to build a 2,000-mile long network of tunnels to move troops and equipment in a concealed and protected manner.<sup>18</sup>

Despite these fears, the vast majority of these underground facilities are buried to only a shallow depth, and are situated in Russia, other states of the former Soviet Union or China (or are on the territory of U.S. allies). Very few bunkers are on the territory of nations with which the United States might find itself at war and which have a strategic significance. Bruce Blair, a knowledgeable analyst of nuclear targeting issues, has written that the opening of a Russian command center in the Kosvinsky mountain in the southern Urals has prompted renewed military interest in bunker-busting nuclear weapons, and that China is also a main target.<sup>19</sup> The author has learned from a variety of sources that Pentagon briefings for the House and Senate armed services committees have closely mirrored the thrust of Bruce Blair's article.

In any case, the bunkers are only as significant a threat as the NBC weapons or facilities, or command and control facilities that they contain.

<sup>18</sup> Morgan, Michael, *The Bunker-Busting Nuke: Essential Capability or Destabilizing Weapon*, "Doing Military Strategy, Seminar J," National Defense University and National War College.

<sup>19</sup> Blair, Bruce, "We Keep Building Nukes For All the Wrong Reasons," *Washington Post*, May 25, 2003.

It therefore becomes necessary to assess the state of NBC weapon proliferation around the world.

### 21ST CENTURY PROLIFERATION: STATE ACTORS

Proliferation of NBC weapons amongst states is a relatively well understood phenomenon. Despite the antipathy of neo-conservatives, arms control and non-proliferation measures have been remarkably effective at containing and rolling back proliferation. However, it would be wrong to assume that no threats remain and that no problems remain to be solved. The proliferant states that cling to their NBC weapons are, for regional as much as global reasons, the hardest problems to solve. In fact, as the table below shows, there are relatively few countries pursuing NBC weapon programs, and that number is declining.

In fact, some 95% of global NBC arsenals (See Table 1) are held by the United States and Russia. It seems that the small number of intractable cases in nuclear proliferation — Israel, India, Pakistan, Iran, North Korea — are all, with the exception of North Korea, related to regional rather than global security concerns. Arms control and non-proliferation regimes have done an excellent job in containing the threat, and, given enhanced mechanisms, may well be able to do much more. (See Chapter Nine for a full discussion of this proposition.)

### 21ST CENTURY PROLIFERATION: NON-STATE ACTORS

Since September 11, 2001, there has been a tremendous media focus, fuelled by intelligence briefings, on non-state-actor NBC weapons threats.

The main cases of non-state-actor NBC activity are well known. The Aum Shinrikyo sect in Japan attacked the subway system of Tokyo with sarin gas in 1995. As a result, 12 people died and 5,000 were hospitalized (mostly as a result of panic and stampede rather than direct effects from

the weapon itself). Despite this, the attack represented a failure to seriously weaponize the gas. Similarly, scientists within the cult worked to weaponize biological agents, and failed despite spending millions of dollars and building well staffed research labs. Aum Shinrikyo has been dismantled as a terrorist threat.

The Al-Qaeda network is thought to be seeking to weaponize biological agents and chemical weapons. The anthrax attacks in the United States may be their work, or they may be the work of a domestic extremist group or individual, which seems more likely.

CNN obtained film of rudimentary Al-Qaeda experiments with cyanide or other gas on dogs at a camp at Darunta in Afghanistan.



*Tarhunah Underground Chemical Plant*

There is some written evidence, also discovered in Afghanistan, that Al-Qaeda have attempted to obtain or manufacture sarin gas.

The CIA has issued a report entitled *Terrorist CBRN: Materials and Effects* which gives some context to the true Al-Qaeda threat. According to the *Washington Times*, which has obtained a copy of this CIA document, the report warns that “Al Qaeda’s goal is the use of [chemical, biological, radiological or nuclear weapons] to cause mass casualties...” and that groups linked to Al Qaeda have “...a wide variety of potential agents and delivery means to choose from for chemical, biological, radiological or nuclear (CBRN) attacks...” The report further states, however, that such attacks would mostly be small scale and crude, using easily available materials and methods of delivery designed to cause

<sup>20</sup> Gertz, Bill, “CIA says Al Qaeda Ready to Use Nukes”, *Washington Times*, June 3, 2003.

**TABLE 1: STATE NUCLEAR, BIOLOGICAL AND CHEMICAL WEAPONS PROGRAMS**

<b>COUNTRY</b>	<b>NUCLEAR</b>	<b>BIOLOGICAL</b>	<b>CHEMICAL</b>
Algeria	Pursued at one time, currently under IAEA inspections	Research, no evidence of production	Possible, but signed and ratified CWC
Belarus	Had under Soviet control, now non-nuclear		
Canada		Former program	Former program
China	Yes	Likely maintains offensive program	Probable
Cuba		Probable research program	Possible
Egypt		Likely maintains offensive program	Probable
Ethiopia			Probable
France	Yes	Former program	Former program
Germany		Former program	Former program
India	Yes	Research, no evidence of production	Former program
Indonesia			Probable
Iran	Probable clandestine program, no evidence of production	Likely maintains offensive program	Yes
Iraq	Pursued at one time, now inactive	Previously active program, now questionable	Previously active program, now questionable
Israel	Yes, undeclared	Research, possible production	Probable
Italy			Former program
Japan		Former program	Former program
Kazakhstan	Had under Soviet control, program now dismantled (some weapons still exist)		
Laos		Probable	Probable
Libya		Research, possible production	Yes
Myanmar (Burma)			Probable
North Korea	Yes	Research, possible production	Yes
Pakistan	Yes	Possible	Probable
Romania			Probable
Russia	Yes	Research, some work beyond legitimate defense activities likely	Yes
Serbia	Had at one time, possesses nuclear material but no indication of its weaponization		Yes
South Africa	Former program, gave up	Former program	Former program
South Korea		Possible	Former program
Sudan		Possible research program	Possible
Syria		Research, possible production	Yes
Taiwan		Possible research program	Probable
United Kingdom	Yes	Former program	Former program
U.S.A.	Yes	Former program	Former program
Vietnam			Possible
Yugoslavia			Former program

## SOURCES FOR TABLE:

“Chemical and Biological Weapons: Possession and Programs Past and Present,” Center for Non-Proliferation Studies, <http://cns.miis.edu/research/cbw/possess.htm>, Downloaded May 13, 2003.

“States Possessing, Pursuing or Capable of Acquiring Weapons of Mass Destruction,” Federation of American Scientists, [http://www.fas.org/irp/threat/wmd\\_state.htm](http://www.fas.org/irp/threat/wmd_state.htm), Downloaded May 13, 2003.



“panic and disruption.” The report estimates that such attacks could cause hundreds of casualties.<sup>20</sup> Despite a worldwide network and vast financial resources, it seems that a true capability for mass destruction remains beyond the scope of Al-Qaeda.

Whatever the truth, and whatever the extent of their success in the weaponization of such materials, the terrorist possession of NBC weapons is a threat that must be faced. Jessica Stern argues that it is important to take this threat seriously, as it is growing, but that it is equally important not to exaggerate the capacities of non-state actors to handle NBC weapons, or indeed their desire to do so.<sup>21</sup> The Irish Republican Army (IRA), for one, has never shown any inclination to obtain or use such weapons, although it clearly had the capacity to mount an attack on a nuclear weapons convoy moving between any of the U.K.’s military nuclear bases and facilities at Burghfield or Aldermaston. Such convoys traveled British roads on a weekly basis (or even more often) during the 1980s and 1990s, with little immediate military protection. Convoys of radioactive materials were even less secure. Despite this, no IRA attempt to steal nuclear bombs or radioactive materials was ever made.

Despite past reluctance by terrorists to use methods of mass destruction, President Bush’s statement at West Point in 2002 contains some truth. He said that:

The gravest danger to freedom lies at the perilous crossroads of radicalism and technology. When the spread of chemical and biological and nuclear weapons, along with ballistic missile technology — when that occurs, even weak states and small groups could attain a catastrophic power to strike great nations.<sup>22</sup>

The main threat would indeed seem to be not just at the crossroads of radicalism and technology, but at the crossroads of religious fundamentalism and technology. This is certainly the case with Aum Shinrikyo and the Al-Qaeda network. There is a new element to add to the mix. The arrest of the Atlanta Olympics bomber has highlighted the existence of Christian fundamentalist terrorists in the United States. These groups, mostly known for bombing abortion clinics and assassinating doctors, have the potential to do more damage.<sup>23</sup> Groups such as the extreme Christian Identity Movement, of which Rudolph’s Army of God seems to be an offshoot, will need to be watched as concerns about non-state actors’ capacities for using NBC weapons grows.

Despite the success at containing proliferation that we have witnessed over the past forty years, some threats remain. The category of non-state actor threats is a relatively new phenomenon that complicates the picture. How to deal with these threats is at the heart of current debates and is the subject of this report.

### DOES U.S. POLICY MAKE THE THREAT WORSE?

The Joint Forces Command has conducted exercises looking at future threats from NBC-weapon-armed opponents, and the Unified Quest 2003 has made some headlines for its conclusions<sup>24</sup>. Set in 2015, the exercise scenarios pitted U.S. commanders against two enemies, an NBC armed state in the Middle East, and an insurgent group in Southeast Asia. The red (hostile) teams in the wargame, looking at U.S. conventional military superiority and a continuing doctrine of preventive or preemptive strikes, chose the early use of NBC weapons against deployed U.S. forces and, in one case, against United States territory.

<sup>21</sup> Stern, Jessica, “Terrorist Motivations and Unconventional Weapons,” in *Planning the Unthinkable*, Lavoy, Peter, Sagan, Scott and Wirtz, James (Eds.) Cornell University, 2000.

<sup>22</sup> Remarks by President Bush at the graduation exercise of the United States Military Academy, June 1, 2002.

<sup>23</sup> Cooperman, Alan, “Is Terrorism Tied to Christian Sect?” *Washington Post*, June 2, 2003.

<sup>24</sup> For further information see Tiboni, Franck, *War Game Stuns U.S. Strategists*, Defense News, May 12 2003. See also U.S. Joint Forces Command news story Historic Wargame Wraps Up, available at <http://www.jfcom.mil/newslink/storyarchive/2003/pa050303.htm> on May 15, 2003.

This exercise reveals a serious paradox which must be addressed by policy makers. Current U.S. global military predominance makes it all the more likely that NBC weapons will be the first, not last, resort of those seeking to challenge American power. And the threat of a preventive attack by the United States means that hostile forces must put NBC weapons into use early in any given conflict. This echoes the ‘use them or lose them’ conundrum that faced NATO commanders armed with nuclear forces in Germany during the Cold War. It is a question that must be faced and resolved as counterproliferation policy and doctrine, particularly concerning the use of U.S. nuclear weapons, continues to develop.

Indeed North Korea appears to have already learned this lesson all too well. Public statements made by North Korean spokesmen seem to indicate that they believe that they have to have nuclear weapons to forestall the possibility of U.S. attack. According to a North Korean diplomat, the country’s:

....self-defence measures in the event of a pre-emptive attack by the USA “will include all possible means, appropriate to the American ones ...North Korea is fully prepared for any military aggression from the USA,” he stressed.<sup>25</sup>

This statement is clear evidence that U.S. policy is having exactly the opposite effect than that intended, and there have many such comments by North Korean spokesmen in 2003. Far from deterring North Korean acquisition of nuclear weapons, U.S. policy seems to be stimulating it. These events have led to a heightened public concern regarding NBC weapons. There is also significant reason to believe that there is a risk of attack against the United States, or its armed forces or citizens across the globe, as well as against Western European nations and other U.S. allies.

While this risk must not be overstressed, the military and expert debate about the nature of diplomatic and military responses, to the threat of terrorist or nation-state NBC use is clearly important to national security. In particular, it is important to answer whether military means are the most appropriate to deal with proliferation. Is it such a serious threat that diplomatic arms control and disarmament cannot work? The remainder of this paper examines the possible military responses to NBC weapons proliferation, and specifically the use of nuclear forces to deter other NBC weapons use, or to preemptively destroy chemical or biological weapons facilities.

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<sup>25</sup> “North Korea to use all possible means to repel attack by USA,” *ITAR-TASS News Agency*, January 31, 2003.

# Chapter Two:

## The Development of Counterproliferation Policy

The defense programs for counterproliferation come into play when non-proliferation controls fail and U.S. forces face NBC-armed enemies. Much of the program is concerned with defensive elements like the protection of U.S. forces from chemical or biological agents. The United States also pursues programs to develop military capabilities for the destruction of enemy NBC weapons, their means of delivery and hardened, deeply buried production or storage facilities. This policy, stemming from concerns that arose during the Gulf War, has a much longer history in military thinking.

The concepts contained in the counterproliferation initiative that Secretary of Defense Aspin announced in December 1993 were not new. Rather, they were grounded in policy debates and proposals, as well as military practices, that are older than nuclear weapons.

### COUNTERPROLIFERATION SINCE WORLD WAR II<sup>26</sup>

Although counterproliferation was only named in 1993, the concept has existed since before the

nuclear age began. This is not surprising, since it is entirely logical for one country at war to wish to destroy the most powerful weapons available to their enemy. Counterproliferation is, from the military perspective, a perfectly sensible policy. There are only a few examples of counterproliferation missions in past history, although they are significant. During World War II, the allies targeted both Japanese and German nuclear weapons facilities to impede development of nuclear weapons by those two nations.

The first case is well known through the film *The Heroes of Telemark*, starring Kirk Douglas. The Allies made repeated attempts to destroy German facilities from 1941 on. One important target was the heavy water production plant, Norsk-Hydro, at Vemork, Norway. Attempted sabotage missions and bombing raids caused little damage to the plant, but the German occupiers decided to transfer the heavy water held there to Germany. Six hundred tons of heavy water were subsequently destroyed when a Norwegian saboteur sank the ferry moving the heavy water. However, the allies were uncertain that the German program had been

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<sup>26</sup> Much of the information in this section comes from Schneider, Barry, *Future War and Counterproliferation*, "Counterforce Attack Decisions: Seven Cases," Praeger Publishers, 1999, pp. 148-157.

fatally damaged, and continued to attack suspected research facilities until the end of the war.

While Japan did not pursue a serious nuclear program after 1943, convinced that they (and, by their calculations, anybody else) were unable to construct a bomb before the end of the war, Japan was also the target of counterproliferation attack missions. These attacks were prompted by fears that nuclear weapons research in Japan had continued. Japan's research cyclotron at the Riken research institute was destroyed by bombing in April 1945.<sup>27</sup>

Since they took place during a declared war, and within the accepted laws of war, neither of these examples excited any particular controversy. This is also the case for the attacks that took place during the Iran-Iraq war in the 1980s. Iran attempted to destroy the Osirak reactor in September 1980, and Iraq destroyed the Iranian reactor at Bushehr in attacks in 1985 and 1987. These attacks again fall within the boundaries of normal wartime actions.

A final non-controversial example of a counterproliferation mission concerns the destruction of Scud missiles and launchers in Iraq during the first Gulf War. Coalition air forces and special forces on the ground combined for the now famous 'Scud hunt.'

Very different was the Israeli attack that actually destroyed the Osirak reactor on June 7, 1981. Israeli intelligence had become convinced that Iraq was, or soon would be, producing nuclear weapons at the reactor. The attack was a preventive strike, designed to stop the Iraqi weapons program in its tracks. It failed, although it did delay that program significantly. Importantly for the discussion in this paper, the attack was a preventive strike outside time of war. It was also conducted against a Non-Proliferation Treaty member state. There was little or no support for

Israel after the attack. In fact, the attack was even condemned by the UN Security Council, despite arguments that the strike was in self-defense and justified under Article 51 of the UN Charter. Resolution 487 (1981) not only 'strongly condemns' the attack, but states that it is "...a serious threat to the entire safeguards regime of the International Atomic Energy Agency, which is the foundation of the nuclear Non-Proliferation Treaty."<sup>28</sup> This example of a counterproliferation mission exemplifies all that is controversial about the new policies and doctrines adopted by the United States.

### *A Long History of Proposed Nuclear Use in Counterproliferation*

Also deeply controversial is the role assigned to nuclear weapons in counterproliferation doctrine and the Bush administration's *National Security Strategy*. That role, however, is well rooted in debates that go back to the 1940s. U.S. military planners have thought of nuclear weapons as weapons of war since General Leslie R. Groves, ran the Manhattan Project, which developed and built the very first nuclear weapons. Particularly they have viewed them as weapons that should be used in missions that today would be described as counterproliferation missions, because of their unique military effectiveness. In October 1945, General Groves said:

If we were truly realistic instead of idealistic, as we appear to be, we would not permit any foreign power with which we are not firmly allied, and in which we do not have absolute confidence, to make or possess atomic weapons. If such a country started to make atomic weapons we would destroy its capacity to make them before it has progressed far enough to threaten us.<sup>29</sup>

<sup>27</sup> For a more detailed account of the Japanese nuclear program and counterproliferation attacks against it by the United States see Rhodes, Richard, *The Making of the Atomic Bomb*, Simon and Schuster, 1986.

<sup>28</sup> United Nations Security Council, Resolution 487 (1981), June 19, 1981.

<sup>29</sup> Groves, General Leslie R., October 1945. The author is indebted to Professor Sir Joseph Rotblat for bringing this quote to his attention.

Only two years later, the Joint Chiefs of Staff concurred, writing in a report that:

(4) That legislation be enacted by the Congress **establishing new definitions of acts of aggression and incipient attack, including the readying of atomic weapons against us.** This legislation should make it **the duty of the President of the United States,** as Commander in Chief of its Armed Forces after consultation with the Cabinet, to order atomic bomb retaliation when such retaliation is necessary **to prevent or frustrate an atomic weapon attack upon us.**<sup>30</sup>  
[Author's Emphasis]

Despite the use of the word retaliation, it is clear that this document envisages a preemptive or preventive attack by the United States. There was a lively debate in the United States in the 1940s on the wisdom or otherwise of a preventive war against the Soviet Union. That debate was resolved in opposition to preemptive nuclear attacks, which in any case became impossible after the Soviet Union detonated its own nuclear bomb in 1949. However, it is clear that the concept of counterproliferation and the use of nuclear weapons in counterproliferation missions have been an integral part of debates about the military utility of those weapons since the earliest days of the nuclear age. President Bush has now put this debate front and center.

#### THE ESTABLISHMENT OF THE DEFENSE COUNTERPROLIFERATION INITIATIVE

The Defense Counterproliferation Initiative was launched by then-Defense Secretary Les Aspin,

following President Clinton's issuing of Presidential Decision Directive 18 on counterproliferation in December 1993. On December 7, 1993, Aspin told the National Academy of Sciences that there were five main points to the Counterproliferation Initiative:

- Recognizing that this is a new mission, not the old Cold War mission;
- Tailoring new U.S. weapons to destroy weapons of mass destruction;
- Re-examining the strategies used against the new kind of threat;
- Focusing intelligence efforts on detecting weapons of mass destruction;
- Ensuring international cooperation in curtailing the threat of such weapons.<sup>31</sup>

Secretary Aspin's initiative was implemented beginning in 1994, with the Deutch report<sup>32</sup> that created a DoD counterproliferation policy. In the same year, Congress passed legislation combining the various programs relating to passive defenses against chemical and biological weapons. In the following years the DoD continued their efforts to operationalize this policy, establishing common definitions, setting up command structures and responsibilities for implementing the policy and putting necessary infrastructure into place. These policies have put the United States somewhat at odds with European and other al-

There was a lively debate in the United States in the 1940s on the wisdom or otherwise of a preventive war against the Soviet Union. That debate was resolved in opposition to preemptive nuclear attacks.

<sup>30</sup> Section Two – RECOMMENDATIONS, The Evaluation of the Atomic Bomb as a Military Weapon, *The Final Report of the Joint Chiefs of Staff Evaluation Board for Operation Crossroads*, June 30, 1947, p. 14.

<sup>31</sup> Quoted in a fact sheet on PDD 18 at the website of the Federation of the American Scientists: [www.fas.org/irp/offdocs/pdd18.htm](http://www.fas.org/irp/offdocs/pdd18.htm), available on June 29, 2003.

<sup>32</sup> The official name of the Deutch Report is the *Report on Nonproliferation and Counterproliferation Activities and Programs*, Office of the Deputy Secretary of Defense, May 1994.

lies, who prefer to place a much stronger emphasis on deterring attack and on traditional diplomatic instruments to prevent proliferation.

Within DoD, the point agency for counterproliferation programs is the Defense Threat Reduction Agency (DTRA), which was established in 1998. Activities across a number of agencies have been overseen since 1994 by the Counterproliferation Program Review Committee (CPRC), chaired by the Secretary of Defense. CPRC has established Areas for Capability Enhancement (ACEs) to guide its program review process. These are based on the Counterproliferation Requirements established by the Pentagon.

The final part of this process — the adoption of a formal counterproliferation doctrine — is now underway, with the United States Air Force (USAF) taking the lead. Expected to be finished by the summer of 2003, JP 3-40 Joint Doctrine for Counterproliferation Operations will “address the integration of four ‘core capabilities’ — counterforce, active defense, passive defense and consequence management.”<sup>33</sup> This comprehensive organization of counterproliferation within DoD laid the groundwork for the Bush administration’s placing of counterproliferation at the heart of national security strategy.

#### **UNILATERALISM AND PREEMPTION: COUNTERPROLIFERATION IN THE NEW NATIONAL SECURITY STRATEGY OF THE UNITED STATES**

On September 20, 2002, the Bush administration published a 38-page document titled, *The National Security Strategy of the United States of America*. This document, required of all Presidential administrations by the Goldwater-Nichols Defense Department Reorganization Act of 1986, is the first document produced by the Bush administration outlining its comprehensive approach to national security and foreign affairs. The strategy put forth is radical in its prescription

for a preemptive use of force in handling NBC weapons proliferation. As the *New York Times* headline said “Bush Outlines Doctrine of Striking Foes First.”<sup>34</sup> It is further unusual in its rhetoric of American military dominance as a permanent operating strategy for U.S. foreign affairs. Particularly troubling in this context of preemption and military dominance are the document’s unilateral overtones and previous allusions by the administration to the use of tactical nuclear weapons in preemptive strikes.

The adoption of the dangerous concept of preventive war, matched with a pervasive preemption through the security strategy, is an unprecedented move by the United States. It distances the Bush administration’s national security policy from all before it. President Bush claims the need for such a strategy is due to the nature of the threats facing the United States in a strategic environment wrought with terrorism. This new strategy, however, is at least partly motivated by the administration’s aim to maintain U.S. military dominance in the future, but seems to carry inherent dangers. An example is, the case of Iraq, where the United States waged a self-proclaimed war for disarmament, and has failed to uncover the NBC weapons that the so-despised UN inspection teams had not found. In this failure, some of the dangers of a preventive or preemptive policy to combat NBC weapons already has been demonstrated. The U.S. will find it much harder to attract allies for the next war.

#### *The Clinton Administration’s National Security Strategy*

Following along the nuclear security path forged by all U.S. presidents of the Cold War era, President Bill Clinton’s 1999 *National Security Strategy* (NSS) focused on a combination of non-proliferation efforts and military capabilities, including nuclear forces. The 1999 NSS emphasized the U.S. commitment to such non-proliferation ef-

<sup>33</sup> Counterproliferation Program Review Committee, *Report on Activities and Programs for Countering Proliferation and NBC Terrorism*, Executive Summary, May 2002, p. 7.

<sup>34</sup> Sanger, David E., “Bush Outlines Doctrine of Striking Foes First,” *The New York Times*, September 20, 2002.

forts as the START Treaties to reduce both U.S. and Russian strategic nuclear arsenals; the Anti-Ballistic Missile (ABM) Treaty to limit deployments of missile defenses in Russia and the United States; the Comprehensive Test Ban Treaty (CTBT) to refrain from all nuclear explosive testing; the Nuclear Non-Proliferation Treaty to prevent the spread of nuclear weapons to non-nuclear states; and the Nunn-Lugar Cooperative Threat Reduction (CTR) program to strengthen controls over weapons-usable fissile material and prevent the theft or diversion of NBC weapons and all related technology from the former Soviet Union.<sup>35</sup> This contrasts with the Bush administration agenda, which has de-emphasized and de-funded many of these items.

In addition to these non-proliferation efforts, President Clinton focused heavily on deterrence as a means of providing security for the United States. Noting that U.S. credibility in upholding its security commitments (including forward deployments to protect our allies and our demonstrated ability to form and lead effective military coalitions) is a key element in the maintenance of a credible U.S. deterrent, Clinton went on to say that the strategic nuclear arsenal is a crucial element of U.S. non-proliferation and deterrence strategy:

Nuclear weapons serve as a guarantee of our security commitments to allies and a disincentive to those who would contemplate developing or otherwise acquiring their own nuclear weapons. Our military planning is focused on deterring a nuclear war and emphasizes the survivability of our nuclear systems and infrastructure necessary to endure a preemptive attack and still respond at overwhelming levels. The United States will continue to maintain a robust triad of strategic nuclear forces sufficient to deter any potential ad-

versaries who may have or seek access to nuclear forces — to convince them that seeking a nuclear advantage or resorting to nuclear weapons would be futile.<sup>36</sup>

The Clinton administration, like so many before it, believed that the best means of ensuring the security of the United States against NBC weapons was through continuing deterrence and strengthening multilateral non-proliferation regimes. This is not to say that deterrence was flawless; indeed, it looks better in retrospect than it did during the Cold War: “The superpowers came to it by default, as the best of a bad lot of choices. It came close to failing more than once, and its failure might have meant something akin to the end of the world.”<sup>37</sup> Nor is it to say that the Clinton administration wholly eschewed a role for nuclear forces in counterproliferation. As shown in Chapter Four, nuclear use was possible under the Clinton version of counterproliferation. However, any military option in Clinton doctrine was far less likely than with the current policies. However flawed, President Clinton recognized that seeking to reduce and eliminate threats through multilateral negotiations is a policy more likely to keep America safe than one which relies on military efforts to defeat threats as they become a serious challenge to U.S. security.

### *The Essence of the Bush Doctrine*

President George W. Bush’s administration has moved away from the deterrent strategies of Clinton and his predecessors. Rather than aiming to deny enemy access to NBC weapons and dissuading attacks through the threat of massive retaliation, Bush’s approach to the proliferation of NBC weapons entails seeking out and destroying suspected stores of enemy NBC weapons before they can be used against us. This is explicitly stated in *The National Security Strategy*:

<sup>35</sup> *National Security Strategy For a New Century*, 1999, Section II.

<sup>36</sup> *Ibid.*, p. 12.

<sup>37</sup> Hertzberg, Hendrik, “Manifesto,” *The New Yorker*, October 14, 2002.

...as a matter of common sense and self-defense, America will act against such emerging threats before they are fully formed. We cannot defend America and our friends by hoping for the best. So we must be prepared to defeat our enemies' plans, using the best intelligence and proceeding with deliberation. History will judge harshly those who saw this coming danger but failed to act. In the new world we have entered, the only path to peace and security is the path of action.<sup>38</sup>

Rather than subscribing to “the relatively uncontroversial concept of true preemption — striking first against **an imminent, specific, near certain attack**,” President Bush focuses on the broader concept of striking first to prevent the mere possibility of such an attack occurring over the long-term (emphasis added). Although

the President refers to it as a preemptive strategy throughout the document itself, critics have deemed this more a strategy of “preventive war” than of preemption.<sup>39</sup>

The stated goal of this preventive/preemptive strategy (emphasized in the *National Strategy to Combat WMD*) is to

protect the United States and its allies from NBC weapons attack by “rogue” states and terrorist organizations. However, the NSS also asserts that preemption, along with the build-up of the U.S. military, will serve to “dissuade future military competition,” leaving the United States as the unquestioned sole superpower.<sup>40</sup> Deterrence is changing. It is coming to mean the deterring of any adversary from acquiring NBC weapons, not

deterring those that have them from using them. In other words, the Bush administration’s *National Security Strategy* is designed not only to protect the United States from potential NBC weapons attack, but is also (and more controversially) a permanent strategy to eliminate any future competitors seeking to challenge U.S. dominance on the world scene. Indeed, as Hendrik Hertzberg points out:

This goes much further than the notion of America as the policeman of the world. It’s the notion of America as both the policeman and the legislator of the world, and it’s where the Bush vision goes seriously, even chillingly, wrong.<sup>41</sup>

Some members of the European Union view the document’s message as a U.S. declaration that, “This is an empire and we will not allow anybody to get close to our capabilities and we are ready to act to prevent that from happening.”<sup>42</sup> The doctrine of dominance, inherent in the Bush administration’s *National Security Strategy*, and the unfolding events in Iraq have stimulated an academic and, in the wake of the war with Iraq, a media debate on the nature of American power and the new imperialism of the United States.

The doctrine of military dominance through preemptive attacks is made less acceptable to international opinion by assertions of a U.S. right to act outside global institutions. Although President Bush explicitly states that his strategy is a multilateral one focused on building new alliances and strengthening old ones, he also adds:

While the United States will constantly strive to enlist the support of the international community, **we will not hesitate**

This strategy of preemption is unprecedented in American history and carries significant risks.

<sup>38</sup> *The National Security Strategy of the United States of America*, September 2002.

<sup>39</sup> *The Bush National Security Strategy: A First Step*, Center for Defense Information, available June 4, 2003 at <http://www.cdi.org/national-security-strategy/washington.cfm>.

<sup>40</sup> *The National Security Strategy of the United States of America*, *op. cit.*, p. 21.

<sup>41</sup> Hertzberg, *op. cit.*

<sup>42</sup> Frankel, Glenn, “New U.S. Doctrine Worries Europeans,” *The Washington Post*, September 30, 2002.



**to act alone**, if necessary, to exercise our right of self-defense by acting preemptively against such terrorists, to prevent them from doing harm against our people and our country [emphasis added].<sup>43</sup>

### THE IMPLICATIONS OF PRESIDENT BUSH'S NATIONAL SECURITY STRATEGY FOR U.S. AND GLOBAL SECURITY

This strategy of preemption is unprecedented in American history and carries significant risks. For one thing, a preemptive strategy that aims to hit suspected stores of NBC weapons has a high possibility of eroding U.S. credibility. If the United States mistargets an NBC weapons site and instead kills innocent civilians, the international community will have little reason to trust U.S. estimates of suspected NBC weapons sites even when they are completely accurate. Such an act would also be rightly condemned by the world as immoral, and possibly even illegal under international law. Such mistargeting is very likely to happen, given the potential for wrongful targeting during even non-preemptive military operations when the targets are more clearly identified. Furthermore, it is rarely certain that the possessor of NBC weapons really intends to use them against the United States or its allies, and thus any preemptive strategy carries the danger of eroding U.S. credibility. Just as the United States relied for so many years on its strategic nuclear arsenal to provide a strong deterrent posture, so a "rogue" state may possess NBC weapons to enhance its own security with a credible deterrent in a regional or global context.

Secondly, the President's preemptive strategy is inherently dangerous in terms of its implications for tactical nuclear use. Although not explicitly stated in the *National Security Strategy*, the allusions to nuclear use inherent in this preemptive strategy speak to the danger of nuclear war made increasingly possible by the Bush administration's plans. These allusions are even clearer in the *National Strategy to Combat WMD*,

and explicit in the classified version of that paper *National Security Presidential Directive 17*. (See the next section.)

On that same note, unilateral preemptive action by the United States will set a precedent for other states to follow. This is perhaps the most dangerous consequence of preemptive U.S. action, for it opens the door for any state to unilaterally and preemptively target its enemies, possibly even with nuclear weapons. The United States could well be one such target, yet the Bush administration fails to address these possible consequences of its preemptive policy. Multilateral institutions have existed for decades to protect against any state targeting another in a preemptive and unreasonable way: if preemption is indeed necessary, the support of the United Nations or even simply a large number of nations carries with it a certain degree of credibility and reasonableness. However, the combination of preemption and unilateralism evident in Bush's strategy indicates a global security crisis unlike any seen in the international arena in recent decades.

The international reaction to Bush's *National Security Strategy* has, for the most part, either recognized the perilous international security implications of the document, or followed the precedent set by the United States (in accordance with the above prediction). Russia's reaction was to immediately cite the document to justify preemptive strikes against Chechen rebels in Georgia, thus reinforcing the argument that this policy sets a dangerous precedent for others to follow.<sup>44</sup> Germany and most of the European Union, however, see Bush's strategy as a unilateral rejection of the multilateral institutions in which they participate with the United States. Furthermore, they believe that the Bush administration has adopted a militarized foreign policy, dividing the world too simply into friends and enemies, and they recognize the danger the document poses in setting a precedent for other countries:

<sup>43</sup> *The National Security Strategy of the United States of America*, *op. cit.*, p. 6.

<sup>44</sup> Roth, Bennett, "Bush Outlines Strike Policy," *The Monterey County Herald*, September 21, 2002.

...if it is all right for the United States to attack another country preemptively for supporting terrorism, then what is to prevent India from dropping a nuclear bomb on Islamabad, the capital of Pakistan, in retaliation for Pakistani support for separatists in Kashmir?<sup>45</sup>

China similarly recognizes inherent dangers in Bush's national security strategy, but its concerns focus more on the possible ramifications of the policy in specified areas, namely North Korea and Taiwan. Because North Korea is mentioned in *The National Security Strategy* as a major NBC weapons producer, the Chinese believe that the United States may preemptively target North Korea sometime in the relatively near future. The ever-present possibility of a U.S.-Chinese conflict over Taiwan further exacerbates China's anxiety about this new strategy, specifically in terms of its restatement of "U.S. commitments to the self-defense of Taiwan."<sup>46</sup>

Although China and the European powers look at the preemptive implications of this document in a different light, it is clear nonetheless that many states are uncomfortable with the document's preemptive doctrine, not to mention its call for unfettered and unchallenged U.S. military dominance. These concerns are not unwarranted:

If the Europeans are a little alarmed, it's not because of their own military insignificance, or because they're a bunch of weak-wristed, spineless wimps who resent the sight of somebody strong, tough, and decisive. It's because, from Napoleon through Stalin and beyond, a century and a half of blood-soaked history taught them that untrammelled national power seldom ends by reaching a salutary balance.<sup>47</sup>

The lack of international support for Bush's preemptive strategy means that it poses diplomatic problems that will eventually increase its security dangers.

### THE NATIONAL STRATEGY TO COMBAT WEAPONS OF MASS DESTRUCTION

The final chapter in a year of significant national security papers, the *National Strategy To Combat Weapons of Mass Destruction* was released on December 11, 2002. It expands upon the policies laid out in the *National Security Strategy*. This short document is an unclassified version of *National Security Presidential Directive 17 (NSPD17)*, which was approved by President Bush in September 2002. The tone of the *National Strategy To Combat Weapons of Mass Destruction* is set by the quote used to open it:

The gravest danger our Nation faces lies at the crossroads of radicalism and technology. Our enemies have openly declared that they are seeking weapons of mass destruction, and evidence indicates that they are doing so with determination.

The United States will not allow these efforts to succeed. ...History will judge harshly those who saw this coming danger but failed to act. In the new world we have entered, the only path to peace and security is the path of action.<sup>48</sup>

The *National Strategy* establishes the administration view of the threat, and then lays out their plans to combat that threat, asserting that rogue states and terrorists are ready and willing to use NBC weapons not as "...weapons of last resort, but militarily useful weapons of choice intended to overcome our nation's advantages in conven-

<sup>45</sup> Frankel, *op. cit.*

<sup>46</sup> *National Security Strategy*, *op. cit.*

<sup>47</sup> Hertzberg, *op. cit.*

<sup>48</sup> Introduction, *The National Security Strategy of the United States of America*, September 2002.

tional forces and to deter us from responding to aggression against our friends and allies in regions of vital interest. In addition, terrorist groups are seeking to acquire WMD with the stated purpose of killing large numbers of our people...<sup>49</sup>

This assertion is controversial. As shown in Chapter One, there is little or no evidence that countries named in the NPR as targets for U.S. counterproliferation nuclear strikes, such as Iran, Iraq, North Korea, Libya or Syria, actually possess NBC weapons in a form that could be used to attack the United States. There is no evidence that they are prepared to use them to attack the U.S. This assertion is dangerous as it forms the basis for an aggressive policy of action (to use the President's word) that is a radical departure from prior policy. It has already been used to justify the invasion of Iraq.

According to this administration, proliferation is no longer a potential threat and a political problem, but it is now an actual military threat that demands a primarily military response. This assertion is questionable at best, and flies in the face of the arguments elaborated in Chapter One. Proliferation has been well contained by the non-proliferation and arms control regime, and what is needed is discussion of how the international community can resolve the few, serious problems that remain. Counterproliferation as configured by the Bush administration has little to offer in this process. Despite this, the first pillar of the Bush strategy to confront proliferation is counterproliferation.

### *Preventing WMD Use*

The possession and increased likelihood of use of WMD by hostile states and terrorists are realities of the contemporary security environment. It is therefore critical that the U.S. military and appropriate civilian agencies be prepared to deter and defend against the full range of possible

WMD employment scenarios. We will ensure that all needed capabilities to combat WMD are fully integrated into the emerging defense transformation plan and into our homeland security posture. Counterproliferation will also be fully integrated into the basic doctrine, training, and equipping of all forces, in order to ensure that they can sustain operations to decisively defeat WMD-armed adversaries.<sup>50</sup>

Proliferation has been upgraded by the administration to the status of the central threat to the United States. In response, counterproliferation has moved from being a support for non-proliferation to being the central plank of U.S. military strategy. Ironically, since the *National Strategy to Combat WMD* is critical of some states for the willingness to use NBC weapons, it also countenances the use of nuclear weapons by the United States for counterproliferation missions, stating that:

We know from experience that we cannot always be successful in preventing and containing the proliferation of WMD to hostile states and terrorists. Therefore, U.S. military and appropriate civilian agencies must possess the full range of operational capabilities to counter the threat and use of WMD by states and terrorists against the United States, our military forces, and friends and allies.<sup>51</sup>

However, while those familiar with the language of such documents would know that the "full range of operational capabilities" includes the use of nuclear weapons. The classified version of this strategy, *NSPD17*, is more explicit. According to a report in the *Washington Times*, this document states that:

<sup>49</sup> *Ibid.*

<sup>50</sup> *Ibid.*, p. 2.

<sup>51</sup> *Ibid.*

The United States will continue to make clear that it reserves the right to respond with overwhelming force — including potentially nuclear weapons — to the use of [weapons of mass destruction] against the United States, our forces abroad, and friends and allies.<sup>52</sup>

As mentioned earlier, the *National Strategy To Combat Weapons of Mass Destruction* is the declassified version of Top Secret *NSPD 17*, (also known as Homeland Security Presidential Directive 4). This WMD strategy is a dramatic extension of the policy of counterproliferation, and gives a far greater role than in the past to nuclear weapons within that strategy. To add to this controversy is the adoption of the possibility of preemptive attack as a means of defense:

Because deterrence may not succeed, and because of the potentially devastating consequences of WMD use against our forces and civilian population, U.S. military forces and appropriate civilian agencies must have the capability to defend against WMD-armed adversaries, including in appropriate cases through preemptive measures. This requires capabilities to detect and destroy an adversary's WMD assets before these weapons are used.<sup>53</sup>

The United States may, under certain circumstances, launch a nuclear strike to prevent another state, or non-state group, using NBC weapons. While WMD strategy contains some recommendations for what it describes as strengthening non-proliferation diplomacy, these are not significant. Previous unequivocal support for the concept of a Fissile Material Cut-Off Treaty (FMCT) is now translated in support for an FMCT that “advances U.S. national security interests.” No explanation of the change is given. This support for non-proliferation must be balanced against the administration's withdrawal from the ABM Treaty, withdrawal of support for the Comprehensive Test Ban Treaty (CTBT), and the end of the START process in favor of the infinitely flexible and ultimately empty SORT Treaty, and their failure to support the conclusions of the 2000 NPT Review Conference despite lip service to the Treaty itself.

In short, counterproliferation is the totality of this administration's strategy to combat proliferation and, as the President says “the only path to peace and security is the path of action.”<sup>54</sup> The readiness of the United States to use nuclear weapons in pursuit of this policy is a radical new element of military strategy that even U.S. allies find hard to accept, and impossible to support.

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<sup>52</sup> Kravev, Nicholas, “Bush Approves Nuclear Response,” *Washington Times*, January 31, 2003.

<sup>53</sup> *The National Strategy To Combat Weapons of Mass Destruction*, December 17, 2002, p. 3.

<sup>54</sup> Introduction, *The National Strategy To Combat Weapons of Mass Destruction*, December 17, 2002.

# Chapter Three:

## *Adapting Nuclear Use Doctrine to the Needs of Counterproliferation*

Counterproliferation policy has had a profound influence during the 1990s on U.S. doctrine for use of nuclear weapons. As the U.S.-Russia deterrent standoff has faded into the background, it has been necessary to find additional roles to justify the retention of nuclear weapons, especially tactical nuclear weapons. From the beginning of the 1990s, the United States began to envisage the use of nuclear weapons against Third World targets. This new target set included not just nuclear-armed (or potentially nuclear-armed) nations, but those whose arsenals included chemical and biological weapons. The new policies and doctrine would allow preventive or preemptive attacks. As Hans Kristensen of the Nautilus Institute wrote in 1997:

The shift was already evident in the Joint Chiefs' "Military Net Assessment" of March 1990, which cited "increasingly capable Third World threats" to justify the stockpiles of both strategic and non-strategic

nuclear weapons. Then, in June 1990, testifying before the Senate Appropriations Committee, Defense Secretary Dick Cheney made the first high-level statement that the proliferation of weapons of mass destruction was a rationale for keeping U.S. nuclear weapons.

Just after the Gulf War — and following the disclosure of Iraq's clandestine nuclear weapons program, Cheney issued the top-secret "Nuclear Weapons Employment Policy," which formally tasked the military with planning nuclear operations against potential proliferators.<sup>55</sup>

This shift in thinking required a change in planning methods for nuclear weapons use, one that the military was quick to work out.

General Butler described the new concept in a May 11, 1993 interview with *Jane's Defence Weekly*: "Adaptive planning" was

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<sup>55</sup> Kristensen, Hans, "Targets of Opportunity: How nuclear planners found new targets for old weapons," *Bulletin of the Atomic Scientists*, Vol. 53, No. 5, September/October 1997.

designed to respond to “spontaneous threats which are more likely to emerge in a new international environment unconstrained by the Super Power stand-off.” The plans would use “generic targets, rather than identifying specific scenarios and specific enemies.” Adaptive planning would offer “unique solutions, tailored to generic regional dangers involving weapons of mass destruction.”<sup>56</sup>

Kristensen goes on to describe how this process was operationalized, making war plans that the military could use if the need arose.

Butler wanted STRATCOM to have overall responsibility — to move “firmly into the counterproliferation mission.” In an October 1993 white paper, STRATCOM argued that it already had the necessary experience — “countering weapons of mass destruction in the context of deterring their use by the former Soviet Union.” STRATCOM’s next targets should be the more “undeterrable” leaders such as Qaddafi and Saddam Hussein.

STRATCOM began developing the “Silver Books” — plans for military strikes against facilities in “rogue nations,” including Iran, Iraq, Libya, and North Korea. “Silver” stood for “Strategic Installation List of Vulnerability Effects and Results,” and the project involved “the planning associated with a series of ‘silver bullet’ missions aimed at counterproliferation.” Targets included nuclear, chemical, biological, and command and control installations.

The Weapons Subcommittee of STRATCOM’s Strategic Advisory Group began analyzing various target sets and weapons capabilities in early 1994, emphasizing mechanisms that could defeat chemical and biological targets as well as buried targets. The subcommittee compared the effectiveness of conventional, unconventional, and nuclear attack on six potential targets.

By late 1994, STRATCOM had prepared a Silver Book for European Command, and it was developing a prototype for Pacific Command. STRATCOM briefed European Command staff during a November 1994 visit, and it later briefed Pacific and Central Commands and the Joint Staff Roles and Functions Working Group.<sup>57</sup>

The Nuclear Posture Review (NPR) produced by the Clinton administration in 1994 confirmed these results. Since then, the United States has had policy and plans in place to wage nuclear war against a developing country that possesses NBC weapons. As early as 1995, the Pentagon began to make specific plans against individual countries.

Iran became the first test case for the new doctrine, with STRATCOM performing an in-depth study in the fall of 1995 of how to target nuclear and chemical targets in Iran with U.S. nuclear weapons. ... The planners at STRATCOM, however, found that further coordination with Central Command was necessary before they could complete the study, so Admiral Chiles asked the planners to apply the new deterrence theory to North Korea instead....<sup>58 59</sup>

<sup>56</sup> Kristensen, *op. cit.*

<sup>57</sup> Kristensen, *ibid.*

<sup>58</sup> *Ibid.*

<sup>59</sup> Kristensen draws on the U.S. Strategic Command, “Minutes of the Fifty-Fourth United States Strategic Command Strategic Advisory Group Meeting (U), 19-20 October 1995, Offutt afb, Nebraska,” Secret/rd, January 1996, pp. 4, 11. Partially declassified and released under the Freedom of Information Act.

By 1996, this shift in doctrine had been expanded to include “non-state actors” or terrorists as legitimate targets for nuclear weapons. *Joint Publication 3-12.1, Doctrine for Joint Theater Nuclear Operations* states that:

Enemy combat forces and facilities that may be **likely targets** for nuclear strikes **include WMD and their delivery systems; ground combat units, air defense facilities, naval installations, combat vessels, nonstate actors, and underground facilities.** (Original emphasis)<sup>60</sup>

This addition is especially important. It would, for example, have allowed U.S. forces to have used nuclear weapons during the overthrow of the Taliban government of Afghanistan, because of their symbiotic link with Al-Qaeda. The anthrax letters attack on the United States, if it could be linked to a stockpile of the bacteria in a terrorist camp, could provide U.S. leaders with the justification under current nuclear doctrine for a nuclear strike wherever that camp might be.

Regional and local U.S. commanders are not constrained to wait to be attacked with NBC weapons before retaliating. Rather, they are told that active as well as passive defense measures should be taken against this possibility and “Operations must be planned and executed to **destroy or eliminate enemy WMD delivery systems** and supporting infrastructure **before they can strike friendly forces.**”<sup>61</sup> (Emphasis added) Such a strike could be with conventional weapons if the commander in theater had full confidence that the facility to be destroyed was vulnerable to conventional attack. However, as the above quote from the Joint Chiefs’ *Doctrine on Theater Nuclear Operations* shows, the United States is prepared for a nuclear first strike in theater warfare.

In 1997, President Clinton approved *Presidential Decision Directive 60* (PDD 60). This document remains classified, but Robert Bell, then Special Advisor to the President, told the media in an interview shortly after the adoption of PDD 60 that it had not altered the counterproliferation role of nuclear weapons, but had rather confirmed that role.<sup>62</sup> This is confirmed in more explicit language by the Air War College:

In a Presidential Decision Directive (PDD) on nuclear arms strategy, which President Clinton issued in November of 1997, the President employed language that would permit U.S. nuclear strikes after enemy attacks using chemical or biological weapons.<sup>63</sup>

This blurring of lines between nuclear, chemical and biological weapons is to be regretted. It provides the best incentive imaginable for a potential foe of the United States to move to development of nuclear weapons, as they would suffer the same consequences for nuclear use as for a chemical or biological attack. In addition, nuclear weapons are likely to have a stronger deterrent effect on U.S. action, as the effects of nuclear use against U.S. targets are likely far more serious than any other threat. Further, the fact that U.S. nuclear doctrine allows nuclear use preemptively gives an incentive for early nuclear use by a U.S. enemy.

Enemy combat forces and facilities that may be likely targets for nuclear strikes include: WMD and their delivery systems; ground combat units; air defense facilities; naval installations; combat vessels; non-state actors; and underground facilities.

<sup>60</sup> Executive Summary, Joint Publication 3-12.1, *Doctrine for Joint Theater Nuclear Operations*, published by Joint Chiefs of Staff, February 9, 1996, p. vii.

<sup>61</sup> *Ibid.*, p. ix.

<sup>62</sup> Smith, R. Jeffrey, “Clinton Directive Changes Strategy on Nuclear Arms,” *The Washington Post*, December 7, 1997.

<sup>63</sup> *What is Counterproliferation?*, from the website of the Air War College at [www.au.af.mil](http://www.au.af.mil).

### THE ROOTS OF THE BUSH ADMINISTRATION'S NUCLEAR USE DOCTRINE

Some influential scientists at the nuclear weapons laboratories, as well as some defense policy experts, have been concerned that it is not enough to consider only conventional options for counterproliferation missions, and that the time has come to work on nuclear weapons options for these military tasks. Many of these individuals have become senior figures in the Bush administration. For example, current DTRA chief Stephen Younger, when Associate Laboratory Director for Nuclear Weapons at Los Alamos National Laboratory, wrote a major policy paper entitled *Nuclear Weapons in the Twenty-First Century*. In this, he advocated major changes in U.S. nuclear weapons policy, arguing that:

The time is right for a fundamental rethinking of the role of nuclear weapons in national defense and of the composition of our nuclear forces. The Cold War is over, but it has been replaced by new threats to our national security.<sup>64</sup>

Younger argues that the United States is now less secure, as the stable deterrence relationship of the Cold War has been replaced with a multipolar world, with security threats coming from anywhere and everywhere mixed with the proliferation of NBC technologies and their means of delivery. He argues that conventional weapons may be sufficient to deter or destroy some threats, but that nuclear weapons will be necessary for others.

Nuclear weapons pack an incredible destructive force into a small, deliverable package. In addition to their psychological deterrent value, they are the only means of holding at risk several classes of targets.<sup>65</sup>

Younger argues that these include mobile targets such as missile launchers, but also deeply buried hardened targets. He goes on to argue that an arsenal of precision-delivered, low-yield nuclear weapons would be suitable for this task, and that:

...the United States has a large archive of previously tested designs that might be fielded with reasonable confidence to meet evolving military needs. In addition, the current stockpile has significant flexibility for modification for new requirements. Such flexibility was most recently evidenced by the modification of the B61 bomb to provide earth-penetrating capability.<sup>66</sup>

Younger finally recommends that a smaller arsenal with a greater emphasis on these low-yield weapons will be necessary. This would help maintain U.S. security for the foreseeable future. He argues that such weapons will do more for U.S. security than the maintenance of a large arsenal of high-yield, strategic nuclear forces that have been characteristic of the weapons deployed under traditional deterrence doctrines. As noted earlier, Younger is now head of DTRA, and is therefore in a position to pursue development of the policies he called for while at Los Alamos.

Younger fails to analyze any consequences of his suggested policies. He does not take into account the possibility that potential foes of the United States may choose to develop nuclear weapons to inoculate themselves against potential U.S. nuclear use. He also fails to account for the likely effect on the non-proliferation regime of a new generation of U.S. nuclear weapons development and deployment. Younger further ignores the likely hostile international reaction to nuclear use by the United States.

Despite these limitations, Younger is not alone in his point of view. One very notable contribu-

<sup>64</sup> Younger, Stephen M., Executive Summary, *Nuclear Weapons in the Twenty-First Century*, LAUR-00-2850, June 27, 2000.

<sup>65</sup> Nuclear Weapons Related Technology, *ibid.*

<sup>66</sup> *Ibid.*



tion to the debate is the report *Rationale and Requirements for U.S. Nuclear Forces and Arms Control*, published in January 2001 by the National Institute for Public Policy (NIPP). This report is especially significant, as many of its authors have now entered the Bush administration. It is widely regarded as the blueprint for the *Nuclear Posture Review*.<sup>67</sup>

The NIPP report is a detailed analysis of the current state of the U.S. nuclear arsenal, and nuclear weapons use policy, with recommendations for future changes to meet the new strategic situation. The authors stress that:

Nuclear weapons can... be used in counterforce attacks that are intended to neutralize enemy military capabilities, especially nuclear and other NBC weapons forces. The purpose of a counterforce strategy is to deter aggression, coerce compliance, and limit the damage that enemy forces can inflict.<sup>68</sup>

The NIPP report notes that while the difference between strategic nuclear forces and theater or tactical nuclear forces was stark during the Cold War, this is unlikely to be true in the new strategic context:

...the number and mix of dual-capable systems and theater nuclear forces the United States and opponents maintain is likely to affect U.S. "strategic" nuclear requirements. U.S. strategic nuclear weapons requirements could, for example, decrease if the U.S. possessed robust theater capabilities...<sup>69</sup>

The report further argues that, given the rapidly changing strategic context of the post-Cold

War world, the United States must maintain a dynamic and flexible nuclear arsenal.

If the United States wishes to maintain an appropriately sized nuclear arsenal, it must be prepared to adapt that arsenal over time to dynamic strategic and foreign policy requirements. This adaptability in the post-Cold War period is absolutely critical because even the most basic of factors driving U.S. requirements are subject to unprecedented change.... Rather than focusing on the codification of a specific numeric goal expected to be valid over time, it would be wise for the United States to maintain the *de jure* prerogative to adjust its nuclear forces to coincide with changes in strategic requirements.... Maintaining the legal prerogative and *de facto* capability to match nuclear capabilities with need over the long term is vital...<sup>70</sup>

The NIPP report suggests that the needs of U.S. national security override the importance of an international treaty regime to reduce nuclear weapons and build nuclear stability. It states that the United States should not be constrained in its actions by treaties, but should act unilaterally. In this, the ideas from the NIPP report are at the core of current doctrine.

The report goes on to emphasize the need for adaptability in nuclear policy. Noting that adversaries to be deterred now include "rogue states," NIPP says that "The new features of the post-Cold War period greatly magnify the challenges of deterrence."<sup>71</sup> The authors argue that concerns about the effectiveness of deterrence "... suggests that, to the extent feasible, the United States should prepare for deterrence failure even as it

<sup>67</sup> Amongst the authors, Dr. Stephen Cambone is now Principal Deputy Under Secretary of Defense for Policy, Stephen J. Hadley is Deputy National Security Adviser, Robert G. Joseph, the head of proliferation strategy at the National Security Council, and William Schneider Jr., a key Bush defense adviser.

<sup>68</sup> Payne, Keith, et al, *Rationale and Requirements for U.S. Nuclear Forces and Arms Control*, NIPP, January 2001, p. 5.

<sup>69</sup> *Ibid*, p. 9.

<sup>70</sup> *Ibid*, p. 10.

<sup>71</sup> *Ibid*, p. 11.

strives to deter.”<sup>72</sup> In other words, the United States must prepare to fight a war with nuclear weapons. A break with the past is the assumption that deterrence will fail, and that the U.S. must be ready to strike first to destroy any potential enemy NBC weapons targets. This policy is difficult to reconcile with the laws of war, and likely to have dire political consequences. An intelligence failure in identification of NBC weapons targets on the scale of Iraq could make the ramifications of such a nuclear use policy disastrous for U.S. and allied interests. (See Chapter Seven.)

Many of the ideas in the NIPP report are now being implemented, and the reaction from the international community has been almost uniformly negative. The NPT PrepComs in 2002 and 2003 saw a rising tide of anger with U.S. policies, and a lack of willingness to cooperate with U.S. initiatives. There is mounting evidence that hawkish nuclear policies are counterproductive to wider American interests in non-proliferation. (See Chapter Eight.)

Ideas about the changing role of nuclear forces also have featured in reports to former administrations. One example is the report of the *Defense Science Board Task Force on Nuclear Deterrence*, published in 1998. This report states that “proliferant nations with NBC capability” are a significant future threat, and that there is a “question of whether U.S. nuclear policy and forces (type and mix) provide credible deterrent against these emerging threats.”<sup>73</sup> The report recommends “formal direction to plan for active counter-proliferation,” matched with specialized weapons/tailored effects for our nuclear deterrent in the long term. According to the report, statements that U.S. nuclear weapons are a deterrent to other NBC weapons are not clear enough, and “Our declaratory policy needs to be less ambiguous and backed by defined requirements and focused operational readiness.”<sup>74</sup> Exactly the same senti-

ments had been expressed in 1995 by the authors of a RAND report on U.S. nuclear weapons use policy.<sup>75</sup>

This backing for what might be referred to as a distinctly American nuclear strategy is disturbing. American leadership has been integral to the success of the non-proliferation regime over the past forty years. It seems that many amongst the national security establishment have lost faith in that regime and are prepared to lead America away from it. The risk is that their fears could become self-fulfilling prophecies, with spiraling proliferation caused by U.S. withdrawal from global non-proliferation efforts and spurred by U.S. threats of nuclear use to counter that proliferation. The authors of the reports cited risk bringing about the state of the world they fear so much.

#### THE 2001 NUCLEAR POSTURE REVIEW

Where the Clinton administration allowed counterproliferation policy and nuclear doctrine to mix without any enthusiasm, the concept is central to the nuclear weapons thinking of the Bush administration. In late December 2001, the Bush administration delivered its Nuclear Posture Review to Congress. The results were then partially briefed to the media on January 9, 2002. Sections of the classified document were then leaked in March 2002.<sup>76</sup> This paper reflected much of the neo-conservative thinking, particularly that developed in the NIPP report, described in the previous section.

In the January 9 briefing, J.D. Crouch, Assistant Secretary of Defense for International Security Policy, outlined the main elements of the NPR. He told media representatives that Russia was no longer a threat and that the danger of a prolonged war with a general nuclear exchange was a thing of the past. Instead, the main threat identified by the Pentagon is “... the growing capabilities of various states in the biological, chemi-

<sup>72</sup> *Ibid.*

<sup>73</sup> *Report of the Defense Science Board Task Force on Nuclear Deterrence*, October 1998, p. 16.

<sup>74</sup> All quotes in this paragraph, *Ibid.*

<sup>75</sup> Gompert, D., Waterman, K., Wilkening, D., *U.S. Nuclear Declaratory Policy: The Question of Nuclear First Use*, RAND, 1995.

<sup>76</sup> The leaked paper can be found at [www.globalsecurity.org](http://www.globalsecurity.org), as of July 10, 2003.

cal, nuclear and ballistic-missile delivery area. And obviously, we are also concerned explicitly about certain states that are developing those capabilities.”<sup>77</sup>

To counter these new threats, and to better adapt to the new security environment that he described, Crouch talked of the need to move to a “capabilities-based approach” which “argues that there may be multiple contingencies and new threats that we will have to deal with. We’re focusing on how we will fight.” Such capabilities-based planning is not country specific, but adaptive (drawing on a decade of previous experience), and includes non-nuclear as well as nuclear strike forces and “active and passive defenses.”<sup>78</sup>

Deterring these new threats relies, according to the administration, on four key principles. General Gordon, then-Director of the National Nuclear Security Administration (NNSA) described them in congressional testimony :

- assure allies and friends by demonstrating the United States’ steadiness of purpose and capability to fulfill its military commitments,
- dissuade adversaries from undertaking military programs or operations that could threaten U.S. interests or those of allies and friends,
- deter threats and counter coercion against the United States, its forces and allies, and
- defeat any adversary decisively and defend against attack if deterrence fails.<sup>79</sup>

Key to the new approach is the New Triad. Crouch indicated his hope that the mix of offensive and defensive capabilities in the New Triad would “... improve our capability to deter attack in the face of a proliferating NBC weapons capability.” In General Gordon’s words:



*President Bush speaking at West Point.*

In seeking to meet these goals, the NPR has established as its centerpiece a “New Triad” of flexible response capabilities consisting of the following elements:

- non-nuclear and nuclear strike capabilities including systems for command and control,
- active and passive defenses including ballistic missile defenses, and
- R&D and industrial infrastructure needed to develop, build, and maintain nuclear offensive forces and defensive systems.

Perhaps more so than in any previous defense review, this concept of a New Triad reflects a broad recognition of the importance of a robust and responsive defense R&D and industrial base in achieving our overall defense strategy.<sup>80</sup>

This represents a dangerous narrowing of the gap between nuclear and conventional military capabilities, as both are now held to have strate-

<sup>77</sup> Crouch, J. D., Special Briefing on the Nuclear Posture Review, ASD ISP, January 9, 2002.

<sup>78</sup> *Ibid.*

<sup>79</sup> Statement of General John A. Gordon, USAF (Ret.), Administrator, National Nuclear Security Administration, before the Senate Armed Services Committee, February 14, 2002.

<sup>80</sup> *Ibid.*

gic functions as part of deterrence and once deterrence fails.

Crouch for the most-part dodged reporters' questions about the administration's plans to develop new class of miniaturized and more usable nuclear devices. The Pentagon's plans were revealed in some greater detail in the leaking of selected parts of the text and in press

According to the NPR, the United States also should be prepared to launch a nuclear strike to destroy stocks of weapons of mass destruction, such as biological and chemical arms.

reports based on the leaked NPR. These details belie President Bush's repeated assertions that nuclear weapons are "relics of the Cold War" and his policy of reduced reliance on nuclear weap-

ons. The leaked document makes it clear that the administration instead plans to develop and define new roles for these weapons of ultimate destruction, making the idea of their use in conflict more commonplace.

In the classified NPR obtained by the *Los Angeles Times* and the *New York Times*, the Pentagon outlines a list of contingencies and targets where nuclear weapons might be used. Listing seven countries — China, Russia, Iraq, North Korea, Iran, Libya and Syria — as potential nuclear targets, the leaked NPR indicates that nuclear weapons could be used in three types of situations: against targets able to withstand non-nuclear attack; in retaliation for attack with nuclear, biological or chemical weapons; or "in the event of surprising military developments." According to the scenarios outlined in the NPR, the Pentagon should be prepared to use nuclear weapons during an Arab-Israel conflict, an Iraqi attack on Israel, or its neighbors, a North Korean attack on South Korea or a military confrontation between

China and Taiwan (a scenario in which Chinese leaders may try to forcefully integrate Taiwan with the mainland China). Countries such as Iran, Syria and Libya could be involved in immediate, potential or unexpected contingencies requiring "nuclear strike capabilities." The United States also should be prepared to launch a nuclear strike to destroy stocks of weapons of mass destruction, such as biological and chemical arms.<sup>81</sup>

Additional detail has been provided by congressional testimony from members of the administration. For example, a key hearing was held in the Senate Armed Service Committee on February 14, 2002. Douglas Feith, Undersecretary of Defense for Policy, told the hearing that:

Instead of our past primary reliance on nuclear forces for deterrence, we will need a broad array of nuclear, non-nuclear and defensive capabilities for an era of uncertainty and surprise. The United States will transform its strategic planning from an approach that has been based almost exclusively on offensive nuclear weapons, to one that also includes a range of non-nuclear and defensive capabilities. In particular, because deterrence will function less predictably in the future, the United States will need options to defend itself, its allies and friends against attacks that cannot be deterred.<sup>82</sup>

From this, and other statements, it is clear that significant figures in the Bush administration regard the failure of deterrence and the use of nuclear weapons as becoming ever more likely. The threshold of nuclear weapons use seems more likely to be crossed now than at any time since the United States and the Soviet Union constructed a (more or less) stable deterrent relationship. This uncertainty is disturbing to allies and potential foes alike, and seems likely to do more

<sup>81</sup> *Nuclear Posture Review, op. cit.*

<sup>82</sup> Feith, Douglas, Hearing of the Senate Armed Services Committee, to receive testimony on the results of the Nuclear Posture Review, in review of the Defense Authorization Request for Fiscal Year 2003, February 14, 2002.

to undermine international security and progress towards non-proliferation than anything else. (See Chapter Eight.)

### SHIFTING NATO POLICY AND DOCTRINE

NATO has adopted counterproliferation as a policy, although with at least initial reluctance. The Alliance also has adapted its nuclear use doctrines and practices to accommodate changes in U.S. strategy. If the United States is not to be forced to act alone, then support from NATO nations is likely essential. Few others are capable of operating alongside the American military. While a nuclear or conventional counterproliferation strike could be launched from U.S. territory, many of the possible targets are on the periphery of NATO. It would, at the least, be advantageous to have NATO support for attacks in the region. The United States sought support for the strike on Libya in 1986. Even an administration with many senior members wedded to unilateral action felt the need to seek NATO support for the invasion of Iraq, and would likely feel constrained to do so again. This places some limits on U.S. counterproliferation efforts (and for a less aggressive administration the restraints would be greater). This is particularly true where this might involve a nuclear strike, as these policies and ideas remain deeply controversial in Europe.

#### *NATO and Counterproliferation*

When briefed at an informal defense ministers meeting in September 1993 just before the launch of the Defense Counterproliferation Initiative, European allies were said to be “lukewarm” in their response.<sup>83</sup> Despite this, NATO agreed to begin consideration of the adoption of counterproliferation as an alliance mission at its Brussels Summit in January 1994. The Summit reemphasized the conclusions of the 1991 Summit on the threat to

the Alliance from the proliferation of NBC weapons, and further decided to consider political and military measures to combat this threat.

Proliferation of weapons of mass destruction and their delivery means constitutes a threat to international security and is a matter of concern to NATO. We have decided to intensify and expand NATO’s political and defence efforts against proliferation, taking into account the work already underway in other international fora and institutions. In this regard, we direct that work begin immediately in appropriate fora of the Alliance to develop an overall policy framework to consider how to reinforce ongoing prevention efforts and how to reduce the proliferation threat and protect against it.<sup>84</sup>

These decisions came despite initial allied reluctance over counterproliferation, and indeed to this day NATO does not officially refer to its counterproliferation activities under that name. The 1994 Summit launched a project by the Senior Defence Group on Proliferation (DGP) to establish NATO policies in the area of counterproliferation. That process led to the approval of force goals for NATO nations by defense ministers at their meeting in December 1996. By 1999, counterproliferation formed part of the NATO strategic concept. Recognizing that proliferation is a threat to NATO nations, and that threat is manifest in NATO’s periphery of North Africa, the Middle East and the former Soviet Union, the Strategic Concept states that, “The principal non-proliferation goal of the Alliance and its members is to prevent proliferation from occurring or, should it occur, to reverse it through diplomatic means.”<sup>85</sup> This is a reflection of European reluc-

<sup>83</sup> Larsen, Jeffrey A., *NATO Counterproliferation Policy: A Case Study in Alliance Politics*, Occasional Paper #17, Air Force Academy Institute for National Security Studies, November 1997.

<sup>84</sup> “Declaration of the Heads of State and Government, “Ministerial Meeting of the North Atlantic Council, NATO Headquarters, Brussels, 10-11 January 1994,” para. 17.

<sup>85</sup> “The Alliance’s Strategic Concept, Approved by the Heads of State and Government participating in the meeting of the North Atlantic Council in Washington D.C. on 23rd and 24th April 1999,” para. 40.

tance to adopt counterproliferation as a policy. However, the Strategic Concept further states, ... that the Alliance's defence posture must have the capability to address appropriately and effectively the risks associated with the proliferation of NBC weapons and their means of delivery, which also pose a potential threat to the Allies' populations, territory, and forces. A balanced mix of forces, response capabilities and strengthened defences is needed..."<sup>86</sup>

By 2002 and the Prague Summit, NATO counterproliferation policy was extended to cover threats from non-state actors.

Recalling the tragic events of 11 September 2001 and our subsequent decision to invoke Article 5 of the Washington Treaty, we have approved a comprehensive package of measures, based on NATO's Strategic Concept, to strengthen our ability to meet the challenges to the security of our forces, populations and territory, from wherever they may come. Today's decisions will provide for balanced and effective capabilities within the Alliance so that NATO can better carry out the full range of its missions and respond collectively to those challenges, including the threat posed by terrorism and by the proliferation of weapons of mass destruction and their means of delivery.<sup>87</sup>

NATO has fully integrated counterproliferation into its force planning, training, and its strategic concept and related papers. The two differences between NATO and U.S. national policy are that

NATO has not openly assigned its forces a preventive or preemptive role in counterproliferation, nor has it explicitly given a role to nuclear weapons in counterproliferation. Despite this, the process of adopting this new doctrine into the Alliance strategic concept has led to the adaptation of NATO nuclear policy and operational practice.

### *Changes in NATO Nuclear Policies and Operational Practice*

NATO doctrine has been adapted, as has operational practice, to accommodate the expansion of the range of possible targets and the range of possible enemies to be deterred by nuclear weapons. U.S. policy on the use of nuclear weapons in regional wars also has had its influence on cooperation with allies. Changes in NATO policy, doctrine and practice are significant as the United States supplies some allies with nuclear weapons, and trains the armed forces of these allies to carry out nuclear weapons missions in a process known as nuclear sharing.<sup>88</sup> These doctrinal changes affecting nuclear cooperation within NATO, and particularly the nuclear sharing programs, are controversial and barely acknowledged in public.

NATO policy began to shift early in the 1990s, led by the changes in U.S. policy. In 1992, Volker Ruhe, then — German Defense Minister, told a press conference at the October NATO Nuclear Planning Group that, "There are no more nuclear weapons aimed at any threat. These weapons insure us against risks which might arise from the proliferation of weapons of mass destruction."<sup>89</sup>

NATO nuclear doctrine traditionally develops in line with changes in U.S. doctrine. With the adoption of the revision to NATO strategy, laid

<sup>86</sup> *Ibid*, Paragraph 53 h, The Alliance's Strategic Concept, Approved by the Heads of State and Government participating in the meeting of the North Atlantic Council in Washington D.C. on 23rd and 24th April 1999.

<sup>87</sup> Prague Summit Declaration Issued by the Heads of State and Government participating in the meeting of the North Atlantic Council in Prague on 21 November 2002," para. 3.

<sup>88</sup> The nuclear sharing nations are Turkey, Greece, Italy, Germany, Belgium and the Netherlands. In addition, U.S. nuclear weapons for U.S. forces with NATO missions are stored in the U.K. and Germany. Full details of the nuclear sharing programs can be found in Butcher, M. Nassauer, O., Padberg, T., and Plesch, D., *Questions of Command and Control: NATO, Nuclear Sharing and the NPT*, PENN Research Report 2000.1, March 2000.

<sup>89</sup> Ruhe, Volker, Statement to Press Conference at NATO Nuclear Planning Group, Gleneagles, October 21, 1992.

out in the document MC400/1<sup>90</sup> in 1996, NATO no longer maintains detailed plans for the use of nuclear weapons in specific scenarios. Instead, like the U.S., it is developing a so-called “adaptive targeting capability.” This capability is designed to allow major NATO commanders to develop target plans and nuclear weapons employment plans on short notice, during a contingency or crisis, from pre-developed databases containing possible targets.

Concerns have been raised that NATO is adopting U.S. policies on using nuclear weapons against proliferant states which possess, or potentially possess, NBC weapons. This is much more controversial in Europe than in the United States, not least because of the proximity of such states to Europe and the likely environmental and human health effects on European populations if such weapons were to be used against, for example, Libya. This has meant that statements of NATO policy are far more opaque than related American statements. As the Project on European Nuclear Non-Proliferation (PENN) noted in a 2000 report:

These concerns [over U.S. nuclear use policy] are prompted by Paragraph 41 of the Alliance’s Strategic Concept which states that: “By deterring the use of NBC weapons, they [Alliance forces] contribute to Alliance efforts aimed at preventing the proliferation of these weapons and their delivery means.”

If “Alliance forces” in the above text were to include both conventional and nuclear forces, NATO would have prepared the ground for an extension of the role of nuclear weapons in NATO strategy in the

future. NATO would in that case see nuclear weapons as a tool in the fight against proliferation. This formula would appear to leave the door open to the use of nuclear weapons against those possessing, or even thought to possess, nuclear or other NBC weapons and their means of delivery, a doctrine the United States is widely believed to have already adopted in U.S. national nuclear strategy. U.S. spokesmen refuse to rule out the use of nuclear weapons against potential adversaries who use, or threaten the use, of nuclear weapons or other NBC weapons, even non-state actors. The United States aims to have national doctrine incorporated into NATO policy, and historical precedent makes this a likely development.<sup>91</sup>

Ministers adopted the next revision of the NATO strategy implementation paper, MC400/2 in May 2000 at the North Atlantic Council meeting in Italy. According to a Reuters report<sup>92</sup>, the document states that “an appropriate mix of forces” – i.e. conventional and nuclear forces – should be available to the Alliance when facing a threat by any NBC weapons. This ambiguity would allow the United States to interpret NATO strategy as being in line with U.S. national doctrine. It is ambiguous enough to allow others to claim that this is not the case. However, interpretation may now be less necessary. According to the leaked *Nuclear Posture Review*, in 2002, following the Bush administration policy shift, the Alliance was engaged in a review of its nuclear posture.

The results of this review were reported to ministers at the June 2002 Nuclear Planning Group. The only indication of the review was the declaration by defense ministers that “NATO’s

<sup>90</sup> The MC400 series of papers are adopted by the NATO Military Committee. They are implementation plans for the published Strategic Concept of the Alliance.

<sup>91</sup> PENN Research Report 2000.1, op. cit., Chapter Three: NATO Nuclear Doctrine Since the End of the Cold War, Changes in NATO Nuclear Strategy in 1999.

<sup>92</sup> Taylor, Paul, “Analysis – NATO Accused of Widening Nuclear Role,” *Reuters News Service*, March 14, 2000.

sub-strategic nuclear forces have been reduced by over 85 percent since 1991, and are maintained at the minimum level sufficient to preserve peace and stability. In this context, we provided guidance to further adapt NATO's dual-capable aircraft posture."<sup>93</sup> It is unclear what this means in the context of the current debate, but knowledgeable observers have speculated that a reactivation of nuclear storage capacity on NATO's southern flank is possible, thus basing dual-capable aircraft (DCA) closer to potential NBC weapons targets in regions of concern on Europe's periphery. No NATO spokesman has ever denied this interpretation.

It seems that the MC400 series of papers has not yet been revised to explicitly allow for preemptive nuclear strikes against NBC weapon states, or non-state actors. Such changes as have been made would allow the United States to say that NATO policy and doctrine have been aligned with U.S. strategy papers. It also seems that NATO has yet to completely revise operational procedure in line with U.S. doctrine, a step that is controversial for European NATO nations, and for Canada. One senior European diplomat told the author that "If you think we are going to let the Americans throw nuclear weapons around on Europe's periphery, then you must be crazy." Canadian diplomats at the 2003 PrepCom for the 2005 NPT Review Conference reacted badly to NGO suggestions that NATO had adopted the U.S. practice of targeting all NBC weapons with nuclear weapons. In a statement to the conference, Canada stated that:

As a non-nuclear weapon State member of NATO, Canada takes this opportunity to affirm that the 1999 Strategic Concept has not been re-opened and remains the base for NATO's nuclear policy. Nor is it NATO policy that nuclear weapons may

be used against non-nuclear-weapon States parties to the NPT, except as provided in the language of the Negative Security Assurances affirmed in 1995.<sup>94</sup>

According to the Centre for European Security and Disarmament (CESD), a Brussels-based research and advocacy group, despite this European and Canadian reluctance, the United States already has attempted to integrate preemptive conventional and possibly nuclear strikes into a NATO exercise scenario, but met with strong resistance from all other NATO nations except Turkey. The exercise, Crisis Management Exercise or CMX 2002, was the first designed to test allied reaction to a potential NBC weapons strike against a member state (in this case Turkey) from 'Amberland' (based on Iraq). The scenario began 100 days into the crisis with an attack looming. CESD notes that:

...serious disagreements arise between Allies over the appropriate response to the situation. The Military Committee is tasked with providing a list of recommendations for military options, but eventually is unable to do so. Capitals cannot agree on what the priorities should be and demand that political considerations be taken into account. The range of alternatives available are narrowed down to two main options: either carry out a pre-emptive strike with conventional weapons, or embark on an active information policy which delivers a threat of heavy and swift response if Amberland attacks Turkey. The United States and Turkey reportedly take a more hard line stance in support of pre-emptive strikes, while Germany, France and Spain prefer to defuse the crisis through more political means. Many NATO members see

<sup>93</sup> Final Communiqué, Ministerial Meeting of the Defence Planning Committee and the Nuclear Planning Group, Brussels June 6, 2002.

<sup>94</sup> Canadian Statement to Cluster 1 Debate, NPT Second PrepCom for 2005 Review Conference, May 1, 2003.



the practical benefits of a pre-emptive strike, but warn that such an action could trigger an escalation of the crisis. By the end of the seven-day exercise, the United States and Turkey declare themselves ready for pre-emptive air strikes. The exercise ends before any attack is carried out or Article V is officially declared.<sup>95</sup>

In fact, the NATO Secretary-General Lord Robertson was forced to step in and shut down the exercise early in order to prevent open conflict emerging between allies. It is clear from this scenario that European leaders continue to prefer to rely on non-proliferation diplomacy to prevent the spread of these weapons, believing that an emphasis on preparing to fight NBC weapons with nuclear forces is a mistake and the preemptive strikes, nuclear or conventional, are untenable politically. This position has only been reinforced in European reaction to the publication of the *National Security Strategy* and the *National Strategy to Combat WMD*:

It is still unclear how the organisation [NATO] could actually contribute were the U.S. to decide to take pre-emptive action. At the moment, there is some agreement among NATO insiders that that 'the Alliance will not be the primary vehicle to carry out such an initiative.' One official points out that 'even if there was evidence that a rogue state was imminently launching an attack with NBC weapons, the Allies would not be able to do anything and the U.S. would have to go it alone. At best, NATO could give political support or another invocation of Article V.'

In NATO's last crisis management exercise (CMX 2002), NATO tested its response to a scenario in which a Middle Eastern country was ready to attack Turkey with biological and chemical weapons, and in which bio-terrorist attacks had already been carried out on NATO territory. Facing the reluctance of the other Allies to agree on pre-emptive action, the United States and Turkey declared themselves ready for such strikes, with or without the participation of others. The demonstrated lack of cohesion among the Allies, coupled with NATO's cumbersome decision-making process, has most likely led the United States to confirm that during a real crisis, operating through the Alliance would not be efficient.<sup>96</sup>

U.S. efforts to fully integrate American doctrine into NATO run counter to the traditional NATO approach that nuclear weapons have a political function. Traditional communique language concerning the role of nuclear weapons in the Alliance was reaffirmed in 2002:

We reaffirmed that the fundamental purpose of the nuclear forces of the Allies is political: to preserve peace and prevent coercion and any kind of war. We continue to place great value on the nuclear forces based in Europe and committed to NATO, which provide essential political and military linkage between the European and the North American members of the Alliance.<sup>97</sup>

In this perspective, the tensions between U.S. and European views on how best to resolve risks

<sup>95</sup> Monaco, Annalisa and Riggle, Sharon, "NATO Squares Off with Middle East Foe: Threat of WMD Challenges Alliance," in *NATO Notes*, Vol 4., No. 2, March 1, 2002. Published by CESD.

<sup>96</sup> Monaco, Annalisa, "The U.S. new strategic doctrine: A likely row with transatlantic partners?" in *NATO Notes*, Vol. 4, no. 6, July 25, 2002. Published by CESD.

<sup>97</sup> "Final Communique, Ministerial Meeting of the Defence Planning Committee and the Nuclear Planning Group held in Brussels on 6 June 2002."

and threats from proliferators will be hard to reconcile. Indeed this was the case in the run-up to war with Iraq. The split in NATO that delayed even defensive assistance to Turkey and denied use of Alliance assets in the invasion itself mirrored very closely the CMX2002 exercise difficulties.

The U.S. view that counterproliferation must be "... integrated into the doctrine, training, and equipping of our force and those of our allies to ensure that we can prevail in any conflict with WMD-armed adversaries..."<sup>98</sup> is controversial as no European nation can openly admit to preparations to fight and win nuclear war, or a war involving other NBC weapons. European NATO nations in particular cannot openly support the idea that nuclear weapons should be used against biological or chemical weapons-armed adversaries who lack nuclear weapons. Even the U.K. and France have moved slowly and cautiously towards an implicit acceptance of these concepts. In any case, in the Strategic Concept, in MC400/2 and in all statements and policy documents available to the public, NATO maintains an ambiguity that allows the United States to interpret the papers as supporting their own national policies and doctrines, and other NATO nations to deny that this is the case.

### FRANCE AND THE U.K. – DOCTRINAL OPACITY ON NUCLEAR COUNTERPROLIFERATION

#### *French Policy*

If NATO as a whole is resistant to the direction of U.S. policy, then the U.K. and France as European nuclear powers are somewhat less so. Neither is yet ready to make a straightforward declaration assigning a preemptive counterproliferation role to their nuclear forces, but senior officials in both countries have spoken in somewhat opaque terms of a deterrence role for nuclear weapons against biological and chemical weapons.

In France, during much of the late 1980s and through the 1990s strategists debated a revision of French nuclear doctrine to allow for preemptive strikes and nuclear warfighting. Former President Francois Mitterrand opposed these ideas strongly during his time in office, but they have resurfaced in the years since.

Speaking in June 2001, current President Jacques Chirac stated that, "Our deterrent must also permit us to stand up to threats which regional powers in possession of weapons of mass destruction could bring to bear on our vital interests." He noted the threat from NBC-armed ballistic missiles, but stressed that while France possessed a credible deterrent it did not regard nuclear weapons as a deterrent against other weapons. However, he also stressed that he wished to remind his audience that French concepts of deterrence "... do not exclude the capacity to demonstrate to a future foe, at the appropriate moment, that our vital interests are in play and that we are determined to safeguard them." He then added that the future defense spending on French nuclear capabilities was intended to ensure that a credible deterrent was maintained "for all circumstances and whatever the location or nature of the threat."<sup>99</sup>

This rather vague formulation leaves open the possibility that France could use nuclear weapons against a state, or non-state actor armed with NBC weapons, including perhaps those armed only with chemical or biological weapons. It also, crucially, seems to leave in play the possibility that such use could be preemptive. The ambiguity in French policy is therefore purposely maintained. For example, at the G8 Summit at Evian in 2003, President Chirac said that:

A great deal of work has been done in the same spirit to ensure implementation of the initiative to prevent terrorist from gaining access to weapons of mass destruction,

<sup>98</sup> *National Security Strategy of the United States*, September 20, 2002.

<sup>99</sup> Chirac, President Jacques, *Speech to the Institut des Hautes Etudes de Defense Nationale*, Ecole Militaire, Paris, June 8, 2001. Translation from the original by the author.

particularly the weapons stored in the former Soviet Union. France, along with its partners, is preparing several projects with Russia. More generally speaking, we shall discuss the critical issue of non-proliferation at Evian. Several countries are carrying out prohibited projects. We are not willing to accept this and **we shall act within the legitimate framework of international law** (Emphasis Added).<sup>100</sup>

This emphasis on international law has been widely interpreted as criticism of the American doctrine of preemption or preventive war, with particular reference to the invasion of Iraq. The truth is that France wants to keep its options open.

### *British Policy*

The role of U.K. nuclear forces with regard to deterring NBC weapons threats from regional powers was established by then-Defence Secretary Malcolm Rifkind in 1993. His elaboration of U.K. nuclear doctrine, a rare event in itself for the U.K., set out a mission for the Trident nuclear ballistic missile force as a tactical nuclear weapon, one which could deter the use of chemical or biological weapons against the U.K. He had nothing to say about potential preemptive use of nuclear weapons. However, Geoff Hoon, current Defence Secretary, made a series of remarks in early 2002 that have been interpreted as aligning the U.K. with a U.S.-style doctrine for the preemptive use of nuclear weapons in counterproliferation missions. On March 20, 2002, Hoon told the Defence Select Committee of the House of Commons that:

The fact that if certain states of concern do acquire complete systems of sufficient range then they might be capable of targeting the United Kingdom within the next few years is something that we consider very seriously. Moreover, we recognise that some

states of concern would already be capable of targeting United Kingdom forces deployed in areas close to them and of targeting the territory of some of our friends and allies. We, therefore, believe that it is vital for all responsible nations to try to tackle the potential threat. We believe a comprehensive strategy is necessary, a strategy that encompasses diplomacy, arms control, conflict prevention, non-proliferation, counterproliferation, export controls, intelligence co-operation, law enforcement, deterrence and defensive measures.

Under questioning from Members of Parliament he further elaborated:

...that there are clearly some states who would be deterred by the fact that the United Kingdom possesses nuclear weapons and has the willingness and ability to use them in appropriate circumstances. States of concern, I would be much less confident about, and Saddam Hussein has demonstrated in the past his willingness to use chemical weapons against his own people. In those kinds of states the wishes, needs and interests of citizens are clearly much less regarded and we cannot rule out the possibility that such states would be willing to sacrifice their own people in order to make that kind of gesture.

They can be absolutely confident that in the right conditions we would be willing to use our nuclear weapons. What I cannot be absolutely confident about is whether that would be sufficient to deter them from using a weapon of mass destruction in the first place.<sup>101</sup>

In June 2002, the *Guardian* noted that the British government has put in place a plan to up-

<sup>100</sup> Chirac, President Jacques, *Speech to the G8 Summit*, Evian, May 21, 2003.

<sup>101</sup> Select Committee on Defence Minutes of Evidence, Examination of Witnesses (Questions 220-238), Rt Hon Geoffrey Hoon MP, Mr Brian Hawtin CB, March 20, 2002.

grade weapons design and production facilities at Aldermaston, the home of U.K. nuclear weapons. In that article, an anonymous Ministry of Defence (MoD) official agreed that Hoon had shifted U.K. policy dramatically:

The Aldermaston plan coincides with an apparent agreement to a radical shift in Britain's nuclear doctrine. The defence secretary, Geoff Hoon, has suggested the government would now be prepared to fire a nuclear weapon in a pre-emptive strike against non-nuclear states suspected of developing chemical and biological weapons. A senior defence official admitted Mr. Hoon had "gone further than people have before."<sup>102</sup>

While much of what Minister Hoon said is open to interpretation, it seems likely that a shift is underway in U.K. policy that makes nuclear use more likely, particularly in the light of U.K. involvement in a war on Iraq alongside the United States. U.K. doctrine has expanded to allow for preventive and preemptive military action against proliferants. The first example of such an operation was the invasion of Iraq. Whether the U.K. would be prepared to use nuclear weapons in such a mission remains an open question.

Prime Minister Tony Blair also has raised the possibility of UK nuclear use against chemical or biological weapons targets. In response to questioning in the House of Commons Liaison Committee in January 2003, he refused to rule the possibility out. Asked if UK policy might include a warning to Saddam that nuclear bombs could be used in the event of war, Blair said:

It is best to say that we are aware of the potential of that threat and we would deal with it in any way that we thought necessary. But I don't think it is wise for me to

get into speculating as to exactly what we are doing about it.<sup>103</sup>

While doctrine in Europe remains more opaque and more nuanced than in the United States, the two nuclear weapon states in Europe are clearly heavily influenced by the U.S. view of changing strategic circumstances. Their influence will also be felt in NATO. For the U.S., the support of the U.K. in counterproliferation missions is likely to be vital – at least as long as any administration wishes to be able to claim at least minimal international support. It seems that U.S. policy and doctrine is already producing a shift in other nations' policies that contributes to the undermining of the global non-proliferation regime. It has certainly contributed to a lack of unity amongst European members of NATO.

#### COUNTERPROLIFERATION AND THE EUROPEAN UNION – A MODERATE ALTERNATIVE

The European Union (EU) has a history of involvement in non-proliferation diplomacy dating back to 1990. Defense policy is a new area for the EU, and a very sensitive one. The European Security and Defense Policy (ESDP) is still a work in progress. For this reason, the EU Strategy Against Proliferation of Weapons of Mass Destruction, concluded in June 2003, is a much more nuanced document than even NATO policy. While headlines trumpeted the EU decision that the use of force could be allowed, in fact the major stress of the document is on reinforcing non-proliferation efforts. Accepting that NBC weapons can pose a threat to international peace especially in the hands of terrorists, the Strategy states that:

An EU strategy against the proliferation of WMD needs to be based on a common assessment of global proliferation threats. The EU Situation Centre has prepared and

<sup>102</sup> Norton-Taylor, Richard, "MoD plans £2bn nuclear expansion," *The Guardian*, June 18, 2002.

<sup>103</sup> Tempest, Matthew, "No way out for Saddam – Blair," *The Guardian*, January 21, 2003.

will continuously update a threat assessment using all available sources; our intelligence services should keep this issue under review and remain engaged in this process.

To address the new threats, a broad approach is needed. Political and diplomatic preventative measures (multilateral treaties and export control regimes) and resort to the competent international organisations (IAEA, OPCW, etc.) form the first line of defence. When these measures (including political dialogue and diplomatic pressure) have failed, coercive measures under Chapter VII of the UN Charter and international law (sanctions, selective or global, interceptions of shipments and, as appropriate, the use of force) could be envisioned. The UN Security Council should play a central role.<sup>104</sup>

This balanced, measured approach to countering proliferation stands in stark contrast to the U.S. approach. The emphasis on multilateral diplomacy and cooperation through the United Nations Security Council are at the heart of this strategy. This approach is matched with an emphasis on dealing with the political roots of insecurity that breeds the conditions in which proliferation occurs:

The best solution to the problem of proliferation of WMD is that countries should

no longer feel they need them. If possible, political solutions should be found to the problems which lead them to seek WMD. The more secure countries feel, the more likely they are to abandon programmes: disarmament measures can lead to a virtuous circle just as weapons programmes can lead to an arms race. To this end, we must actively foster the establishment of regional security arrangements and regional arms control and disarmament processes. Our dialogue with the countries concerned should take account of the fact that in many cases they have real and legitimate security concerns, with the clear understanding that there can never be any justification for the illegal development of WMD. We will encourage these countries to renounce the use of technology and facilities which might cause a particular risk of proliferation.<sup>105</sup>

The European Union has adopted a strategy for countering proliferation that matches its institutional history of building peace through international cooperation. This style is emphasized through the action plan adopted at the same time as the strategy, which lays out a series of diplomatic measures to be taken across the proliferation spectrum. No mention is made in the Action Plan of any coercive measures. The EU Strategy is a model for global action in this area of particular concern.

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<sup>104</sup> "Basic Principles of an EU Strategy against Proliferation of Weapons of Mass Destruction," Adopted by the General Affairs Council of the European Union, June 17, 2003.

<sup>105</sup> *Ibid.*



# Chapter Four:

## Military Options for Countering NBC Weapons

As described in previous chapters, the Bush administration has made the threat of nuclear, biological and chemical weapons a centerpiece of its defense policies. Progress in implementing U.S. counterproliferation policy is laid out each year in a report from the Secretary of Defense, and in a report to Congress from the Counterproliferation Program Review Committee (CPRC).<sup>106</sup> These reports highlight threats to the United States from weapons of mass destruction, and progress in building the military infrastructure and policies necessary for the full implementation of counterproliferation doctrine. The most recent CPRC report to Congress was issued in May 2002. Amongst its findings and recommendations, the CPRC states that:

Countering proliferation is now an established and institutionalized priority within each of the CPRC-represented organizations. The development of capabilities to

counter NBC terrorist threats is receiving added attention throughout DoD, DOE and the IC [intelligence community]. These efforts reflect the President's firm commitment to stem NBC/M [nuclear, biological and chemical weapons, and their means of delivery] proliferation and negate terrorist NBC threats.<sup>107</sup>

Evidently, all relevant agencies of the U.S. government are being mobilized with increasing urgency over the past decade to combat proliferation. President Bush has dramatically increased the focus on military efforts in this task, probably to the detriment of diplomatic non-proliferation efforts. This chapter explores the range of military options available to the United States to combat proliferation and what tools are ready to strike the targets that intelligence and military analysts state present the new threats. The chapter also examines whether nuclear or conven-

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<sup>106</sup> The CPRC was established in 1994, and is made up of the Secretary of Defense, the Secretary of Energy, the Director of Central Intelligence and the Joint Chiefs of Staff.

<sup>107</sup> Counterproliferation Program Review Committee, *Report on Activities and Programs for Countering Proliferation and NBC Terrorism*, Executive Summary, May 2002, p. 18.

tional options for counterforce strikes are most useful and what defensive means are available, and are they purely defensive?

### **DEFENSIVE OPTIONS: COUNTERPROLIFERATION AND MISSILE DEFENSES**

Missile defenses play an integral role in defense counterproliferation programs, and in U.S. defense strategy. If nuclear and other offensive weapons are the sword, then missile defenses are intended to be a shield, from the tactical to strategic level. As the DoD says:

Ballistic Missile Defense (BMD) plays a central role in U.S. national security strategy by supporting our defense and counterproliferation objectives. The requirement

**If nuclear and other offensive weapons are the sword, then missile defenses are intended to be a shield, from the tactical to strategic level.**

for BMD flows from a strategy that requires the U.S. to maintain a credible overseas presence and the capability to respond to major regional conflicts despite the increasing danger posed by

the proliferation of ballistic missiles. In a world of regional threats to the U.S., BMD affords the U.S. greater freedom of action to protect its interests and uphold its security commitments without fear of coercion. BMD can bolster the solidarity of coalitions and alliances (as it did in Desert Storm in 1991), and provide a response to crises without having to resort to offensive measures. Finally, BMD can strengthen the credibility of our deterrent forces and provide an essential hedge against the failure of deterrence.<sup>108</sup>

DoD also claims that missile defenses are an integral part of preventing proliferation, both by potential foes and by allies:

Missile defense programs complement and strengthen the prevention and deterrence provided by these programs. Effective missile defense systems reduce the incentives for proliferants to develop, acquire, or use ballistic missiles and NBC weapons by reducing the chances that an attack would inflict serious damage on U.S. or allied targets. Missile defenses thus both deny the accomplishment of a belligerent's objective and decrease the incentive to acquire NBC weapons and ballistic missile systems. Furthermore, the ability to extend protection to allies and friends can mitigate the desire of many states to acquire their own NBC weapons as an independent deterrent against attack.<sup>109</sup>

This optimistic assessment ignores the fact that missile defenses are easy to penetrate, either by using sophisticated missiles with decoy warheads and other countermeasures; or by using delivery systems other than ballistic missiles. This is particularly the case in theaters such as the Middle East where widespread U.S. bases and facilities operate amongst a population that is, more or less, hostile. However, these quotes make clear that DoD sees missile defenses as an essential part of nuclear deterrence, as well as counterproliferation.

### **OFFENSIVE OPTIONS: COUNTERFORCE CAPABILITIES AGAINST AN ADVERSARY'S NBC INFRASTRUCTURE**

Parallel to doctrinal and policy developments, the Pentagon and DOE weapons labs have been pressing ahead with development of counterforce capabilities for counterproliferation missions. The

<sup>108</sup> Ballistic Missile Defense Organization (BMDO), Ballistic Missile Defense Programs Website Introduction, <http://www.acq.osd.mil/bmdo/bmdolink/html/programs.html>.

<sup>109</sup> Perry, William (Secretary of Defense), *Annual Report to The President and Congress 1996*, Chapter 25: Ballistic Missile Defenses.



policy requirement for the military is to develop capabilities to destroy chemical and biological agents and facilities with minimal “collateral effects,” or damage to the surrounding population and environment. The aim is to prevent any enemy from being able to deploy and use NBC weapons against U.S. forces or other targets. Capabilities are sought to destroy NBC weapons development, production and storage facilities, as well as weapons systems including deployed, mobile weapons systems.

### *Improved Capability Against Hardened Targets*

The DoD describes hardened targets as:

...facilities that have been designed and constructed to make them difficult to defeat using conventional weapons...

Hardened, fixed targets fall into two broad categories. Many are hardened by using soil, concrete, and rock boulders atop the structure once it has been built. ...The second category includes tunnels and deep shafts, where the protection is provided by existing rock and soil.<sup>110</sup>

The second category is often referred to as deeply buried targets. Both targets are hard to destroy with conventional military means, although the United States does have conventional bombs designed to strike them, such as the GBU-28 5,000lb bomb that was used in Afghanistan. DoD has been researching methods for the destruction of such hardened, deeply buried targets since the Gulf War, which exposed the limits of U.S. conventional capabilities. There is significant concern that the joint examination of nuclear and conventional options for this program narrows the difference between nuclear and conventional weapons. It seems clear in assessing these two options as part of the same process that at least some in the military are beginning to regard



*Patriot Missile*

nuclear weapons as just another tool to be used when the need arises, rather than as a weapon of last resort.

This requirement for the ability to destroy an NBC or other bunker has led to the U.S. Air Combat Command and the U.S. Strategic Command conducting a Hard and Deeply Buried Target Defeat Capability (HDBTDC) program. DoD is pursuing conventional options for disrupting operations in such facilities, denying access to them and even destroying them. Military research for this program is supported by a variety of agencies including the national laboratories such as Lawrence Livermore National Laboratory and Los Alamos National Laboratory. These programs have examined such issues as testing on weapons and weapons effects, and the effect of rock and other geological features on weapons penetration and damage propagation.<sup>111</sup>

### *The Agent Defeat Weapon Program*

The Air Force is conducting the Agent Defeat Weapon (ADW) program to fulfill this requirement. This effort is in an early stage called ‘concept exploration.’ Studies are currently being conducted “to identify and evaluate concepts to sat-

<sup>110</sup> U.S. Department of Defense *Proliferation: Threat and Response*, Section II, DoD Response, January 2001, p.92.

<sup>111</sup> *Ibid.*

isfy the mission need, with the goal of fielding an NBC-specific strike capability.”<sup>112</sup> The United States is examining what kinds of weapons will be necessary to attack a chemical or biological weapons site, with the capability to destroy those weapons in any such attack. Such a capability could be conventional or nuclear.

The Secretaries of Defense and Energy have described the need for the program as follows:

Physical destruction of hard and deeply buried structures is not enough if the WMD – for example, a biological agent stored inside the facility – remains viable or is released into the environment. This could cause casualties to innocent civilians and allied forces, and result in environmental contamination – either of which could hinder allied forces operations and/or movements.<sup>113</sup>

A comprehensive description of the ADW program comes from the same report:

The Air Force Agent Defeat Weapon Program was initiated in response to a Combat Air Force Mission Need Statement. The objective of the current Concept Exploration and Definition acquisition activity is to develop an agent defeat weapon to neutralize, destroy, or deny access or immobilize CW/ BW agents and their associated weapon and delivery systems. All agent defeat weapon concepts will minimize collateral damage and effects and be deliverable by current Air Force platforms... The Agent Defeat Warhead (ADW) Demonstration (ADWD) program objective is to develop and demonstrate a warhead with a payload specifically tailored for use against fixed ground targets associated

with the development, production, and storage of chemical (C) agents, biological (B) agents, and CB weapons (CBW). The U.S. Air Force is conducting the Agent Defeat Weapon (ADW) program to develop the capability to destroy, neutralize, immobilize, or deny an adversary access to biological and chemical agents with little or no collateral damage. The effort is currently in concept exploration. Studies are being performed to identify and evaluate concepts to satisfy the mission need, with the goal of fielding an NBC specific strike capability. All concepts must comply with relevant arms control treaties. Analysis tools being developed to support ADW include Agent Release models, Internal Dispersion and Venting models, and a Lethality model to evaluate inventory and conceptual weapon effectiveness against NBC/M targets.<sup>114</sup>

Both these programs may lead to the development of modified or new nuclear weapons. They also have inspired ideas for new capabilities. It is likely that the development of a range of new, smaller yield nuclear weapons tailored for specific purposes would lead to military and political pressure for their use. Certainly, there is an enhanced risk that tailored effects nuclear weapons would be seen as more useable. This is discussed in the next section of this report.

### *A Role for Nuclear Weapons*

In both the ADW and the HDBT programs, nuclear weapons are thought to be essential. A report to Congress in October 2001 made the role of nuclear weapons in the destruction of enemy NBC weapons clear.

The *Report on the Defeat of Hard and Deeply Buried Targets* from DOE and DoD to Congress was

<sup>112</sup> *Proliferation: Threat and Response*, op. cit., Section II, p. 90.

<sup>113</sup> *Report to Congress on the Defeat of Hard and Deeply Buried Target*, Section 2.3, The Challenge of WMD, p. 10.

<sup>114</sup> Description of the ADW Program found at <http://www.globalsecurity.org/military/systems/munitions/adw.htm> on June 29, 2003.

mandated by Section 1044 of the National Defense Authorization Act for Fiscal Year 2001, inserted after a push led by Senators John Warner (R-VA) and Wayne Allard (R-CO). It was scheduled for delivery to Congress by July 1, 2001, but was finally submitted in October 2001. The document shows clearly that nuclear weapons are an intrinsic part of defeating hard and deeply buried targets, and chemical and biological agents. If DoD 'has not defined a requirement' for a nuclear weapon for this purpose, it is only because DoD is *currently* defining such a requirement. This requirement would meet a Mission Needs Assessment (MNA) identified by the Air Force and the United States Strategic Command (USSTRATCOM) in 1994, for a weapon to defeat Hard and Deeply Buried Targets (HDBT) and NBC weapons. The report also describes the intrinsic value of lower-yield nuclear weapons.

A classified study called *Project Sand Dune* started to address the role of nuclear weapons in HDBT defeat in 1997. The study was completed in the first quarter of 1999. This study was undertaken because "...the HDBT Defeat AoA [Analysis of Alternatives] had focused on conventional solutions and highlighted an inability to destroy all HDBTs with current or projected weapons..."<sup>115</sup> The study looked at nuclear weapons that could fulfill the Air Force and USSTRATCOM Mission Needs Analysis (MNA) from 1994 for a HDBT Defeat Weapon.

The current situation on both HDBT defeat and NBC weapons agent defeat is set out in Section 5 of the report to Congress. On nuclear weapons for HDBT it says:

There is no current program to design a new or modified HDBT Defeat nuclear weapon. However, DoD and DOE continue to consider and assess nuclear concepts that could address the validated mission needs and

CRD [Capstone Requirements Document]. They have formed a joint Nuclear Planning Group to define the appropriate scope and option selection criteria for a possible design feasibility and cost study.<sup>116</sup>

The report is even more explicit concerning the role of nuclear weapons in NBC weapons Agent Defeat, they are described as having "a unique ability to destroy both agent containers and CBW agents."<sup>117</sup> Accuracy and penetration are important as, given those characteristics, the report says that a lower-yield weapon can be used with less collateral damage. The report also notes that current weapons are not well adapted for this purpose. Interestingly, seemingly referring to the B61-11 which is a 'dial-a-yield' bomb with yields as low as 0.3kt, it says that the lower yield version of this earth-penetrating nuclear weapon has not been certified.

...it is possible to employ a much lower-yield weapon to achieve the needed neutralization. The ability to use a lower-yield would reduce weapon-produced collateral effects. The current nuclear weapons stockpile, while possessing some limited ground penetration capability and lower yield options (not yet certified), was not developed with this mission in mind.<sup>118</sup>

To fill this gap, Project Sand Dune led to a planning study that was due to report in early 2002. Due to the classified nature of the study, its outcome is unknown to the author.

The HDBT report to Congress further states that, "The overall objective of HDBT and NBC weapons Agent Defeat S&T Programs is to redress shortfalls in current operational capabilities against future threats. Elements include: ... nuclear weapons"<sup>119</sup> and later elaborates, "For

<sup>115</sup> *Ibid*, Section 3, Accomplishments to Date, p. 11.

<sup>116</sup> *Ibid*, Section 5, Programs Responsive to the Capstone Requirements Document, p. 18.

<sup>117</sup> *Ibid*, Section 5, Programs Responsive to the Capstone Requirements Document, p. 19.

<sup>118</sup> *Ibid*.

<sup>119</sup> *Ibid*, Section 6, S&T Meeting Future Threats, p. 20.

destruction of more deeply buried facilities, DoD and DOE are studying the sensitivities and synergies of nuclear weapon yield, penetration, accuracy and tactics.”<sup>120</sup> The FY2003 Defense Authorization Act mandated a study on the need for, and possible effects of, a nuclear bunker buster. In addition, Pentagon sources have said on several occasions in private meetings that a military requirement for the RNEP is being prepared, and is expected to be ready by early 2004.

The HDBT report says, “Any development and procurement of advanced nuclear capabilities would be considered in the broad context of nuclear stockpile policy, plans and priorities, as well as future DoD strategic programs.”<sup>121</sup> The administration has sent an implementation plan for the NPR to Congress, and is preparing a stockpile memorandum. These documents would provide the necessary context.

Any such full-scale development of a weapon with a yield of less than 5kt would, of course, need to be preceded by the repeal of the Furse-Spratt provision from the FY94 National Defense Authorization Act passed in 1993. Although interpretations of the Furse-Spratt law vary, it seems that current work does not break that law as the concept and feasibility studies precede the research and development phases of the design of a new weapon. The lower-yield version of the B61-11 is a complicating factor, if that is the weapon referenced in the HDBT report, as it needs only to be certified, no research and development would be involved. The administration also has stated during 2002 that larger weapons, such as the B83 are being studied as potential candidates for the HDBT defeat weapon. Due to the larger yield of this weapon, no breach of Furse-Spratt would be entailed.

In its draft FY04 National Defense Authorization Bill, the DoD requested the repeal of the Furse-Spratt legislation. This would allow work on a range of new warhead concepts. To clarify the situation both the House and the Senate have

passed legislation that would allow research work through Phase 6.2a, while obliging the administration to return to Congress to obtain permission to start Phase 6.3 development engineering work, or ‘bending metal’ as it is colloquially expressed. (See Table 2 for details.) It is unlikely that, with the current Congress and administration, there will be any problems in obtaining permission in future to move from paper studies, to actual development of a new or modified weapon.

### NUCLEAR WEAPONS OPTIONS FOR COUNTERPROLIFERATION MISSIONS

The development of counterforce mission needs are now fueling ever more insistent demands for the development of new nuclear weapons. This work now has the explicit support of the administration in the Nuclear Posture Review and in budget requests. One earth-penetrating nuclear weapon (of admittedly limited capability) is already available, but the administration has sought support for another, the Robust Nuclear Earth Penetrator (RNEP), and for a range of capabilities under the Advanced Concepts Initiative (ACI) rubric. All these advanced weapons concepts build on ideas that were developed in the early 1990s. While these plans have accelerated under President Bush, Republican efforts to revive nuclear weapons research and design began during the last years of the Clinton presidency.

Senators Warner and Allard introduced section 1018 of the FY2001 Defense Authorization bill in the spring of 2000. Their intent was to allow a study on “the defeat of hardened and deeply buried targets” and includes “any limited research and development that may be necessary to conduct such assessment.” This would have been the first step in overturning the Furse-Spratt legislation of 1993 that prevents the United States from developing new nuclear weapons with explosive yields of less than 5kt.

As the *Washington Post* reported in June 2000, the purpose of the study is to develop “a deep

<sup>120</sup> *Ibid*, Section 6 S&T Meeting Future Threats, p.21.

<sup>121</sup> *Ibid*, Executive Summary, p.4.

**TABLE 2: PHASES 6.X LIFE EXTENSION PROCESS**

Phase	6.1	6.2	6.2A	6.3	6.4	6.5	6.6
<b>Title</b>	Concept Assessment	Feasibility Study & Option Down-Select	Design Definition & Cost Study	Development Engineering	Production Engineering	First Production	Full-Scale Production
<b>Approval Authority</b>	DOE or DOD (Note 1)	NWC (Note 2)	DOE and DOD	NWC (Note 2)	DOE	DOE	NWC (Note 2)
<b>Estimated Length of Phase</b>	Outgoing process updated annually	9-18 Months	3-6 Months	1-3 Years	1-3 Years	3-6 Months	Variable
<b>Documentation</b>	Phase 6.1 Report	<ul style="list-style-type: none"> <li>· MIR</li> <li>· Phase 6.2 Report</li> <li>· Updated MCs, STS &amp; ICDs</li> <li>· Draft DPP &amp; HPP</li> <li>· PID</li> <li>· IPR Report</li> </ul>	<ul style="list-style-type: none"> <li>· WDCR</li> <li>· Phase 6.2 A Report</li> <li>· DPP &amp; JIPP</li> <li>· Draft PCP</li> <li>· IPR Report</li> </ul>	<ul style="list-style-type: none"> <li>· AERs</li> <li>· Draft Addendum to the FWDR</li> <li>· PCP &amp; BCR</li> <li>· Updated DPP &amp; JIPP</li> <li>· Preliminary DRAAG Report</li> <li>· Approved MCs, STS &amp; ICDs</li> <li>· Preliminary NWSSG Report</li> <li>· IPR Report</li> </ul>	<ul style="list-style-type: none"> <li>· CERs</li> <li>· QERs</li> <li>· PMD</li> <li>· Updated DPP &amp; JIPP</li> <li>· SEP</li> <li>· IPR Report</li> </ul>	<ul style="list-style-type: none"> <li>· MAR</li> <li>· Final DRAAG Report</li> <li>· Addendum to the FWDR and Certification Letter</li> <li>· Updated DPP &amp; JIPP</li> <li>· Pre-Operational NWSSG Report</li> <li>· IPR Report (Note 5)</li> </ul>	<ul style="list-style-type: none"> <li>· End-of-Project Report</li> <li>· Final DPP</li> <li>· IPR Report (Note 5)</li> </ul>
<b>Major Reviews (Notes 3 and 4)</b>		IPR	IPR	Preliminary DRAAG Preliminary NWSSG IPR	IPR	Final DRAAG Pre-Operational NWSSG IPR (Note 5)	IPR (Note 5)

Note 1 – For Phase 6.1 activities that are jointly conducted by the DOD and DOE, the NWCSSC will be informed in writing before the onset of the activity.

Note 2 – The NWC may delegate its authority to the NWCSSC at any time.

Note 3 – This does not include the required DOE management reviews or reviews initiated by the cognizant laboratories.

Note 4 – The NWCSSC will periodically conduct reviews to evaluate program milestones, requirements and strategies (e.g. annual POG briefings to the NWCSSC).

Note 5 – An IPR and IPR Report will be required if a conditional MAR is released or an issue develops in Phases 6.5 or 6.6.

AERs – Advanced Engineering Releases

BCR – Baseline Cost Report

CERs – Complete Engineering Releases

DOD – Department of Defense

DOE – Department of Energy

DPP – DOE Project Plan

DRAAG – Design Review and Acceptance Group

FWDR – Final Weapon Development Report

ICDs – Interface Control Documents

IPR – Interlaboratory Peer Review

JIPP – Joint Integrated Project Plan

MAR – Major Assembly Release

MCs – Military Characteristics

MIR – Major Impact Report

NWC – Nuclear Weapons Council

NWCSSC – NWC Standing and Safety Committee

NWSSG – Nuclear Weapons System Safety Group

PCP – Product Change Proposal

PID – Planning Information Document

POG – Project Officers Group

PMD – Program Management Document

QERs – Qualification Evaluation Release

SEP – Stockpile Evaluation Plan

STS – Stockpile-to-Target Sequence

WDCR – Weapon Design and Cost Report

Source: Department of Energy

penetrator that could hold at risk a rogue state's deeply buried weapons" or "threaten a bunker tunneled under 300 meters of granite without killing the surrounding civilian population"<sup>122</sup> This proposed change in the law was supported by influential figures in the nation's weapons labs such as Paul Robinson, Director of the Sandia National Laboratory who told the *Post* that, "The United States will eventually need a new, low-yield nuclear weapon" because the explosive power of silo-busting thermonuclear warheads designed for the Cold War is "too high" to deter small nations in today's multipolar world.<sup>123</sup>

As noted in the previous chapter, the Bush administration has now formally requested the repeal of Furse-Spratt. Its draft of the Defense Authorization bill contains the following language:

Section 3136 — the so-called PLYWD legislation — has negatively affected U.S. government efforts to support the national strategy to counter WMD and undercuts efforts that could strengthen our ability to deter, or respond to, new or emerging threats.

A revitalized nuclear weapons advanced concepts effort is essential to (1) train the next generation of nuclear weapons scientists and engineers, and (2) restore a nuclear weapons enterprise able to respond rapidly and decisively to changes in the international security environment or unforeseen technical problems in the stockpile. PLYWD has had a "chilling effect" on this effort by impeding the ability of our scientists and engineers to explore the full range of technical options. It does not simply prohibit research on new, low-yield warheads, but prohibits any activities "which could potentially lead to pro-

duction by the United States" of such a warhead.

It is prudent national security policy not to foreclose exploration of technical options that could strengthen our ability to deter, or respond to, new or emerging threats. In this regard, the ... NPR urged exploration of weapons concepts that could offer greater capabilities for precision, earth penetration (to hold at risk deeply buried and hardened bunkers), defeat of chemical and biological agents, and reduced collateral damage. The PLYWD legislation impedes this effort.

Repeal of the so-called PLYWD law falls far short of committing the United States to developing, producing and deploying new, low-yield warheads. Such warhead concepts could not proceed to full-scale development, much less production and deployment, unless Congress authorizes and appropriates the substantial funds required to do this.<sup>124</sup>

Since the administration is so keen to revive the work done by Project PLYWD, what was that project? What weapons were intended for development under this name, and for what purposes?

### *Project PLYWD*

In 1991, U.S. European Command and Los Alamos National Laboratory were both pressing for development of new tactical nuclear weapons. The Air Force established Project PLYWD (Precision Low-Yield Weapons Design) to research options for new nuclear weapons to meet emerging threats. The weapons labs already had prepared some ideas that formed the basis for the new weapons programs. For example:

<sup>122</sup> Pincus, Walter, "Senate Bill Requires Study of New Nuclear Weapon," *Washington Post*, Monday, June 12, 2000, p. A02.

<sup>123</sup> *Ibid.*

<sup>124</sup> Sec. 221 of the Department of Defense Draft Defense Authorization Bill for FY 2004.

In Fall 1991, two Los Alamos scientists recommended the development of mini-nukes to counter “well-armed tyrants” in the Third World in an article in *Strategic Review*. The authors suggested four nuclear weapons designs:

- a 10-ton yield penetrating “micro-nuke” to destroy bunkers;
- a 100-ton yield “mini-nuke” to counter ballistic missiles;
- a 1000-ton yield “tiny-nuke” for battle-field attacks; and
- exotic technology warheads.<sup>125</sup>

In 1992 Congress learned that these proposals had become research programs, and that some in the labs were discussing so-called ‘tailored effects weapons’ for use in contingencies in the Third World. As Kristensen and Handler note:

The Energy Department matched its words with deeds. The Department of Energy budget request for FY 1995 specified several Phase I and Phase II studies having taken place in FY 1993 in support of Defense Department missions involving low-yield nuclear weapons, including a “phase I study for Air Force Low Yield Warhead Design.”

In 1993, the Joint Chiefs of Staff also endorsed the utility of low-yield nuclear weapons. In their new “Doctrine for Joint Nuclear Operations,” the Chiefs advocated that, “a selective capability of being able to use lower-yield weapons in retaliation, without destabilizing the conflict, is a useful alternative for the U.S. National Command Authority (NCA).”<sup>126</sup>

This work was brought to an end by the adoption of the Furse-Spratt provision in the FY94 National Defense Authorization Act, prohibiting research and engineering development on warheads with a yield below 5kt. The provision states that:

a) UNITED STATES POLICY — It shall be the policy of the United States not to conduct research and development which could lead to the production by the United States of a new low-yield nuclear weapon, including a precision low-yield warhead.

(b) LIMITATION — The Secretary of Energy may not conduct, or provide for the conduct of, research and development which could lead to the production by the United States of a low-yield nuclear weapon which, as of the date of the enactment of this Act, has not entered production.<sup>127</sup>

However, it was still possible for new nuclear capabilities to be produced within the restrictions of the Act, above the specified threshold. During the 1990s one modified weapon with a new capability entered the arsenal.

### *The B61-mod 11*

The first of these new weapons modifications to reach the nuclear arsenal is the B61-mod 11. This is the eleventh modification of the B61, a bomb that first entered the arsenal in 1968. The B61 is deployed with the U.S. Air Force in strategic and tactical roles. It is believed to be the only U.S. nuclear weapon type now deployed in Europe.

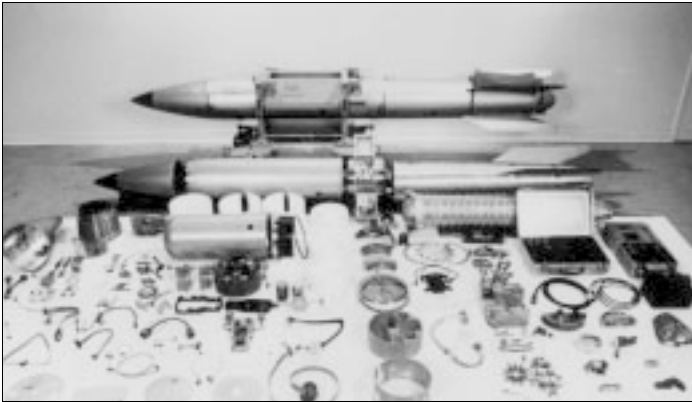
The B61-11 has a wide range of available yields depending on the task for which it is to be used. A DOE report in early September 1995<sup>128</sup> said that the forthcoming modification could be compared

<sup>125</sup> Kristensen, Hans, Handler, Joshua, *Changing Targets: Nuclear Doctrine from the Cold War to the Third World*, Greenpeace International, March 1, 1995.

<sup>126</sup> *Ibid.*

<sup>127</sup> National Defense Authorization Act for Fiscal Year 1994 (PL 103-160): Sec. 3136. Prohibition on Research and Development of Low-Yield Nuclear Weapons.

<sup>128</sup> Johnson, Kent, et al., *Stockpile Surveillance: Past and Future*, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, and Sandia National Laboratories, September 1995.



B-61

in its effects to the B61-7, which has yields from 10 to 340 kilotons (kt). The B61 can be configured to a yield as low as 0.3kt. The lower end of the yield range would be ideal for military counterproliferation tasks.

And these are exactly the tasks that the military has in mind for the B61. An official of Los Alamos confirmed in 1995 that, “[t]he services are looking at redeploying an existing weapon in such an earth penetrating warhead to address hardened targets...”<sup>129</sup> The B61-11 is thought to be able to burrow up to 20ft before exploding.

As the British American Security Information Council writes:

About 50 B61-11 bombs are in the operational stockpile. This weapon is the newest in the U.S. arsenal. First originated in 1993, the Mod 11 is designed as a “bunker buster” — capable of attacking hardened targets underground. The B61-11 is a replacement for the B53, which was assigned the bunker buster role because of its large yield. The Mod 11 is designed to penetrate targets before exploding, and thus in theory does not need as large a yield to fulfill its mission.<sup>130</sup>

The B61-11 was deployed to Europe in 1997, and full deployment was completed in 1998. The United States and NATO have the capability in the European theater to carry out nuclear counterproliferation missions for the defeat of hardened and buried targets, as well as biological and chemical agents.

### *A New Generation of Nuclear Weapons?*

While a clear military requirement has not yet been presented by the Pentagon regarding new roles and capabilities, the NPR stated a mission for nuclear weapons in counterproliferation. Congress has provided small amounts of funding for research work on new capabilities. President Bush spoke in favor of a ‘flexible’ nuclear arsenal during his campaign, and on May 1, 2001, in his major defense policy speech he said:

...[T]his is still a dangerous world; a less certain, a less predictable one. More nations have nuclear weapons and still more have nuclear aspirations. Many have chemical and biological weapons. Some already have developed a ballistic missile technology that would allow them to deliver weapons of mass destruction at long distances and incredible speeds, and a number of these countries are spreading these technologies around the world.<sup>131</sup>

He continued:

In such a world, Cold War deterrence is no longer enough to maintain peace, to protect our own citizens and our own allies and friends. We must seek security based on more than the grim premise that we can destroy those who seek to destroy us.<sup>132</sup>

<sup>129</sup> *B61-11 Concerns and Background* by the Los Alamos Study Group. This report is available at [www.lasg.org](http://www.lasg.org) and is excellent background reading on the B61-11 bomb.

<sup>130</sup> Young, Stephen, *Taking the Pulse: Nuclear Warheads*, [www.basicint.org](http://www.basicint.org) available on June 29, 2003.

<sup>131</sup> President Bush’s Speech at the National Defense University, Washington DC, May 1, 2001.

<sup>132</sup> *Ibid.*



With the NPR release and from subsequent leaked classified sections of the NPR, it became clear that the President was calling for the development of a new nuclear capability. As NNSA Deputy Administrator for Defense Programs, Everett Beckner told Congress in his statement to the Senate Armed Service Committee on March 14, 2002:

The Nuclear Posture Review (NPR) states that the number, composition, and character of the nation's nuclear forces ought to reflect the reality that the Cold War is over and that required capabilities may now need to be different. For example, current weapons in the stockpile cannot hold at risk a growing category of potential targets deeply buried in tunnel facilities, possibly containing chemical, biological, nuclear, or command and control facilities. As a result the NPR endorsed NNSA's Advanced Concepts Initiative that could provide the Nation with options that could be considered for future production and deployment. Also, as required by the NPR, it would provide an opportunity for NNSA and its contractors to exercise critical skills necessary for the long-term sustainment of the nation's defense. By direction of the Nuclear Weapons Council, and in response to an Air Force requirement, the initial focus of the Advanced Concepts Program will be the Robust Nuclear Earth Penetrator (RNEP), for which \$15.5 million is requested in FY 2003 as part of the Directed Stockpile Research and Development activity. The three-year RNEP Feasibility Study will assess the feasibility of modifying one of two candidate nuclear weapons currently in the stockpile to provide enhanced penetration capability into hard rock geologies and develop out-year costs for the subsequent pro-

duction phases, if a decision is made by the Nuclear Weapons Council to proceed.

In response to subsequent questioning, he named the B61-11 and the B83 as the two candidate bombs for the task of striking the hardest and most deeply buried targets.

The B83 was first produced in June 1983. The United States is thought to have deployed some 650 of these weapons. The B83 has a yield of up to 1.2 megatons, a huge explosive capacity. It is likely that this weapon could be modified for use against the deepest of buried and hardened targets because of its potentially enormous explosive yield.

Despite the denial in the legislation that there is any intent at this stage to deploy the weapons that would be developed, media reports suggest otherwise. For example, in an interview with the *San Jose Mercury News*, Fred Celec, the deputy assistant to the secretary of defense for nuclear matters stated strong support for the RNEP saying that if the research is successful, "It will ultimately get fielded."<sup>133</sup> Weapons scientists told the *Mercury News* that, "The United States has worked on nuclear earth penetrators for decades, and scientists involved in the project say they expect to succeed..."<sup>134</sup> According to the paper:

The design contest between Livermore and Los Alamos is expected to last two to three years and cost about \$15 million per year. The winning lab will then shift to an engineering phase, a move that would require congressional approval and funding.<sup>135</sup>

The administration is pressing ahead with the RNEP. Recent reports indicate that after meeting reporting requirements, the planned three year study on research design cost and feasibility will go forward, possibly on an accelerated schedule.

<sup>133</sup> Stober, Dan, "Administration Moves Ahead on Nuclear 'Bunker Busters'," *San Jose Mercury News*, April 23, 2003.

<sup>134</sup> *Ibid.*

<sup>135</sup> *Ibid.*

### *Other Advanced Concepts*

Some nuclear enthusiasts fear that the B61-11 and other weapons in the arsenal may still be too large, or otherwise inadequate, to perform counterproliferation missions, and that they would cause excessive environmental damage and civilian casualties, thus rendering them unusable as the political consequences of their use would be too high. These advocates for a new nuclear arsenal have called for the development and deployment of so-called ‘mini-nukes,’ or nuclear weapons tailored for a variety of missions. The NPR also calls for other “nuclear weapon options that might provide important advantages for enhancing the nation’s deterrence posture,” including “possible modifications to existing weapons to provide additional yield flexibility” and “warheads that reduce collateral damage.”

The advanced concepts that the weapons labs had in mind in the early 1990s have not disappeared. Rather, these concepts have been refined. Some idea of what may emerge from the ACI, which the administration initially wishes to fund at the level of \$6 million in FY04, and more in coming years, can be found in the Lawrence Livermore National Laboratory (LLNL) report *Whither Deterrence?* published in 2002.

The report, published by the Center for Global Security Research of LLNL, calls for the development of new warheads by 2015, including a ‘Theoretical Enhanced Radiation’ (TER) warhead for use against ‘manpower intensive targets,’ and a ‘Reduced Residual Radiation Weapon’ (RRR) which would be used to reduce collateral damage and make a nuclear weapon more ‘useable politically.’ Differing versions of these warheads would be produced for different targets, for example, a TER might be used against a biological weapons target.<sup>136</sup>

On May 20, 2003 the Senate approved the repeal of the Furse-Spratt ban. The House had

previously voted to amend it. Either version would allow research to begin on the kinds of weapons described in this section.

### *Available Nuclear Weapons*

In addition to new weapons research, the United States has a number of nuclear weapons designs already available that could be brought off the shelf and into the arsenal, possibly even without nuclear testing. This design archive has been built up over the years, and some of them are designed to function at the low- or sub-kiloton level required for a mini-nuke.

For example, the 1955 Operation Teapot tests at the Nevada Test Site consisted of 14 tests of low- or medium-yield nuclear devices. Devices tested included the XW-30 fission warhead, tested on February 22, 1955. Predicted to have a 4kt yield, it produced a 2kt yield. These tests were part of a series intended to produce a reduced fallout warhead.

On March 23, 1955, in the same series, the Ess test was of the Ranger Able U-235 core in a Mk-6 HE assembly. Ess stood for “Effects Sub-Surface, and this device was an atomic demolition munition, commonly called a nuclear mine. This produced a yield of 1.2kt.<sup>137</sup>

Either of these devices probably could be manufactured in a form necessary to meet the requirement for a mini-nuke. However, the candidate warhead said to be most favored is the Davy Crockett — the W54.

The Davy Crockett was fielded in Europe from 1961 to 1971. It was designed to be fired from a recoilless rifle, and could even be mounted on a jeep for firing. This was the smallest and lightest nuclear weapon ever fielded by the United States, and also one of its most robust. In tests, the W54 produced yields as low as 0.01kt, or ten tons of TNT equivalent.<sup>138</sup>

<sup>136</sup> *Whither Deterrence?* Final Report, Center for Global Security Research, Lawrence Livermore National Laboratory, 2002, p. 37.

<sup>137</sup> Full information on Operation Teapot and all U.S. nuclear weapons can be found at the web page of the Federation of American Scientists, [www.fas.org](http://www.fas.org).

<sup>138</sup> More detailed information about the Davy Crockett can be found at the U.S. Nuclear Weapons Cost Study Product page of the Brookings Institution website at [www.brook.edu/FP/projects/nucwcost/davyc.htm](http://www.brook.edu/FP/projects/nucwcost/davyc.htm).

New designs for weapons built around these warheads would need to be tested. If the warheads were simply rebuilt to original specifications, there would be no need from the pure design point of view to conduct full-scale nuclear tests. If significant modification to physics packages of old weapons designs were involved then a resumption of testing is likely.

However, military commanders are unlikely to accept weapons into the arsenal that have not been fully tested. There is a danger that the pursuit of these new nuclear capabilities, in particular for the Agent Defeat Weapon program, will lead to a resumption of nuclear testing. (This is-

sue is discussed in Chapter Eight.)

It is clear from this discussion that there are some in the DOE weapons labs, as well as amongst DoD civilian appointees who have a strong commitment to the research and development of new nuclear weapons capabilities. This drive for a new generation of nuclear weapons is intensely controversial, and is even the subject of debate in DOE and DoD. In Congress many, even on the Republican side of the aisle, doubt the utility of such weapons and worry about the effects of such policies on the global non-proliferation regime and on U.S. security. (These questions are discussed in Chapter Eight.)



# Chapter Five:

## The Environmental and Health Consequences of Nuclear Weapons Use

The new counterproliferation policies that the Bush administration has advocated and begun to implement since 2001, and the range of nuclear weapons that the administration is seeking to begin research and development work on, mean that an evaluation should be made of the human and environmental effects of these weapons. These consequences must be fully understood if the acceptability, or lack thereof, of the use of nuclear weapons against NBC weapons sites is to be fully assessed. As this chapter demonstrates, no responsible decision maker could decide to press ahead with a counterproliferation mission involving the use of nuclear weapons.

PSR physicians have demonstrated the impacts of nuclear weapons use in many medical journal articles since the founding of the organization in 1961.<sup>139</sup> PSR physicians and analysts have conclusively shown that even a relatively small use of nuclear weapons would bring catastrophic ca-

sualties that would overwhelm the medical resources of the United States, let alone of the developing countries where the use of nuclear weapons in counterproliferation missions is being considered. For example, a country such as Iran or North Korea could make no preparations for, and would have no sensible response to, a U.S. attack with even one nuclear weapon.

Recognizing this reality, the viability of plans from nuclear weapons advocates for a new generation of nuclear weapons rely on the capability of such weapons to contain the effects of the nuclear blast, thereby minimizing civilian deaths, radioactive contamination and other collateral damage. Without such containment, nuclear weapons exploded at ground level are much dirtier than airburst weapons; they expel much more radioactive debris as a result of exploding on the ground. The limited penetration capability of any weapons makes such fallout a certainty. The 'Ess' nuclear test referred to in Chapter Four, for ex-

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<sup>139</sup> The most recent article can be found in the April 30, 1998 *New England Journal of Medicine*. It is Forrow L., Blair B.G., Helfland I., Lewis G., Postol T., Sidel V., *et al.* "Accidental nuclear war — a post cold war assessment," *N Engl J Med* 1998; 338: 1326-1331. PSR has additional material published in, *inter alia*, the *British Medical Journal*.

ample, was a small but dirty nuclear explosion. As the Los Alamos Study Group has written:

The 1-kiloton “Ess” shot was conducted on 3/23/55 at the Nevada Test site by the Los Alamos Scientific Laboratory. It was a “crater” shot... The Ess device had a yield somewhat smaller than the weapons Dr. Robinson proposes for his “Capability Two,” i.e. Third World, arsenal.

A 1-kiloton explosion occurring at a depth of 50 ft in dry soil would create a crater of about 75 ft. in depth with a radius of about 135 ft.

A bunker located 200 ft. deep directly beneath the blast would probably ride out the explosion, and a very shallowly buried thin concrete arch structure 200 ft or more from ground zero almost certainly would. The air blast would, however, knock down nearly all homes and apartments — and kill nearly all the people in them — out to distances of greater than half a mile from the blast.

Those survivors of the blast who were exposed to the fission products incorporated in the dirt shown and in early fallout from the resulting cloud, could expect to receive anywhere from many hundred rems to a few thousand rems of radiation. Any such dose would be acutely fatal.

Fallout would also extend farther downwind to more distant and unpredictable locations, creating both acute and chronic casualties. To take a specific example, if the target in question were the Iraqi presiden-

tial bunker located in south-central Baghdad, there would be very roughly 20,000 people located within one-half mile of this target, making this number a rough lower bound for the estimated civilian casualties in this case.<sup>140</sup>

That this casualty estimate is very much on the low side was shown by modeling work undertaken by the Natural Resources Defense Council (NRDC). Using DoD software, NRDC has estimated the casualties of a nuclear attack on Baghdad could be around 400,000 if a 50kt weapon were used – something entirely likely if a bunker were the target.<sup>141</sup>

The hopes of those who support the development and deployment of a new generation of nuclear weapons, whether for bunker busting or for agent defeat, therefore rest in their ability to design a weapon that will penetrate far enough below the surface to explode, destroy its target and seal in all debris where the bomb explodes.

Recent research by physicist Rob Nelson of the Federation of American Scientists shows that this hope is an illusion. Nelson demonstrates that a 1kt explosion would have to be buried below 550ft underground if it was to seal itself in, and even then there is a chance that it could vent radioactive material up the shaft through which it had burrowed toward its target. By means of some simple calculations, Nelson shows that penetration and complete containment is simply impossible, even if a warhead could be built that was robust enough to survive the intense pressures of such deep penetration.<sup>142</sup>

Much work has been done since the Hiroshima and Nagasaki bombings on the consequences of nuclear attack for both soldiers and civilian populations. NATO, as part of preparation for conducting operations in an NBC environment and un-

<sup>140</sup> Mello, Greg, “Beware the Nuclear Warrior,” *Albuquerque Tribune*, April 12, 2001.

<sup>141</sup> *Consequences of using Weapons of Mass Destruction in a U.S.-Iraq*, Press Backgrounder, NRDC, March 13, 2003.

<sup>142</sup> *Low-Yield Earth-Penetrating Nuclear Weapons*, *FAS Public Interest Report*, January/February 2001, Vol. 54, No.1. The full text of the paper can be found at [www.fas.org](http://www.fas.org), available on June 29, 2003.

derstanding the effects of its own nuclear weapons, has analyzed the consequences that would result from nuclear weapons use. The Alliance handbook on medical aspects of operating in an NBC environment contains the following passage:

### THE HEALTH EFFECTS OF A NUCLEAR EXPLOSION

A nuclear bomb explosion produces both a blast wave and intense thermal radiation. A blast wave causes rapid compression and decompression of the surrounding air, which can damage lung tissue and the gastrointestinal system, ultimately leading to hemorrhaging or an air embolism. The heat from a 100-kt bomb, which is eight times stronger than the 12.5-kt bomb used over Hiroshima, creates air temperatures above the boiling point of water, producing super-fires, toxic smoke, and gases. This can lead to a near 100 per cent death rate within 4.3km of the explosion. Heat from such a blast causes burns directly, through the skin's absorption of thermal energy and indirectly through exposure to fires.

Those who survive such a blast would not have access to adequate medical care. The destruction of transportation, energy and communication systems would make it impossible for victims to be moved to surviving medical facilities. Forced into crowded shelters, the survivors, whose immune systems would be weakened by the radiation would be at risk for epidemics. Fallout from just one 100-kt blast would create a radiation zone of 30-60 square kilometers. Medical personnel would not be able to treat those in affected areas because of the danger of radiation exposure. The exposed patients themselves could pose

the risk of radioactive contamination for health professionals. Even limited contact with radiation affects the brain's ability to regulate its blood supply, lowers fertility, and increases the probability of cancer. The radiation received from the contaminated area is compounded by the ingestion and inhalation of contaminated substances. The result could lead to more secondary deaths than initial deaths. Long term survivors could be left with damaged cells which may become cancerous, or damaged DNA, which can lead to genetic mutations and birth defects in future generations.<sup>143</sup>

Any nuclear weapons use would be absolutely catastrophic in human and environmental terms. The likelihood is that any attack on an NBC weapons facility would spread radioactive fallout over a wide area, greatly intensifying the medical consequences for the civilian population in the region. Such human cost would ensure an enormous political toll for any nation that chose to use nuclear weapons, particularly in a first strike.

In the case of a nuclear weapons attack on a chemical or biological weapons facility, there is a strong likelihood of the release of toxins or biological agents into the atmosphere along with ra-

PSR physicians and analysts have shown conclusively that even a relatively small use of nuclear weapons would bring catastrophic casualties that would overwhelm the medical resources of the United States, let alone of the developing countries where the use of nuclear weapons in counterproliferation missions is being considered.

<sup>143</sup> Excerpted from *NATO Handbook on the Medical Aspects of NBC Defensive Operations*, Part 1-Nuclear, Departments of the Army, the Navy, and the Air Force, February 1, 1996.

dioactive fallout. As detailed above, Rob Nelson has shown that it is almost impossible for a weapon to burrow deeply enough to destroy any biological or chemical agents in the target site, or to contain the explosion and material distributed as a result of the blast. Evidence from the Persian Gulf War has shown the potential for the dissemination of toxins or biological agents that could greatly increase the medical consequences resulting from the attack.<sup>144</sup> The release of a chemical agent most likely would have only localized effect, with significant civilian casualties occurring only if the attack took place in an urban area. Chemical agents generally disperse quickly in the atmosphere, and so the main danger would be from the use of a nuclear weapon.

In the case of biological weapons the effects could be extremely difficult to predict. The release of a virus or other biological weapon into the environment could have widespread effects on civilians far beyond the country targeted. Certainly the targeted civilian population would be at great risk. With medical facilities dysfunctional or destroyed there would be few treatment options available for patients. And a population under attack is likely to be short of food and water, physically and psychologically traumatized and with their immune systems so suppressed, such a population would therefore be at greater risk of contracting disease. This would enhance the effects of a biological agent.<sup>145</sup>

There also must be considerable concern that a nuclear weapon could be used mistakenly on the wrong target. The truth is that bombs in war go astray, and that there is no 100% guarantee that a nuclear weapon would be dropped in the correct place. Alternatively, a target could be chosen in error. The U.S. attack on the Chinese embassy in Belgrade during the 1999 Kosovo War is the best-known recent example of a bomb that hit the intended target, only for the intelligence that led to the attack to prove to have been disastrously bad.

The 1998 cruise missile attack on the Sudanese pharmaceutical factory at El Shifa is an example of a counterproliferation mission gone wrong. The plant did not, as the CIA claimed, produce chemical weapons, nor did the factory have any links to Al-Qaeda. Its destruction by the United States was a public relations disaster in the region. The effects of a mis-targeted attack on a civilian population are likely to be even worse than an attack on a weapons facility remote from civilian areas.

The use of nuclear weapons is extremely unlikely to be proportionate to a potential threat. The human and environmental factors involved should mean that nuclear weapons are never used, let alone for preemptive attacks on areas where civilian casualties are certain to result. This is all the more certain when a wide variety of conventional weapons are available in the event that a counterforce strike proves unavoidable.

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<sup>144</sup> Sidel MD, Victor W., *et al*, *The Threat of Low-Yield Earth-Penetrating Nuclear Weapons to Civilian Populations: Nuclear Bunker Busters and Their Medical Consequences*, IPPNW, March 2003. See also Nelson, Robert W., "Low-Yield Earth-Penetrating Nuclear Weapons," *op. cit.*

<sup>145</sup> For a more detailed treatment of these questions see Sidel MD, Victor W., *et al*, *ibid.*



# Chapter Six:

## Conventional Weapons Options for Counterproliferation Missions<sup>146</sup>

C ounterproliferation as a concept makes sense for the irreducible minimum of threats that are impossible to resolve through diplomatic means. Since this is so, finding mechanisms and forces that make counterproliferation possible to implement is essential. Since, as discussed in the previous chapter, the effects of nuclear weapons are so terrible as to be self-detering in all but the most extreme circumstances, the need for advanced conventional weapons capable of defeating the deepest and hardest bunkers or destroying chemical and biological agents *in situ* becomes obvious. This point is reinforced by the political complications involved even with the consideration of the use of nuclear weapons. While the legitimacy of preemptive or preventive strikes or wars would still be in question, the use of advanced conventional weapons against NBC weapons proliferators would be widely acceptable.

The U.S. military has been pursuing advanced conventional weapons options for counterpro-

liferation missions since the early 1990s. Each of the branches of the armed services is pursuing its own programs in this regard. These Advanced Concept Technology Development (ACTD) programs are coordinated and assisted by DTRA, and these include:

#### U.S. AIR FORCE PROGRAMS:

Near-term programs focus on development and production of existing penetrating weapons designs. Included in this effort are:

The Enhanced GBU-28 program, integrating the 5,000lb EGBU-28 laser guided bomb onto the B-2... expanded testing of the GBU-28 in hard rock formations... equipping 50 Conventional Air-Launched Cruise Missiles (CALCM) with a penetrating warhead based on the Advanced Unitary Penetrator bomb; application of the Joint Air-to-Surface Standoff Missile (JASSM) against many targets in the HDBT set...

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<sup>146</sup> For an in-depth treatment of the issues in this chapter, see Levi, Michael, *Fire in the Hole: Nuclear and Non-Nuclear Options for Counterproliferation*, Carnegie Endowment for International Peace, November 2002.

Supporting these systems is the FMU-159/B Hard Target Smart Fuze that will provide void and layer counting, and depth of burial capabilities for air-to-ground penetrator weapons.

U.S. NAVY PROGRAMS:

The U.S. Navy's efforts include: development of the GBU-24 (BLU-116 penetrator), an improvement of the existing BLU-109; development of a variant of the Joint Stand-off Weapon (JSOW) with a penetrating warhead, using British Royal Ordnance Augmenting Charge (BROACH) technology; consideration of a penetrating version of the Tactical Tomahawk Land Attack Missile ...research on technologies for a supersonic cruise missile ....and participation with the Army in the Tactical Missile System Precision Penetrator (TACMS-P) missile program...

U.S. ARMY PROGRAMS:

The primary U.S. Army program is collaboration with the Navy in the TACMS Penetrator ACTD...<sup>147</sup>

These approaches, with fusing that can count how many layers of walls and rooms the bomb has passed through, matched with new concepts in shaped charges (BROACH), allow far deeper penetration of conventional weapons than was true in the past. These shaped charges, or multiple charges in one warhead, provide for the direction of explosive energy into the target. Functional kill (that is the disabling of a target), and even destruction of all but the deepest bunkers will become easier as these new weapons come into service.

Other weapons system improvements include radical new penetration aids, allowing the hardened protection of a bunker to be struck and a

warhead to survive impact and explode inside the intended target. For example, in 1999 Sandia National Laboratory patented designs for new penetration aids, including a warhead that acts like a dum-dum bullet. In this warhead, a floating weight in the front of the warhead would be expelled from the warhead on contact with the target. This weight would penetrate the target, creating a hole through which the warhead could pass. This reduces the shock of penetration for the explosive payload of the missile, and means that an agent defeat weapon or bunker busting high explosive can be delivered to the target with a greater chance of remaining effective. Another option under research by the U.S. Air Force is a conventional intercontinental ballistic missile that could be delivered to a target anywhere in the world from the United States, or from a ballistic missile submarine.

In the area of chemical and biological agent defeat, the Air Force Agent Defeat Weapon program is conducting a number of studies on conventional options for this task. These include modeling the behavior of chemical and biological agents when dispersed through attack by explosives, heat, radiation, ultra-violet radiation and even bleach, as well as their behavior when fragmented.

Under the *Agent Defeat Ordnance* program, the Air Force Research Laboratory is developing: (1) low-collateral-effects fragmentation warheads that minimize overpressure and create a neutralizing atmosphere for exposed or aerosolized agent, (2) advanced fuzing techniques that assist in precise control of weapon function timing and payload dispersal, (3) new penetrator designs that facilitate payload dispersal, (4) methods to quantify/predict target-warhead interaction and collateral effects...<sup>148</sup>

<sup>147</sup> *Report to Congress on the Defeat of Hard and Deeply Buried Target*, Section 5.1.3 Defeat of HDBTs, pp. 16-18.

<sup>148</sup> *Ibid*, Section 5.2 NBC weapons Agent Defeat, p. 19.

Many of these methods are likely to prove effective, and would certainly be more acceptable than nuclear weapons designed for the same purposes.

### THERMOBARIC WEAPONS

Public attention has been directed towards a new class of weapon, thermobaric bombs. A small number of these weapons were brought into service after a crash program of development and construction following the September 11 attacks.

These weapons produce a fireball capable of reaching temperatures up to 3000°C, and blast overpressure in excess of 430psi. The exact capabilities of the BLU-118B are classified, but DTRA has reported that significantly enhanced thermal and blast effects are produced by the bomb. The fireball not only burns, it creates a vacuum which kills all in its area. The fireball is intended to neutralize chemical or biological agents, and programs are underway to improve this characteristic of thermobaric weapons, including a U.S. Navy program to mix thermobaric explosive with aluminum. The pressure wave generated by the explosion can not only kill personnel in a bunker, but destroy and disable equipment. The immediate effects in a confined space such as a tunnel or bunker are not unlike those of a small nuclear weapon, but without the radiation and longer term problems of fallout.

The BLU-118/B was first tested at the Nevada Test Site in December 2001, and has been used to attack caves in Afghanistan on at least two occasions. The bomb is composed of the BLU-109 penetrating warhead and thermobaric explosive, PBXIH-135. This bomb is essentially a high-tech version of a fuel-air explosive (FAE), and functions in the same manner as classic FAEs but with much greater lethality.

This combination of enhanced penetration and new explosive effects in advanced conventional weapons, notably thermobaric bombs, are likely to prove extremely effective against HDBTs containing NBC weapons facilities. Only the deepest facilities would be safe, and those are hard to attack even with nuclear weapons.

If the United States and other states moving towards counterproliferation policies wish to preserve the global norm against the use of nuclear weapons, then they should restrict their arsenals for the implementation of counterproliferation to these high tech weapons. The U.S. and its allies have a strong interest in taking this path. It is in U.S. interests to prevent the spread of all NBC weapons, and this task is made harder when the U.S. attaches a high political and military value to its own nuclear forces. When the U.S. considers the paradoxical use of nuclear weapons to promote disarmament, it creates political opposition that need not exist and sends a strong message of the utility of nuclear weapons to potential adversaries. Conventional weapons have most, if not all of the advantages of nuclear weapons in counterproliferation roles without any of the attendant problems. The current, and future, administrations would be well advised to pursue advanced conventional weapons options intensively.

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# Chapter Seven:

## Legal and Military Constraints on Military Operations

**T**he ability of U.S. forces to strike more or less at will across the globe is not in doubt. However, political realities mean that even the aggressively unilateralist Bush administration has to take account of international opinion, as well as legal and military constraints on their actions. The limits of the use of military power are established in international law, and have been developed over centuries. Perhaps more important for an administration that seems to hold the United Nations in something close to contempt, there are also practical limits to the ends that can be achieved with the use of military strikes. These two aspects of the legitimacy of counterproliferation are closely entwined and both are examined in this chapter.

### COUNTERPROLIFERATION AND INTERNATIONAL LAW: CAN PREEMPTIVE OR PREVENTIVE STRIKES BE JUSTIFIED LEGALLY?

The legality of the use of preemptive or preventive military operations to attack NBC weapons

facilities is questionable. The use of nuclear weapons in such operations even more so. These questions are controlled by two areas of international law, which Brian Foley defined as follows:

the international law on whether force can be used to address a breach of or threat to international peace and security... is called the "*jus ad bellum*." The law concerning the conduct of war is called the "*jus in bello*" and is set forth mainly in the Geneva Conventions.<sup>149</sup>

In this context, it is useful to examine some questions that have been asked by others writing on counterproliferation issues. Barry Schneider, in *Future War and Counterproliferation*, quotes Brad Roberts, and elaborates a set of rules and conditions that would need to be fulfilled before moving ahead with military action. Roberts argues that just war theory in international law would require leaders of state who are con-

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<sup>149</sup> Foley, Brian, *Recent (Indecent) Exposures: Impact on International Law of U.S. Policies Toward Iraq and North Korea*, Paper for the PSR/CDI Conference, "U.S. Nuclear Weapons and Counterproliferation," February 26, 2003. This paper, with a much fuller treatment of international law issues, is available at [www.psr.org](http://www.psr.org).

sidering preemption against an emerging NBC threat to follow five rules:

Taking action only after peaceful remedies are exhausted.

Taking only those actions that have a reasonable chance of success.

Taking actions proportional to the injury or anticipated injury about to be suffered.

Acting only in self-defense.

Taking action only if exercised by a competent authority.

When is the threat sufficient to justify the use of force in response to it? The situation ripe for counterforce action is one where a number of conditions are present:

The enemy is very hostile in words and behavior.

The adversary has shown intent to inflict injury.

There is an active preparation for the use of weapons of mass destruction.

The enemy state is also engaged in illegal acts that threaten the peace and stability of the region.

It is concluded in a U.S. net assessment that more lives and vital interests of the United States and its allies will be lost by

inaction in the face of imminent danger than by taking offensive action.<sup>150</sup>

Clearly these are difficult areas because as Foley says:

International law on the use of force is at once clear and blurry. Clear, because according to the UN Charter, nations may not use force or the threat of force in their relations with other countries.<sup>151</sup> It is up to the Security Council to decide whether there is a breach or threat of international peace and security, and whether force is warranted to correct it.<sup>152</sup> Individual nations may use force only in self-defense, and then, only if an armed attack has occurred, and only until the Security Council can take over.<sup>153</sup> ...Yet what is clear on paper can become blurred, because state practice is regarded as shaping the law. In short, what states do, on this view, if consented to by other states, is legal and becomes law.<sup>154</sup>

The legal questions concerning the legitimacy of preemptive or preventive strikes, particularly when they may involve the use of nuclear weapons are extremely complex. It is essential to arrive at some understanding of the issues involved, and this chapter sets out arguments concerning both the way countries go to war, and the way they fight those wars once started.

### *Jus Ad Bellum*

When is going to war for disarmament justified? Can preemptive strikes against NBC weapons facilities ever be legal? This is a key question to be

<sup>150</sup> Roberts, Brad, *Military Strikes Against NBC-Armed Rogue States: Is there a Moral Case for Preemption?*, Unpublished paper prepared for a project of the Ethics and Public Policy Center on Just War After the Cold War, Washington DC, 1996. Quoted in Schneider, *op. cit.*

<sup>151</sup> UN Charter, Article 2 (<http://www.un.org/aboutun/charter/>).

<sup>152</sup> See UN Charter, Chapter VII (<http://www.un.org/aboutun/charter/>).

<sup>153</sup> UN Charter, Article 51 (<http://www.un.org/aboutun/charter/>).

<sup>154</sup> Foley, Brian, *ibid.*

asked in the light of the development of U.S. policy over the past decade. Preventive strikes against NBC weapons facilities in wartime would excite little controversy. It is less clear that an attack from out of the blue in time of peace would be similarly sanctioned. That said, international law allows for a preventive attack if it is clear that there is an imminent threat of war. This concept has a long precedent in history. In 1625, Hugo Grotius, the natural law philosopher, theologian, and eminent thinker on the law of war wrote:

The first just cause of war ...is an injury, which even though not actually (yet) committed, threatens our persons or our property.<sup>155</sup>

The right of self-defense is enshrined in Article 51 of the UN Charter, and any country threatened with imminent NBC weapons attack could make a case under Article 51 that a preemptive strike is justified. It is likely that the court of world opinion would agree. However, the controversy that a preventive attack might generate would revolve around whether there was clear proof that it prevented an *imminent* attack. If such attack was not imminent, is a counterproliferation strike justified simply to remove NBC weapons capability from the hands of a potential foe?

If the possessor of NBC weapons is a State Party to the Non-Proliferation Treaty (NPT), the Chemical Weapons Convention (CWC), and the Biological and Toxic Weapons Convention (BTWC), then its possession of NBC weapons is clearly illegal under international law. However, those treaties do not provide for military action to deny such capabilities to their States Parties. No individual nation can arrogate to itself the right to dispossess another of such weapons simply on the grounds that it dislikes the fact of their possession, or that the foreign government is unfriendly. It may be that a resolution by the United Nations Security Council could provide sufficient

legal basis for a preventive attack, especially as the basis of state sovereignty is shifting so dramatically at present, but the approval of the Security Council would be key as it was in the Gulf War and in NATO actions in Bosnia.

In the post-Cold War world the notions of the sovereignty of states have been shifting exceptionally fast. Principles that had their genesis in the 1648 Peace of Westphalia are on the decline. Westphalia established the system *cuius regio, eius religio*, whereby a prince had the right to set the state religion for his own territory. It also balanced this right with provisions that allowed for mixed religion in cities or provinces where this already existed. The system was, from the very beginning, less rigid than current pundits would have one believe. However, as the quotes from *Foreign Policy* magazine say:

In the contemporary world, sovereignty primarily has been linked with the idea that states are autonomous and independent from each other. Within their own boundaries, the members of a polity are free to choose their own form of government. A necessary corollary of this claim is the principle of non-intervention: one state does not have the right to intervene in the internal affairs of another.

This would mean that no nation, short of acting to prevent an imminent attack, could have the right to target another even to destroy NBC weapons stocks or facilities. However, *Foreign Policy* also notes that:

...this norm has been challenged frequently by inconsistent principles (such as universal human rights) and violated in practice (the U.S.- and British-enforced no-fly zones over Iraq).<sup>156</sup>

<sup>155</sup> Grotius, Hugo, *The Law of War and Peace*, Book II, Chapter 1, Section 2. Quoted in Schneider, Barry R., *Future War and Counterproliferation: U.S. Military Responses to NBC Proliferation Threats*, Praeger Publishers, 1999.

<sup>156</sup> Sovereignty, *Foreign Policy Magazine*, January/February 2001.

Ambassador Edward D. Marks has argued that this murky situation over the rights of states has been dramatically transformed by the UN actions after the NATO air strikes in Kosovo in 1999. Writing in *American Diplomacy*, he states that:

Although the international rules of the road set out in the Treaty of Westphalia have been modified over the years, most recently and notably by the Charter of the United Nations, they remained more or less intact until June 10, 1999, when the UN Security Council approved Resolution 1244 (1999). With that Resolution on Kosovo, the world's major countries redefined the sovereign character of the nation state, including their own. The post-Cold War world has segued into what might be called the post-Westphalian world.

Resolution 1244 is the final act in a series of decisions and actions which, taken together, change the legal and theoretical structure of international politics.<sup>157</sup>

As Ambassador Marks writes, this change did not begin with Kosovo, but had been developing for some time. The idea that a state might intervene militarily in the internal affairs of another had previously been sanctioned by the Security Council.

In Haiti, for example, the international community decided or at least acquiesced in the view strongly held by the U.S. government that the Haitian government was illegitimate. The United States took the lead in replacing that government by forcible intervention. Most recently, UN, NATO and the Organization for Security and Cooperation in Europe (OSCE) introduced into the Balkans a *de facto* international trusteeship regime in a situation where national sovereignties in conflict existed.<sup>158</sup>

This undermining of the principle of the sovereign right of princes was then further undermined by the Security Council resolution and NATO military action in Kosovo.

NATO, claiming authority under those UN resolutions, [1244 and other Security Council resolutions on Kosovo passed between March 1998 and June 1999] thereupon declared invalid the authority of the current government of that nation [Yugoslavia] to rule a portion of its own territory and intervened militarily to enforce that decision to replace the previous government with a UN trusteeship, this with intention to create a new local authority to which NATO would transfer the right of governance at a time of and in accordance with criteria of its own choosing... The hitherto inviolable sovereignty of the nation state is now conditional, subject to the approval of the international community of its peers "in the Security Council assembled."<sup>159</sup>

It seems likely therefore that with recent innovations in international law brought about by the Security Council, that a preventive or preemptive attack authorized in advance by that body would be politically and legally legitimate – even if there is no threat of imminent attack. The Security Council would, given an international norm against the possession and proliferation of NBC weapons, seem to have the power to decide that the possession of NBC weapons by any nation is illegal and that action must be taken to remove that capability from the nation's arsenal. It also would be necessary to determine that, following the UN Charter, such a country was a threat to international peace and security, and non-forcible measures had been exhausted, then force could be used.

These issues, already difficult to address in the context of relations between states, become even more so in the context of modern terrorist actions and the potential for terrorists or other non-state actors to gain access to NBC weapons. The

<sup>157</sup> Marks, Amb. Edward D., "From Post-Cold War to Post Westphalia," *American Diplomacy*, March 27, 2001.

<sup>158</sup> *Ibid.*

<sup>159</sup> *Ibid.*



nature of terrorist groups and networks means that they have no territory of their own from which to operate, and that they are highly mobile. They also obviously do not sign treaties and are not subject to the same constraints as nations. Action may need to be taken in many different countries to neutralize terrorist NBC weapons.

If the group concerned has found shelter in a friendly state, as the Al-Qaeda operatives in Hamburg, Germany did, it could be possible for the law enforcement and militaries of the states involved to cooperate in their arrest or eradication with use of civilian or military law enforcement. However, it is just as likely that they would take refuge in a hostile state, such as Iraq or Sudan, or a failed state, as Al-Qaeda did in Afghanistan. In this case, the use of force against the non-state group may be complicated. If there is evidence of an imminent attack, then the doctrine of self-defense would apply and the targeted nation could take unilateral action. If there is no such evidence, then the authority of the UN should be sought for any attack. Policing operations would be less controversial. Even if UN support is not forthcoming, the effort to obtain it will at least help with the battle for political legitimacy. It also may disrupt the terrorist network by signaling an upcoming attack or police operation and forcing it to move location against its will, and could lead to the terrorists' capture.

Intelligence on the location and nature of facilities may be extremely hard to come by, and the consequences of a mistaken or misdirected attack in a region where the United States is already unpopular could have a serious impact on U.S. relations in the region affected. This would be especially true with regard to the way that local populations view U.S. intentions. This was the case with the attack on the Al-Shifa pharmaceuticals plant in the Sudan, which many in the region regard as simple American bullying. A serious effort is needed within the UN system to define rules for dealing with terrorists and other

non-states groups, particularly where they are likely to threaten the use of NBC weapons.

It is clearly unreasonable to expect a nation to stand back and wait to be attacked with nuclear weapons or other NBC weapons if, with some foreknowledge, it could prevent that attack and thereby save thousands, even hundreds of thousands of civilian lives. It seems that, with UN backing, conventional military operations against a NBC weapons proliferator would be well grounded in international law if it was decided that its possession of NBC weapons was illegitimate. It is also clear that, in the event of an imminent attack, a nation has the right to defend itself against either conventional or NBC weapons attack with preventive or preemptive military action.

### *Jus In Bello*

What is much less clear is whether the use of nuclear weapons could be justified under such circumstances, as current U.S. policy allows. This question comes under the rubric of *Jus In Bello*, the body of international law that controls the way in which war are fought. International law states that any preemptive attack must be proportionate to any likely threat that it will prevent. As U.S. Secretary of State Daniel Webster wrote to the British government in the Caroline case in 1837:

Use of force by one nation against another is permissible as a self-defense action only if the force is both necessary and proportionate. The first of these conditions, necessity, means the resort to force in response to an armed attack, or the imminent threat of armed attack, is only allowed when an alternative means of redress is lacking. The second condition, proportionality, is linked closely to necessity in requiring that a use of force in self-defense must not exceed in manner or aim the necessity provoking it.<sup>160</sup>

<sup>160</sup> Quoted in Schneider, Barry R., *Future War and Counterproliferation: U.S. Military Responses to NBC Proliferation Threats*, Praeger Publishers, 1999, Chapter 7, p. 162.

The devastating environmental and human consequences of the use of nuclear weapons means that their use is never justified, and the preemptive use of nuclear weapons against potential or actual proliferators is certainly in no way proportional to any potential threat. (The medical consequences of a nuclear attack are discussed in Chapter Five of this paper.) Further, under the 1996 *International Court of Justice Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons*, use of nuclear weapons would be legal only in a case of “extreme self-defense,”<sup>161</sup> where the very survival of the state is threatened. What that means is not really clear. It does seem unlikely that even the threat of an imminent, devastating attack on, say, Miami, would warrant a nuclear strike against those threatening the attack.

Even in the case of the threat of use of a nuclear weapon against the United States, the U.S. possesses an advanced conventional arsenal and a capacity for the use of military force so far beyond that of any other nation, or alliance of nations, it can likely ensure the functional defeat of an enemy NBC weapons capability with conventional weapons options with such a degree of certainty as to rule out the legitimacy of a preemptive nuclear strike.

### **CAN COUNTERPROLIFERATION PREVENTIVE OR PREEMPTIVE STRIKES BE JUSTIFIED MILITARILY?**

Barry Schneider, Director of the USAF Counterproliferation Center, has written that “...U.S. preemptive counterforce operations should be considered, if at all, only in very special cases, ideally characterized by optimal conditions.” He then goes on to list twenty questions that need to be answered in deciding whether to attack the NBC weapons facilities of a ‘rogue state.’ These questions provide an illuminating background against which to consider the utility of a preventive or pre-emptive strike.

Has the United States exhausted all other nonmilitary options first?

Has the United States effectively communicated its will to act and its capability to inflict unacceptable levels of damage on an adversary if he chooses to field and threatens to use NBC weapons?

Is U.S. intelligence reliable and certain that the enemy will initiate use of its nuclear, chemical or biological forces?

Has the adversary initiated any kind of recent military aggression or terrorist campaign, a trigger event that will clearly mark them, not the United States, as the aggressor in the court of world opinion?

Has the stage been properly set so that the U.S. government has strong domestic public support and the support of important states?

Is the enemy estimated to be undeterrable?

Does the enemy possess NBC weapons, or is it on the threshold of acquiring such weapons?

Are U.S. vital interests directly threatened?

Are key enemy targets precisely located and vulnerable?

Can collateral damage to civilians and the civilian sector of society be avoided or kept to a minimum?

Is surprise achievable?

Does the United States have the required counterforce strike capabilities?

<sup>161</sup> *ICJ Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons*, 35 *ILM* 809 (1996).

Will U.S. counterforce targeting make the enemy less likely to use NBC weapons?

Can the U.S. counterforce operations succeed without using nuclear weapons?

Are U.S. and allied homelands safe from enemy NBC weapons?

Would the U.S. be safe from NBC weapons retaliation by third parties?

Have U.S. leaders set clear objectives and chosen appropriate means?

Is the U.S. committed to win once the combat has begun?

Should the U.S. respond proportionately to NBC weapons aggression?

Have the U.S. decision-makers identified an appropriate exit strategy for the war about to begin?<sup>162</sup>

Clearly, it would be extremely difficult to achieve a positive answer to this entire set of questions, or even to a majority of them. And yet, if the United States, or any other nation intending to carry out a counterproliferation operation (especially involving the use of nuclear forces), is not seen to be acting as a global nuclear-armed bully, it would be essential that most (if not all) of the questions were answered in the affirmative. Full consideration must be given to all the consequences of military action, particularly if nuclear weapons are to be used.

If we examine the recent case of the war against Iraq as a counterproliferation mission, rather than an exercise in removing a ruler that the U.S. found unacceptable, then we can highlight several of the most serious problems that arise.

#### ■ Intelligence

Before the war started, the administration seemed certain that NBC weapons would be easily discovered in Iraq. In the post-war search for weapons, military teams have searched almost 100 sites that the intelligence community had declared held NBC weapons or facilities for producing them. Little or nothing of any real significance had been found at the time of writing. This illustrates vividly the dangers of using military tools to attempt to disarm a nation. The failure by U.S. intelligence to identify usable NBC weapons targets accurately made effective counterforce strikes to eliminate those capabilities impossible. This would seem to reinforce the lessons of the Unified Quest 2003 exercise (quoted in Chapter One) — preventive war can lead to early use of NBC weapons by an adversary and if a counterforce mission is to be undertaken, the United States and its allies have to be absolutely certain where targets are situated and that they can be destroyed. Even an attack that disrupted enemy command and control, delaying NBC weapons, may not be enough. Only certain destruction can fulfill the counterproliferation mission.

#### ■ Political Support

It proved almost impossible in the recent Iraq war to build active international political support (beyond the U.K.) in the absence of a serious commitment to acting through authorization of the UN Security Council. In the case of the use of nuclear weapons in a counterforce strike, this problem would only be exacerbated. The United States likely will find it difficult to assemble future ad-hoc coalitions because of the exaggeration and manipulation of intelligence in the Iraq case.

#### ■ The Exit Strategy

The United States and Great Britain are already mired in difficulties in post-war Iraq. The wartime euphoria of easy victory is giving way to the harsh

<sup>162</sup> Schneider, Barry R., *Future War and Counterproliferation: U.S. Military Responses to NBC Proliferation Threats*, Praeger Publishers 1999, Chapter 7, pp. 157-161.

reality of running what is perceived by many as an occupation government. If the use of military force to deny an enemy the use of NBC weapons is likely to lead to the decapitation of the hostile command

Counterproliferation should remain, as it was under President Clinton, in a supporting role to traditional non-proliferation diplomacy.

authority to prevent an order to use NBC weapons, then such problems will arise often. All aspects of counterproliferation missions need to be better

planned than they have been in Iraq. Whether this is ever possible may depend on political legitimacy that can only be conferred by the UN.

#### ■ Collateral Damage

As we have shown in this report, the use of conventional or nuclear weapons against NBC weapons facilities contains terrible risks. In the event that nuclear weapons are used, then ensuing human health and environmental problems will greatly exacerbate every aspect of this collateral damage risk. Counterforce attacks in cities are almost certain to cause damage and that will be seen around the world on CNN and Al-Jazeera. It will be very hard to put together a mission that justifies such collateral damage in the eyes of the world, and absolute proof of an imminent attack by the hostile nation would be required.

#### *Limited Military Utility of Nuclear Weapons*

There are a number of factors inherent in the characteristics of nuclear weapons that severely limit their military utility in counterproliferation missions:

- There is no guarantee that the hardest and deepest facilities will be destroyed by even a large nuclear weapon. Also, in the case of mobile facilities (or of inevitable intelligence errors or bad use of intelligence) they may not all be detected, and nuclear weapons may therefore be used at great political cost without achieving their military objective;

- The effects of nuclear weapons will severely impede future operations in the area of the attack, and in the case of the severe fall-out likely from a ground-burst or sub-surface burst nuclear explosion, for many miles around;

- Intelligence gathering at the suspected NBC weapons site will be at least severely impaired and may be impossible in the aftermath of a nuclear strike. Even in a country like Iraq, which has gone to enormous lengths to hide its NBC weapons programs and facilities, the loss of intelligence from one site could prove disastrous for efforts to track down other sites;

- Finally, the potential use of nuclear weapons by the United States early in a conflict, or preemptively at the start of a conflict, may force an NBC weapons proliferator into a ‘use them or lose them’ mentality. The possibility that a coming conflict may begin with the United States using nuclear weapons to destroy a proliferator’s NBC weapons assets could well lead the proliferator to begin the conflict with a strike at the United States or an ally, perhaps at a specifically chosen non-military target. The likelihood of early use against an invading force or of increased global terrorist NBC weapons threat are also threats that must be considered. A policy of counterproliferation can thus precipitate the very threat it seeks to negate.

These and other military factors must be taken into consideration before a preemptive or preventive counterforce nuclear strike is ordered. In short, it will be extremely difficult for a counterproliferation mission to be successful, and nearly impossible if the success must be measured in political and military terms. It will be necessary to prove an imminent threat and show that the mission will be able to be carried out without first provoking the use of those NBC weapons it is

intended to deny. It will be necessary to show that the target state or non-state actor could not have been deterred, and it will be crucial to convince the wider international community of all

these things. For this reason, counterproliferation should remain, as it was under President Clinton, in a supporting role to traditional non-proliferation diplomacy.



# Chapter Eight:

## *Counterproliferation and the Non-Proliferation Regime*

**C**ounterproliferation policy and evolving nuclear doctrines together severely undermine the global non-proliferation regime. As noted in the missile defense section above, the administration has scrapped the ABM Treaty, widely regarded as a cornerstone of arms control, allowing development of a missile defense system that is an integral part of counterproliferation policy. However, these policies also put at risk the CTBT and even the Non-Proliferation Treaty (NPT) itself.

### **AN END TO NEGATIVE SECURITY ASSURANCES?**

The U.S. and NATO policy that has evolved over the years contradicts directly the Negative Security Assurances (NSAs) given by the United States in the context of the NPT. The latest version of this NSA from 1995 reads:

The United States reaffirms that it will not use nuclear weapons against non-nuclear-weapon state-parties to the Treaty on the

Nonproliferation of Nuclear Weapons, except in the case of an invasion or any other attack on the United States, its territories, its armed forces or other troops, its allies, or on a state toward which it has a security commitment carried out, or sustained by such a non-nuclear-weapon state in association or alliance with a nuclear-weapon state.<sup>163</sup>

No exception is made for the use, threat of use, or possession of chemical or biological weapons by an enemy or potential enemy. These assurances were first given by the Carter administration, and they were an important part of the bargain between nuclear and non-nuclear states at the extension of the NPT in 1995.

The non-nuclear states that are parties in good standing to the NPT always have argued that they should be free of the threat of nuclear attack. South Africa has, for example, repeatedly raised this question at NPT Preparatory Committees and Review Conferences. If this is not the case, then

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<sup>163</sup> Negative Security Assurance given by Secretary of State Warren Christopher on April 5, 1995.

the incentive for any proliferant state would be to go nuclear at the earliest possible opportunity to gain a capability to deter the United States. If even the existence of chemical or biological weapons facilities is reason enough for the United States to attack a country, then there is no longer any incentive to remain non-nuclear. The United States has stated that its NSAs are still completely intact, but there is a significant ambiguity in these statements. This trend began under President Clinton, notably in a statement by Walter Slocombe at DoD:

“The U.S. response to NBC [nuclear, biological, and chemical] weapons will be decisive, overwhelming, and devastating,” Under Secretary of Defense Walter Slocombe told the Senate Armed Services Committee on March 6. He added: “As Secretary [William] Perry said... in 1996, ‘if some nation were to attack the United States with chemical weapons, then they would have to fear the consequences of a response from any weapon in our inventory.... We could make a devastating response without the use of nuclear weapons, but we would not forswear the possibility.’”<sup>164</sup>

The Clinton administration also made explicit nuclear threats against suspected Libyan chemical weapons facilities that breached not just the NSAs, but also the protocols to the African Nuclear Weapon-Free Zone which the United States has endorsed. At a breakfast meeting with reporters on April 23, 1996, Dr. Harold Smith<sup>165</sup> outlined U.S. conventional and nuclear capability for destroying a suspected Libyan chemical weapons factory, under construction underground at Tarhunah, 40 miles southeast of Tripoli.

Dr. Smith explained that, at present, the United States has no conventional weapon

capable of destroying the plant from the air, and such a weapon could not be ready in less than two years. *Smith went on to tell reporters that an earth-penetrating B61 nuclear bomb, in development, could take out the plant. The new bomb would be ready for possible use by the end of this year, Smith said, before the expected completion date of the factory. (Original emphasis.)*<sup>166</sup>

On April 11, just 12 days before Dr. Smith’s announcement, and after an interagency struggle that pitted the Pentagon against the State Department, the United States signed protocols to the African Nuclear Weapons Free Zone Treaty in Cairo. In this treaty, the United States pledged not to use or threaten to use a nuclear weapon in Africa against any of the nearly 50 signatory states, including Libya.

U.S. NSAs were thus clearly devalued by the Pentagon’s threat, which marked a shift in U.S. nuclear policy. That shift was to openly include the possibility of preemptive strikes against NBC weapons capabilities, in addition to the possibility of a nuclear response to NBC weapons use. Such a posture, if allowed to stand, would have been unprecedented in nuclear history.

The announcement by Dr. Smith, which had been joined by statements from Secretary of Defense William Perry and others, sent shock waves through diplomatic circles. A partial retraction was given by Defense Department spokesman Kenneth Bacon at a press conference on May 7, 1996.<sup>167</sup> His answer, while clearly ruling out a preemptive nuclear attack on Tarhunah, did not rule out the use of nuclear weapons in a counterproliferation mission against chemical or biological weapons facilities:

The Secretary actually spoke about this very forthrightly at Maxwell Air Force Base in Alabama about ten days ago, April

<sup>164</sup> Quoted in Arkin, Bill, “The Last Word,” *Bulletin of the Atomic Scientists*, Vol.54, No.3, May/June 1998.

<sup>165</sup> Dr Harold Smith was then-Assistant to the Secretary of Defense for Atomic Energy.

<sup>166</sup> B61-11 Concerns and Background, *op. cit.*

<sup>167</sup> *Ibid.*



26th, when he was down there giving a speech on nuclear non-proliferation issues. ...The Tarhunah Plant being built in Libya is one that we oppose as a dangerous initiative, and we have launched a diplomatic effort to prevent that plant from being built. That involves talking to neighboring countries to bring it to the attention of our NATO allies, publicizing the fact that the plant's being built...

Our first line of defense against that plant is to prevent it from being built using diplomatic and economic means. ...Should military options be necessary, we can accomplish this with conventional means. There is no consideration to using nuclear weapons and any implication that we would use nuclear weapons against this plant preemptively is just wrong. And that's what the Secretary said at Maxwell Air Force Base ...He said that "...That would not need to be and I would never recommend nuclear weapons for that particular application. So any application that we would use, any implication that we would use nuclear weapons for that purpose is just wrong."

**Q:** Can you give us an impression on that first, for that purpose, you mean not just Libya but any suggestion the United States would use nuclear weapons in order to keep someone from producing chemical or biological weapons is wrong in general?

**A:** ...We have a wide range of options already. We're developing a wider range of options, conventional options to prevent the proliferation of weapons of mass destruction. We are focusing on developing and enhancing our current conventional

methods for preventing proliferation of the production of weapons of mass destruction if necessary.

**Q:** Is that a yes or no?

**A:** That's my answer.<sup>168</sup>

This trend to undermine the credibility of American NSAs has been exacerbated by the Bush administration. Given their antipathy to traditional arms control and non-proliferation measures this is hardly surprising, but is a matter of deep concern to many NPT States Parties. In an interview with *Arms Control Today*, John Bolton, Undersecretary of State for Arms Control and International Security, said that the approach represented by NSAs is unproductive:

**ACT:** *In 1995, Secretary of State Warren Christopher reaffirmed U.S. negative security assurances, which—and I'm going to paraphrase here—say that the United States will not use nuclear weapons against a non-nuclear-weapon state unless that state attacks the United States or its allies in association with a nuclear-weapon state. Is that the policy of this administration as well?*

**Bolton:** I don't think we're of the view that this kind of approach is necessarily the most productive. What we've tried to say is that we're looking at changing the overall way we view strategic issues, and a large part of that is embodied in the outcome of the nuclear posture review. It's certainly reflected in the ongoing strategic discussions that we've had with the Russians and reflected in the discussions we've had with a number of other countries as well. So, I just don't think that our emphasis is on the rhetorical. Our emphasis is on the actual change in our military posture.

<sup>168</sup> Official Transcript, Department of Defense Press Briefing with Spokesman Kenneth Bacon, May 7, 1996.

**ACT:** *So, right now, the Bush administration would not make a commitment to non-nuclear-weapon states under the circumstances I outlined, that it would not use nuclear weapons —*

**Bolton:** I don't think we have any intention of using nuclear weapons in circumstances that I can foresee in the days ahead of us. The point is that the kind of rhetorical approach that you are describing doesn't seem to me to be terribly helpful in analyzing what our security needs may be in the real world, and what we are doing instead of chitchatting is making changes in our force structures, that we're making in a very transparent fashion. We've briefed the Russians, friends, and allies as well about the nuclear posture review, and we'll let our actions speak.<sup>169</sup>

The State Department moved to assure people that the policy had not changed, and that NSAs remain intact. However, the statement by State Department Spokesman Richard Boucher was less than conclusive:

What Under Secretary Bolton was reiterating was a policy that the United States Government has had since the 1970s. There was a specific statement in 1978. It was also reaffirmed. The formulation I have is the formulation we have been using since 1995, and that is that the United States reaffirms that it will not use nuclear weapons against non-nuclear weapon state parties to the Treaty on the Nonproliferation of Nuclear Weapons, except in the case of an invasion or any other attack on the United States, its territories, its armed forces or other troops, its allies, or on a state toward which it has a security commitment carried out, or sustained by such a non-nuclear weapon

state in association or alliance with a nuclear weapon state.

Furthermore, the policy says that we will do whatever is necessary to deter the use of weapons of mass destruction against the United States, its allies and its interests. If a weapon of mass destruction is used against the United States or its allies, we will not rule out any specific type of military response.

Those kind of statements have been made repeatedly since the 1970s. Similar statements, as you remember, were made in the Gulf War in 1991 by U.S. officials. Secretary of Defense William Perry made them in April 1996. He said if the United States was attacked by chemical weapons — he said that if the United States was attacked by chemical weapons, “We could have a devastating response without the use of nuclear weapons, but we would not forswear that possibility.”

This has been a very consistent policy of 20 or 30 years. That is what Secretary Bolton was talking about, and there is no change.<sup>170</sup>

Boucher reinforces the point made by Bolton and others that the United States is now prepared to use nuclear weapons against chemical and biological weapons facilities. This opens the possibility that States Party to the NPT, and in good standing with that Treaty, could be attacked with nuclear weapons.

The *National Strategy to Combat Weapons of Mass Destruction* states that:

The United States will continue to make clear that it reserves the right to respond

<sup>169</sup> Scoblic, Peter, “An Interview With John Bolton,” *Arms Control Today*, March 2002.

<sup>170</sup> Official Transcript, State Department Daily Press Briefing, February 22, 2002.

with overwhelming force — including through resort to all our options — to the use of WMD against the United States, our forces abroad, and friends and allies.<sup>171</sup>

This clearly implies that nuclear weapons have some equivalence with chemical and biological weapons, and that the United States would be prepared to use nuclear weapons against a non-nuclear state. For potential adversaries the message is clear, adherence to the NPT and reliance on the Negative Security Assurances of the United States are no longer viable policies. The implications for the Non-Proliferation Treaty are likely to be serious, as the deal under which states give up nuclear weapons is at least in part conditioned by a guarantee that they will not be attacked with nuclear weapons. If that guarantee no longer holds, then the imperative for those whose interests diverge from those of the United States to develop and deploy a nuclear arsenal grows. This is especially true for those states that are listed in the ‘axis of evil,’ or who can be found in the list of countries against whom the NPR calls for contingency nuclear attack plans to be drawn up. This issue will continue to be a subject of some controversy in the NPT review process.

#### A NORM OF NON-POSSESSION?

The most effective method for restricting the spread of NBC weapons, non-proliferation, and the most successful global treaty, the NPT, are directly undermined by military policies adopted by the United States to destroy these weapons. The norm of non-possession of nuclear weapons, enshrined in the NPT, is directly contradicted by current policies and doctrines. When Vice-President Dick Cheney spoke of the absolute need to disarm Iraq of all NBC weapons, he implied a strict international norm against NBC weapons possession:

9/11 and its aftermath awakened this nation to danger, to the true ambitions of the

global terror network, and to the reality that weapons of mass destruction are being sought by determined enemies who would not hesitate to use them against us.

...Those terrorists who remain at large are determined to use these capabilities against the United States and against our friends and allies around the world... As we face this prospect, old doctrines of security do not apply. In the days of the Cold War, we were able to manage the threat with strategies of deterrence and containment. But it's a lot tougher to deter enemies who have no country to defend. And containment is not possible when dictators obtain weapons of mass destruction and are prepared to share them with terrorists who intend to inflict catastrophic losses on the United States.

In the case of Saddam Hussein, we have a dictator who was defeated in the Persian Gulf War, and who agreed at the time to the destruction of all of his weapons of mass destruction. In the past decade, however, Saddam has systematically broken all of these agreements. His regime is busy enhancing its capabilities in the field of chemical and biological agents, and they continue to pursue an aggressive nuclear weapons program...

...The objective has to be disarmament; to compel Iraqi compliance with the U.N. Se-

**U.S. statements imply clearly that nuclear weapons have some equivalence with chemical and biological weapons, and that the United States would be prepared to use nuclear weapons against a non-nuclear state.**

<sup>171</sup> *National Strategy to Combat Weapons of Mass Destruction*, December 2002, p. 3.

curity Council Resolutions that call for the complete destruction of Saddam's weapons of mass destruction and an end to all efforts to develop or produce more chemical, biological, or nuclear weapons.<sup>172</sup>

However, the continued possession by the United States of a large arsenal of nuclear weapons undermines that norm, and sends a confusing message to the international community. The intent to use nuclear weapons in counterproliferation missions, and to develop new nuclear weapons for the purpose of destroying NBC weapons belonging to other nations, only deepens the confusion. The norm of non-possession is weakened by U.S. words and deeds.

The same is true for NATO. Past NATO communiqués offer strong language in favor of non-proliferation and arms control, but at the same time assert that nuclear weapons are essential for alliance security and unity. For example, the "Alliance Report on Options for Confidence and Security Building Measures (CSBMs), Verification, Non-Proliferation, Arms Control and Disarmament" begins:

NATO's policy of support for arms control, disarmament and non-proliferation has played and will continue to play a major role in the achievement of the Alliance's security objectives. NATO has a longstanding commitment in this area and continues to ensure that its overall objectives of defence, arms control, disarmament and non-proliferation remain in harmony.

At their Summit Meeting in Washington in April 1999, Allies decided to increase Alliance efforts against weapons of mass destruction (NBC weapons) and their means of delivery. The NBC weapons Ini-

tiative has initiated a more vigorous and structured debate on NBC weapons issues. The principal goal of the Alliance and its members remains to prevent proliferation from occurring or, should it occur, to reverse it through diplomatic means.

As stated in the Strategic Concept of 1999, the Alliance is committed to contribute actively to the development of arms control, disarmament, and non-proliferation agreements as well as to confidence and security-building measures (CSBMs). The Allies are fully aware of their distinctive role in promoting a broader, more comprehensive and more verifiable international arms control and disarmament process. They consider confidence-building, arms control, disarmament and non-proliferation as important components of conflict prevention. NATO's partnership, cooperation and dialogue programmes offer a unique opportunity to promote these objectives. In this context, the Alliance's longstanding commitments and current activities in the area of arms control, disarmament and non-proliferation are in and of themselves tangible contributions to the overall goal of creating meaningful CSBMs and a cooperative approach to international security.<sup>173</sup>

However, more recent communiqués are more equivocal. For example:

We recalled that NATO's sub-strategic nuclear forces have been reduced by over 85 percent since 1991, and are maintained at the minimum level sufficient to preserve peace and stability. In this context, we provided guidance to further adapt NATO's

<sup>172</sup> Speech by Vice-President Richard Cheney Honoring Veterans of Korean War, Marriott River Front Hotel, San Antonio, Texas, August 29, 2002.

<sup>173</sup> Report on Options for Confidence and Security Building Measures (CSBMs), Verification, Non-Proliferation, Arms Control and Disarmament, Press Release M-NAC-2(2000)121, December 2000.

dual-capable aircraft posture. We reaffirmed that the fundamental purpose of the nuclear forces of the Allies is political: to preserve peace and prevent coercion and any kind of war. We continue to place great value on the nuclear forces based in Europe and committed to NATO, which provide essential political and military linkage between the European and the North American members of the Alliance.

In this regard, we note that deterrence and defence, along with arms control and non-proliferation, will continue to play a major role in the achievement of the Alliance's security objectives. We reaffirmed our determination to contribute to the implementation of the conclusions of the 2000 Nuclear Non-Proliferation Treaty Review Conference and welcomed the full discussion of issues at the Preparatory Conference for the 2005 Review Conference in April this year. We continue to support the existing moratoria on nuclear testing.<sup>174</sup>

The commitment to nuclear weapons as essential for the peace of Europe and the maintenance of the transatlantic link sits uneasily alongside a stated intent to support the outcome of the 2000 Review Conference of the NPT at which an unequivocal undertaking to complete nuclear disarmament was given by the United States and its NATO allies. The effect is at best confusing, and can be seen as hypocritical at worst. As Henning Riecke has written, NATO can only enhance the norm against use of NBC weapons when signaling their negative ethical value (as in the report on non-proliferation), but that by "sending signals that show the significance of such weapons and which prevent a learning directed

against NBC weapons, an opposite effect can be expected."<sup>175</sup>

In other words, the statement that nuclear weapons are essential for alliance defense can only be expected to encourage the possession or acquisition of NBC weapons by others, despite NATO's stated intent to support the NPT and other non-proliferation and disarmament treaties. The fact that many states in NATO's periphery possess, or are thought to possess, weapons of mass destruction can be seen as supporting evidence of this contention. The fact that they have not yet been used against NATO states can be seen as evidence that deterrence works, but perhaps only by encouraging NBC weapons proliferation as a defense mechanism against NATO. This paradox is a central weakness at the heart of U.S. and allied policy.

In addition, the adoption of new policies and roles for nuclear weapons use undermines the central bargain of the NPT. The United States has committed in Article VI of the NPT to get rid of its nuclear weapons. Each of the parties to the treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and to a treaty on general and complete disarmament under strict and effective international control.<sup>176</sup>

The prospect of the United States retaining its weapons indefinitely already has been a major factor in Indian and Pakistani development of nuclear weapons. At the very least, the policies outlined in the Nuclear Posture Review and the intention by the United States (and other nuclear weapon states) to retain nuclear weapons indefinitely undermine a global norm of non-possession enshrined in the NPT. An increase in their significance in U.S. military policy is likely to worsen this trend, as other countries that have

<sup>174</sup> NATO Final Communiqué, Ministerial Meeting of the Defence Planning Committee and the Nuclear Planning Group, Brussels, June 6, 2002.

<sup>175</sup> Riecke, Henning, "NATO's Non-Proliferation and Deterrent Policies," in *Preventing the Use of Weapons of Mass Destruction*, Herring, Eric, ed., Frank Cas, London, March 2000.

<sup>176</sup> Non-Proliferation Treaty, Article VI.

currently renounced a nuclear capability see no reason to stay non-nuclear when the United States has no intention of honoring its pledge to disarm.

### JEOPARDIZING THE CTBT?

Administrations for decades previous to Bush II have seen the CTBT as a non-proliferation goal, which would help prevent the spread of nuclear weapons. No proliferant state could have confidence that a nuclear weapon would work unless it had first been tested. They still could obtain a bomb, but could do little or no work on advanced nuclear weapons technologies. Miniaturization necessary to weaponization of a warhead to be delivered by ballistic missile could be slowed dramatically, and probably prevented. Current nuclear states would be hindered severely in, and possibly unable to pursue, efforts to develop new generations of nuclear weapons.

However, the Bush administration has made it clear that it will not ask the Senate to ratify the CTBT, and have in fact explored the possibility of withdrawing the Treaty from the Senate and unsigned it — although this option seems not to be possible. The administration has said they will for the moment continue the moratorium on nuclear tests that has held since the presidency of the current president's father. Administration officials say this allows them to maintain the necessary flexibility should nuclear testing prove necessary in the future for national security reasons.

This strand of opinion is well entrenched in the administration and in conservative circles generally:

Frank Gaffney, a former defense official and prominent conservative analyst and advisor, stated in May that “we’re going to have to resume on a limited basis underground testing of our nuclear arms.” In a March 12 letter to Secretary of State

Colin Powell, Senate Foreign Relations Committee Chairman Jesse Helms called on the administration to repudiate the signed but unratified Comprehensive Test Ban Treaty. The *New York Times* reported May 9th that Defense Secretary Donald Rumsfeld seems more inclined to deploy missile defenses and develop nuclear forces than negotiating with Russia or China. “Before taking office Mr. Rumsfeld argued that the U.S. should not ratify the Comprehensive Test Ban Treaty because it might need to develop new nuclear weapons,” the *Times* reported. So far, President Bush has refused to place the treaty before the Senate. “‘This is a paradigm shift,’ said a senior Pentagon official. ‘We are probably not going to be hampered by arms control agreements.’”<sup>177</sup>

During the FY2002 budget debates, the administration asked the House of Representatives to approve a measure shortening readiness at the Nevada Test Site from 36 to 18 months. Insiders say that the ultimate goal is to be ready to test at six months’ notice. This request was refused, even by the Republican-controlled House. However, with the FY 2003 budget on its way through Congress, some \$27 million has been allocated to enhanced readiness at the Nevada Test Site. This added \$12 million to the administration’s initial request. This would shorten the period necessary to prepare a full-scale nuclear test from the current 2-3 years, to around 18 months.

### Enhanced Test Readiness

The administration may be committed publicly to a flexible (and weak) position of support for the continuing *de facto* test moratorium. However, they also are committed to readying the infrastructure for testing should that position change. In support of this aim, National Nuclear Security

<sup>177</sup> Erickson, Steve, Trumann, Preston J., *Is the Bush Administration Preparing to Break Out of the Nuclear Weapons Testing Moratorium?*, June 30, 2001, [www.commondreams.org](http://www.commondreams.org), available on June 29, 2003.

Administration (NNSA) Administrator General John Gordon this year told the Senate that:

President Bush supports a continued moratorium on underground nuclear testing; nothing in the NPR changes that. Over time, we believe that the stewardship program will provide the tools to ensure stockpile safety and reliability without nuclear testing. But there are no guarantees. It is only prudent to continue to hedge for the possibility that we may in the future uncover a safety or reliability problem in a warhead critical to the U.S. nuclear deterrent that could not be fixed without nuclear testing.

Based on a 1993 Presidential directive, NNSA currently maintains a capability to conduct an underground nuclear test within 24 to 36 months of a Presidential decision to do so. Test readiness is maintained principally by the participation of nuclear test program personnel in an active program of stockpile stewardship experiments, especially the subcritical experiments carried out underground at the Nevada Test Site (NTS).

During the NPR, two concerns were raised about our test readiness program. First, a two to three year readiness posture may not be sustainable as more and more experienced test personnel retire. Not all techniques and processes required to carry out underground nuclear tests are exercised with the work carried out at the NTS. As experienced personnel retire, it will become more difficult to train new people in these techniques, further degrading test readiness.

This argued for an approach in which key capabilities required to conduct nuclear tests are identified and exercised regularly

on projects making use of a variety of nuclear test-related skills.

Second, the current two to three year posture may be too long. If we believed that a defect uncovered in the stockpile surveillance program, or through new insight gained in R&D efforts, had degraded our confidence in the safety and/or reliability of the W76 warhead — the warhead deployed on Trident submarines and comprising the most substantial part of our strategic deterrent — the ability to conduct a test more quickly might be critically important.

To address these concerns, the NPR endorsed the NNSA proposal to enhance test readiness by reducing the lead-time to prepare for and conduct an underground nuclear test. To support this, NNSA has allocated \$15 M in FY '03 to begin the transition to an enhanced test readiness posture. Funds will be used, among other things, to:

- augment key personnel and increase their operational proficiency,
- begin the mentoring of the next generation of testing personnel,
- conduct additional subcritical experiments and test-related exercises,
- replace key underground-test-unique components,
- modernize certain test diagnostic capabilities, and
- decrease the time required to show regulatory and safety compliance.

NNSA will work with DoD over coming months to refine test scenarios and evaluate cost/benefit tradeoffs in order to determine, implement, and sustain the optimum test readiness time.<sup>178</sup>

<sup>178</sup> Statement of General John A. Gordon, USAF (Ret.), Administrator, National Nuclear Security Administration before the Senate Armed Services Committee, February 14, 2002.

While a resumption of nuclear testing is not imminent, it cannot be ruled out in the longer term. The desire to develop new nuclear weapons for counterproliferation missions means that a return to testing is more likely now than in the past. In August 2002, Dale Klein, Director of the Nuclear Weapons Council, is reported as saying that nuclear testing could resume in "... five years. It could be

The United States has a clear national interest in the ratification and observance by others nations of the CTBT. The counterproliferation policy relying on new nuclear weapons and capabilities pursued by the current administration is undermining that national interest.

ten." Noting that the current stockpile of weapons is aging, Klein said that "... over time we will need to verify some of the calculations that have been done."<sup>179</sup>

Any return to testing by the United States would kill the CTBT. China, followed by India and Pakistan, likely would be the first nations to follow suit. Russia likely would feel obliged to conduct its own test series. The United States already has signaled to India and Pakistan that it does not regard their proliferation as serious, by lifting all sanctions imposed after their 1998 tests in return for their support in the war on terrorism. In September 2001, reports circulated that the administration had told China that its acceptance of U.S. missile defense could be matched by U.S. acceptance of renewed Chinese nuclear testing, in order to assist Chinese modernization and upgrades to its nuclear arsenal.

These reports were strongly denied by the administration. The fact that the reports were nevertheless widely believed to be true indicates that counterproliferation, and the desire for new nuclear weapons in the United States, already may be undermining efforts to stop testing and the spread of nuclear weapons across the world.

Despite this desire, the United States has the least of any nation to gain from a return to nuclear testing, having already conducted many more tests than anyone else, and having the most sophisticated test simulation facilities. All U.S. NATO allies have signed and ratified the test ban, including the UK and France. They are therefore banned from participating in any American test program, or from sharing the results of such a program in any way. Others could profit however.

The impetus to the development of new nuclear weapons by other nations that would come from a return to testing can hardly be in the U.S. interest. China, for example, would be able to miniaturize its warheads and deploy a much more capable arsenal aimed at the United States if it could benefit from further nuclear test explosions. This action likely would create a domino effect in South Asia, with tests by India and Pakistan likely. If Pakistan tests again, then the impetus on Iranian proliferation will be strong. The consequences of U.S. testing are hard to gauge, but are bound to be serious. Therefore, the United States has a clear national interest in the ratification and observance by others nations of the CTBT. The counterproliferation policy relying on new nuclear weapons and capabilities pursued by the current administration is undermining that national interest.

<sup>179</sup> Rogers, Keith, "Weapons Arsenal Aging: Official: Nuclear Tests Needed," *Las Vegas Review-Journal*, August 15, 2002.



# Chapter Nine:

## *Conclusions and Recommendations*

**T**he United States, under the name counterproliferation, is developing a range of policies, practices and capabilities that will prove useful in the fight against the proliferation and use of weapons of mass destruction in future years. The idea that it is so unacceptable for a state to possess nuclear, biological or chemical weapons that possession alone could make them subject to attack sends a strong signal against proliferation.

However, when the state developing that message is also the world's largest nuclear power, the force of the message is blunted and becomes a warning not to challenge United States and Western interests rather than a message against proliferation. Nuclear weapons use can never be part of such a policy, and neither can the continued possession of nuclear weapons.

If the authority of the UN Security Council can be put behind a strictly enforced ban on the possession by any nation of NBC weapons, then counterproliferation will be a vital part of that effort. The capabilities that United States is now devising, developing and creating in intelligence, doctrines, new weapons and all other aspects of

counterproliferation are a basis for future global cooperation against proliferators. For that to come to pass, the NPT bargain must be met in full for counterproliferation to truly grow into an accepted, non-controversial part of global security policy.

However, President Bush and his neo-conservative allies have done much to undermine the old paradigm for non-proliferation, arms control and disarmament. Part of their analysis is correct. The Cold War system of negotiating agreements between the United States and the Soviet Union is now in part obsolete. The challenge is to replace it with a multilateral model that will work, and will allow for U.S.-Russian disarmament while including other nations. Global cooperation working for the elimination of nuclear weapons, as well as elimination of chemical and biological weapons, under strict verification and enforcement regimes is the only long term method to prevent the use of these weapons.

The President has decided not to seek such cooperation, but rather to use counterproliferation as a military tool to destroy those who would attack the United States with NBC weapons. The so-called international relations "realists" who

support these ideas are nothing of the sort. Their short-sighted policy concentrates only on fighting threats as they emerge. A long-term policy would seek to identify and eliminate threats before they could emerge, removing the basis for concern in the first place. The NPT provides a platform on which to build such a paradigm.

### **PREVENTING NUCLEAR USE**

As a first principle, the United States, and other nuclear weapon states, need to recognize that nuclear weapons use would be the ultimate medical catastrophe and work to ensure that such a tragedy never happens. The primary aim of both deterrence and non-proliferation policies is to prevent the use of nuclear weapons and other weapons of mass destruction. A role for nuclear forces in counterproliferation runs counter to that aim and, in the case of use, negates it absolutely.

The current counterproliferation policies and associated nuclear use doctrines being pursued by this and past administrations run against U.S. national interests. This negative effect will only be exacerbated by the abandonment of international treaties and a return to nuclear testing. Actual use of nuclear weapons would make the United States the ultimate rogue state, an international pariah even to its best friends and allies. Moreover, as long as nuclear weapons form part of global arsenals there remains a risk they will be used against the United States.

Preventing nuclear war through the elimination of nuclear weapons is in the U. S. national interest, as well as the wider global interest. Multilateral cooperation to achieve this goal should be at the center of an active diplomatic effort by the United States.

### **BUILDING A NEW PARADIGM**

The U.S. Ambassador to the 2003 PrepCom for the 2005 NPT Review Conference told the assembled nations that the time had passed for 'business as usual.' This is surely correct, and to further the pursuit of the urgent objective of containing proliferation, and preventing the use of NBC weapons, there is a need for an urgent ex-

amination of counterproliferation and non-proliferation policies. This examination should explore military and non-military means for preventing and rolling back proliferation, and ensure that the diplomatic and military policies pursued are compatible, and do not undermine U.S. security. This process also should ensure that such military counterproliferation efforts as are deemed necessary serve non-proliferation ends, rather than supplanting them. This new non-proliferation paradigm is vital if the first decades of the 21<sup>st</sup> century are not to witness a renewed rush of nuclear proliferation.

### *Ensure Compatibility of Counterproliferation Policy with Non-Proliferation Goals*

The administration should ensure that the policies pursued under the name counterproliferation are compatible with, and do not undermine, the non-proliferation policies that it is also pursuing. Efforts to restrict the spread of NBC weapons, and rollback proliferation where it has occurred, should take precedence over policies aimed at destroying such weapons, since their destruction can never be more than a last resort in an effort to prevent the use of such weapons.

In particular, the administration should pursue conventional weapons options for the destruction of NBC weapons targets, as the use of conventional weapons always will be more politically acceptable than the use of nuclear weapons. It is widely thought that many within the Pentagon responsible for planning counterproliferation missions reject the idea that nuclear weapons have any utility in such missions. They do not believe that they would be given permission to use nuclear weapons. As such, U.S. policy currently lacks credibility, as well as undermines non-proliferation norms the United States has sought to develop and uphold. Since nuclear weapons have, at best, a limited utility in counterproliferation missions, the administration would be wise to adopt a series of policies concerned with nuclear forces that would strengthen non-proliferation policy.

### *Renounce the First Use of Nuclear Weapons*

Any U.S. adversary is given an incentive to acquire and use nuclear weapons, knowing that use of the considerably less effective chemical and biological weapons could bring a nuclear attack on their country. Additionally, the knowledge that an attack by the United States could be preemptive means that they have an incentive to use their own weapons early rather than lose them. Renouncing first use of nuclear weapons would, therefore, enhance U.S. security by raising the bar for the use of all NBC weapons.

### *Renounce the Use of Nuclear Weapons Against Chemical or Biological Weapons*

The extension of the use of nuclear weapons to include the deterrence or destruction of chemical and biological weapons lowers the bar for nuclear use, making it more likely that the U.S. will face a nuclear-armed opponent. Why restrict proliferation efforts to chemical or biological weapons when the United States is threatening nuclear war in response? Current U.S. nuclear doctrine actually diminishes U.S. national security and should be changed to restrict the circumstances in which nuclear weapons might be used, thus diminishing the incentive to nuclear proliferation or the use of nuclear or other NBC weapons.

### *Abandon the Development of New Nuclear Capabilities and Weapons*

Since the signing of the NPT in 1968, the United States has been bound legally to eliminate its nuclear weapons. Planning the extension of the life of the arsenal, and the extension of the role of nuclear weapons in U.S. military strategy, runs directly counter to that legally binding undertaking. The United States, and other nuclear weapon states, should be containing and reducing the roles of nuclear weapons as a prelude to their elimination. They should not, as the United States is doing, be increasing their importance both politically and militarily by expanding roles and missions and preparing new weapons and capabilities. The self-fulfilling and self-justifying position of the neo-conservatives that nuclear weapons will never be

eliminated, and that their nuclear plans are therefore warranted, is no reason not to comply with an international treaty obligation.

Stopping weapons design, development and production capability is a major part of that disarmament process. Abandoning the development of new capabilities for nuclear weapons and new nuclear weapons designs would be a strong signal that the U.S. is serious about disarmament.

### **PROMOTING A GLOBAL COALITION FOR THE ELIMINATION OF NBC WEAPONS**

In all of these efforts the United Nations should be central. The legitimacy that the Security Council can provide is unique. With the strong support of the United States it can achieve much. The United States has a compelling interest in building a truly global coalition to promote the kinds of policies outlined in this section. A genuine coalition of global partners could be put together to enforce the implementation of a global non-proliferation and disarmament regime. It is only necessary to read the contributions of the many States Parties to the NPT at recent review conferences and PrepComs to know that the world would welcome such U.S. intervention, if the U.S. is ready to move towards the elimination of nuclear weapons itself. In addition to the changes in U.S. policy and practice suggested above, there are a number of non-proliferation initiatives that could be undertaken, by the United States and Russia, or multilaterally, which would enhance the chances that counterforce strikes against NBC weapons sites and facilities will never be needed.

Already, the global non-proliferation regime has been remarkably successful at containing the number of states that obtained nuclear weapons or other NBC weapons. More needs to be done, and the treaty-based regime that has served so well for forty years needs to be enhanced, rather than demolished. In particular, the administration should pursue the following policies:

#### *Ratify and Implement the CTBT*

The administration should pursue speedy ratification of the CTBT by the Senate, and should use

diplomatic pressure to encourage other countries to sign and ratify the treaty speedily. Entry-into-force of the CTBT should be a major U.S. goal, since it severely restrains the ability of states to develop nuclear weapons or to improve the designs they already have.

#### *Strengthen and Expand Cooperative Threat Reduction and Non-Proliferation Programs*

There is great concern about the proliferation of nuclear materials from Russia, and also about “loose nukes,” or weapons possibly lost from the approximately 20,000-strong Russian arsenal of tactical nuclear weapons. Either weapons or materials would be useful to potential proliferants, including terrorist groups. The United States should augment spending on, and give a greater political priority to, the Cooperative Threat Reduction and Non-Proliferation Programs that enhance nuclear security in Russia and the other states of the former Soviet Union and lessen this risk.

#### *Negotiate Deep Cuts in Strategic Weapons and the Elimination of Tactical Nuclear Weapons*

The United States and Russia are negotiating new cuts in their strategic forces. This important process must continue, and reductions in strategic forces should be quickly pursued to allow the entry of other nuclear nations into disarmament talks. There is, at present, no framework for the discussion of the reduction and elimination of tactical nuclear weapons. Since these are the weapons most likely to be used by terrorists, such talks should be initiated immediately. Where other nations have the capacity to deploy such weapons they should be involved in such negotiations. A joint initiative from the United States and Russia may be a means to revitalize the moribund Conference on Disarmament (CD).

The SORT treaty, signed in Moscow in May 2002, provides little or no actual disarmament. On the contrary it is likely to lead to the reloading of Russian ICBMs with multiple warheads, and little more than the storage of thousands of U.S. warheads withdrawn from active deployment. This is unlikely to prove satisfactory for

U.S. and Russian partners at the NPT, who seek signs of genuine progress to full compliance with that treaty.

#### *Strengthen the Non-Proliferation Role of the IAEA*

The International Atomic Energy Agency (IAEA) has the responsibility for monitoring nuclear power facilities and nuclear materials across the globe. Their powers are limited, although they have been somewhat strengthened during the 1990s by such measures as the 93+2 verification process. This led to the 1997 Additional Protocols for strengthening the IAEA safeguards system. To supplement this, the IAEA should be given greater resources, and greater powers, to carry out its vital task. With support from U.S. intelligence agencies and full cooperation and support from this and future administrations, that work would become all the easier.

These policies would combine to greatly strengthen the nuclear non-proliferation regime and thus enhance U.S. national security. The administration is too ready to work unilaterally, ignoring the truth that multilateral cooperation in this field, while slow and difficult, is the key to success.

#### *Enhance Global Controls on Fissile Materials*

Since 1995, the Fissile Material Cut-Off Treaty (FMCT) has languished in the CD in Geneva. Quick negotiation and adoption of this treaty, which would end the production of fissile materials for weapons purposes, would be an important step in the control of fissile materials, necessary for nuclear or radiological weapons worldwide.

A further important element would be increased security for stocks of fissile materials that already exist, and their gradual transfer to civilian control under IAEA safeguards. This would reduce the likelihood that a terrorist could obtain such materials to build a nuclear weapon.

#### *Pursue Non-Proliferation Responses to Biological and Chemical Weapons Terrorism*

Preventing terrorist use of biological or chemical

weapons is significantly more difficult than preventing nuclear weapons use. However, a major part of the resolution of the problem must be in the development of strict verification regimes for the conventions banning these weapons that already exist.

The Chemical Weapons Convention (CWC) has entered into force, and has a reasonably satisfactory verification procedure. National procedures for the control of dangerous chemicals and chemical weapons precursors, within an international framework of reporting, would help in preventing terrorist acquisition of chemical weapons capabilities. The CWC could be greatly improved in effectiveness with a major political effort to increase the number of states parties and ensure their active participation in implementation. This also would reduce the likelihood that terrorists would receive state support in the acquisition and use of chemical weapons.

The Biological Weapons Convention (BWC) has no verification or enforcement regime, and the United States in 2002 wrecked negotiations aimed at producing an enforcement protocol. That protocol had already been greatly weakened by the Clinton administration, acting largely under pressure from Pharma, the Pharmaceutical Manufacturers Association. This has the effect of ensuring that no effective international control regime is likely to be in place for some long time to come. Support is needed for a number of initiatives:

- An effective enforcement mechanism for the BWC, matched with diplomatic initiatives to make this a truly universal convention;
- An enhanced and expanded non-proliferation program in co-operation with Russia for the destruction of Russian chemical and biological weapons, and the destruction of the U.S. arsenal;
- The promotion of national legislation in all

BWC member states, making it a crime for individuals, corporations, universities, and other research institutes or government representatives, to acquire, develop, stockpile or use biological weapons;

- Require all laboratories that could produce biological weapons to register with federal authorities. Each laboratory should submit an annual declaration, verifiable by inspection, that they are not engaged in any biological weapons work. Promote international efforts to adopt national legislation to this effect for all BWC members.

### CREATE A TRULY GLOBAL COUNTERPROLIFERATION POLICY

Certain aspects of counterproliferation policies being pursued by the U.S. government could be extremely useful, indeed essential, in the enforcement of a global regime of non-proliferation and disarmament. Intelligence gathering methods and technologies; sensing technologies for radiation, chemical and biological agents; advanced diagnostic methods for recognizing and treating BW outbreaks; enhanced tracking and monitoring of 'dual-use' goods and materials, amongst many other things, are items which could usefully be shared with the international community to help prevent the spread of NBC weapons. Even counterforce strikes against proliferant states could be widely acceptable as part of a truly global norm against the possession of such weapons. All this would have to be done under the auspices and with the authority of the UN Security Council. The United States, its allies, and other NBC weapons possessors would have to be prepared to implement the CWC, BWC and the NPT in full to make this acceptable to the wider international community. No longer would it be seen as a 'do as I say, not as I do' component of U.S. enforcement of its narrow security interests, but as part of a genuine effort to enhance global security with the cooperation of all. Those who chose to stand outside such an effort would be

'rogue' states indeed.

## CONCLUSION

The answers to the conundrum posed in the quote from Shakespeare have now been fully examined. That the United States and the international community have suffered 'griefs,' in the shape of the spread and threat of use of NBC weapons is beyond question. And, in the words of Shakespeare, we have weighed in the balance the wrongs against us, and the wrongs our arms may do.

Those who seeks to acquire NBC weapons, and those who already hold them, pose a threat to international se-

Those who seeks to acquire NBC weapons, and those that already hold them pose a threat to international security.

curity. It is clear that nations have a right of self-defense and, in the last resort, the possibility of the use of military force in counterproliferation missions must be retained. But this policy can never be anything more than a last resort, a final option. It cannot be the first choice. In the words of Shakespeare's noted war leader, Coriolanus, "The end of war's uncertain,"<sup>180</sup> and that is something that this and every administration must bear in mind.

This administration has done such damage to the international diplomatic non-proliferation regime that it has been gravely undermined. Our first line of defense is therefore weakened. This

has, in turn, undermined the legitimacy of U.S. counterproliferation policy. President Bush runs the risk that his policies will be viewed not in a positive light, but rather (again in the words of Shakespeare) as people viewed the disastrous policies of England's King John:

And in this seat of peace tumultuous wars  
Shall kin with kin and kind with kind con-  
found; Disorder, horror, fear and mutiny  
Shall here inhabit, and this land be call'd  
The field of Golgotha and dead men's  
skulls.<sup>181</sup>

Unlike Shakespeare's Archbishop's quote at the beginning of this report, the international community has begun to believe that the offenses of the U.S. are more grievous than the faults of its opponents. The war in Iraq, and the failure to find significant evidence of NBC weapons, have only reinforced skepticism about the legitimacy of U.S. actions. In seeking credibility to prosecute a war, or even a limited strike, for counterproliferation purposes, it would be better for any administration to make every effort first to enforce compliance with international regimes through diplomatic means and to be seen to be doing so with the support of the United Nations.

In so doing, support for military action in truly last resort cases would be much easier to build in the international community. It would be better also if the administration were to renounce the use of nuclear weapons themselves. The legitimacy of global efforts to eliminate NBC weapons will only benefit from such cooperation and restraint.

<sup>180</sup> Shakespeare, William, *Coriolanus*, Act V, Scene 3.

<sup>181</sup> Shakespeare, William, *King John*, Act IV, Scene 1.

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## ABOUT THE AUTHOR

Martin Butcher is director of security programs for Physicians for Social Responsibility. He oversees a program that concentrates on reducing the threat of nuclear war and the use of nuclear weapons. PSR also works to mitigate the health and environmental consequences of 60 years of research, development, testing and production of nuclear weapons. Martin has worked as an analyst of nuclear weapons issues since 1983, and is the author and co-author of numerous publications on NATO strategy, NATO nuclear policy, French and British nuclear policies, the European Union, nuclear weapons and nuclear disarmament.

Before joining PSR in 2000, Martin worked with the British American Security Information Council (BASIC) as Acting Director, during the Director's sabbatical and as a Senior Fellow covering nuclear arms and disarmament issues.

For seven years, Martin was director of the Center for European Security and Disarmament (CESD) in Brussels. There he carried out research

on NATO and EU security, foreign and defense policies and directed a program on nuclear arms and disarmament; arms transfer policy; EU Common Foreign and Security Policy (CFSP), amongst other issues. Martin also acted as an advisor to the European Commission and Parliament on non-proliferation issues.

Before CESD, Martin worked in London for BASIC as Associate for European Affairs. His main areas of study during his four years with BASIC were NATO nuclear policies and nuclear weapons, and French nuclear weapons policies. Martin's career began with the Campaign for Nuclear Disarmament (CND). At CND, Martin organized the Student CND network, was active in planning and organizing major events. He was the organizer of the 1987 European Nuclear Disarmament Convention. As well as writing a column for the monthly news magazine, *Sanity*, he collaborated in writing information briefs for Parliament.



**PHYSICIANS FOR SOCIAL RESPONSIBILITY**

1875 Connecticut Avenue, NW, Suite 1012  
Washington, DC 20009

Telephone: (202) 667-4260

Fax: (202) 667-4201

E-mail: [psrnatl@psr.org](mailto:psrnatl@psr.org)

Web [www.psr.org](http://www.psr.org)



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the Prevention of Nuclear War