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United States Department of Defense

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At the fifteenth NATO workshop on political-military decision-making, Dr. Hamre addresses the need for nations to take steps to reduce the threat of cyberattacks and attacks by weapons of mass destruction .

Volume 13, Number 44**Hamre: Counterproliferation efforts must include defense against cyberattacks<,> WMD**

Remarks by [Deputy Secretary of Defense Dr. John J. Hamre](#) at the NATO Workshop, Vienna, Austria, June 22, 1998.

[Secretary General \[Javier\] Solana](#), [Gen. \[Klaus\] Naumann](#) [Chairman, North Atlantic Military Committee], [Gen. Wesley Clark](#) [Supreme Allied Commander Europe], and distinguished participants, your excellencies -- I am honored to participate in this fifteenth [NATO](#) workshop on political-military decision-making. It is an honor to participate with such distinguished and very qualified experts.

NATO stands on the edge of its 50th anniversary, and it is very important that we are all thinking about the future of the NATO alliance, of the future of Partnership for Peace and of the future of our own countries.

Historians will conclude that this is a fortunate time in European history. We have seen a transformation for freedom that is grand in scope, noble in cause, and unique in the annals of humankind. From the Atlantic to the Urals, we are helping to secure the peace of the post-Cold War world. We have a chance to make the 21st century in Europe the antithesis of the 20th century in Europe.

This historic day did not come to us through luck, but through determined leadership.

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Through the perseverance of peoples throughout the continent who remained steadfast in their support for freedom. Through the resilience and strength of our military commitment that stood against oppression. These were the forces that brought down the Berlin Wall. The burning truth of democratic idealism toppled the iron curtain, but it needed the determined persistence of military might to give these democratic ideas time to grow.

And while these are golden days, they are not without peril. The theme of this conference is "Confronting the Security Challenges of the New NATO." Future foes, unable to prevail in a conventional challenge, are likely to seek other ways to challenge us. Our opponents of the future, be they nation-states, sub-state or transnational actors, will seek our Achilles heels -- unconventional ways to attack our vulnerabilities.

Unfortunately, modern post-industrial society provides many targets to would-be future adversaries. Future opponents who cannot match us on traditional battlefields have disturbing new tools. They include: chemical and biological weapons -- and the ability to deliver them; nuclear weapons -- still threatening despite Herculean efforts to control them; cyberattack against vital information systems, capable of disrupting and even destroying the infrastructure of modern society; and the scourge of terrorism, and an emerging willingness of terrorists to use chemical and biological weapons. These threats demand unprecedented cooperation among all of our countries.

In some ways these threats are not new. Chemical and biological weapons have been used before. In ancient times, the Spartans assailed the Athenians with noxious fumes of smoldering pitch and sulfur. During the Middle Ages, cadavers were catapulted over besieged city walls to spread death and disease. In this century, the searing sting of mustard gas poisoned the battlefields of Europe and nerve gas has claimed innocent civilians in Iraq. Combatants since the dawn of time have sought to sever vital lines of communication. Terrorism has been a tool of conflict for as long as fear has been a weapon. These were examples of nasty tactics of combat.

What makes our age different is these new technologies are becoming strategic weapons, not tactical maneuvers. Technology has made these weapons more powerful and much more widely available. Five pounds of anthrax, properly dispersed, would kill over 200,000 in Washington, DC. Internet sites now give instructions on how to make chemical bombs and how to make primitive biological agents. Hackers clubs around the world are competing to break into the computers of business, academia and government.

We have only to look around the world to realize that chemical, biological, and nuclear weapons are a growing threat. At least two dozen nations already possess chemical and biological weapons or have active development programs to build them. Globalization of the world economy and increasing ease of information transfer make knowledge of these weapons available to even more nations and non-state actors at the click of a button.

The Tokyo subway sarin gas attack broke the taboo of first use, sparking interest in dozens of other terrorists/fringe organizations. And the shock of nuclear tests in the deserts of India

and Pakistan still reverberates in each of our capitols, and set off fear others may match their terrible decisions.

The picture is not uniformly gloomy! In the U.S., we have decided that these so-called asymmetric -- that is, a small number of people on an offensive effort generates the need for a huge number of people on a defense effort -- threats represent the most important security challenge of the next century. Stopping the proliferation of chemical, biological and nuclear weapons and protecting our vulnerable infrastructure constitutes the security challenge of our age. We have initiated a broad range of measures to help us enter this frightening new world.

First, we will continue our participation and expand our funding of the cooperative threat reduction program to speed reduction or elimination of nuclear weapons in Russia, Belarus, Kazakhstan and Ukraine. We would like to extend that program to help eliminate chemical weapons.

Second, we have reorganized and consolidated our own defense department, bringing together over a dozen separate treaty and threat reduction implementation efforts into a single new defense threat reduction agency. This new agency will be our focal point for our efforts to reduce nuclear, chemical, and biological threats. It will monitor all of our treaties. It will manage the licensing process for the export of technologies and products that have dual-use potential. It will manage all of our programs that work collaboratively with other countries to reduce threatening systems.

Third, to protect our armed forces, for the first time in our history, we have instituted mandatory systematic vaccinations against deadly anthrax for our entire military.

Fourth, I fear this is just the start of systematic inoculation. At some point, I predict, we will offer voluntary vaccinations for all Americans. But that decision is some time off. We will spend over \$5 billion on chemical and biological protection and counterproliferation over the next six years. Major emphasis is to develop remote detection systems and non-aqueous diagnostic techniques.

Fifth, we have launched an expansive new effort under the label of "homeland defense." For example, to protect our citizens in the U.S., we have organized special rapid assessment teams within our national guard. We are placing teams at strategic locations around the U.S. that are being specially trained to identify, diagnose and contain terror weapon attacks using chemical and biological agents. We are building a new generation of rapid diagnostic equipment that can identify deadly chemical and biological agents within seconds and minutes.

In the United States, the defense department is normally not commissioned to deal with internal threats. Traditionally, our military is oriented to defend against conventional threats beyond our shores. We will be changing that in coming months. A terrorist incident using chemical or biological agents will quickly outstrip the ability of local emergency authorities

to deal with these threats. Military forces are better able to deal with consequences of chemical, biological or nuclear use, especially if they result in mass casualties.

All of these actions demonstrate that the U.S. firmly believes the threat from terror weapons and terrorism is very real and increasing.

Our newfound emphasis on America's homeland defense should not be seen as a retreat from [NATO](#). We believe we cannot succeed in countering international terrorism without active collaboration with our partners in NATO. We think it is equally important that NATO members and partner countries take this threat just as seriously and that we all continue and expand efforts to counterproliferation of weapons of mass destruction. Indeed, monitoring threatening developments and determining hostile acts will demand an unprecedented level of cooperation among all NATO allies.

NATO has already made important initial strides. The senior politico-military group on proliferation was created to review political issues. The senior defense group on proliferation was created to address the defense issues associated with nuclear, biological and chemical weapons risks.

Less than two weeks ago, the defense group issued a report taking stock of NATO defense efforts against proliferation. The group noted that both NATO and member countries have taken the essential first steps to adapt forces to face the risks of terror weapons. The group's report makes several excellent recommendations on how the alliance can enhance its defense posture against asymmetric chemical and biological threats.

One recommendation focuses on the challenges posed by possible attacks against civilian targets. The report also notes NATO should consider national and collective responses to these threats, including appropriate defense support to civil authorities.

I believe it is appropriate for the NATO senior defense group on proliferation to consider how NATO -- and interested partner countries -- can further improve their capabilities for dealing with the consequences of these horrific weapons. We must all act on these recommendations to sustain progress. The report makes clear that much more needs to be done to prepare our forces and protect our citizens.

The senior defense group report also recognized that theater missile defense is a vital component of NATO's military posture. Missile defense is required to adapt to new, out-of-area missions and a new security environment characterized by the proliferation of ballistic missiles armed with chemical, biological or nuclear warheads. The threat to our troops and our cities from theater ballistic missiles is real and is here today. The alliance must continue to work toward developing layered ballistic missile defense.

In the near term, one of our common goals should be establishing an effective coalition warfare capability among those allies already possessing missile defense systems. We are making progress. The U.S., Germany and the Netherlands -- the three member nations with

the Patriot system -- have participated together in theater missile defense exercises and planning. NATO nations should build on this cooperation to identify further opportunities to strengthen our defenses. Missile defense is integral to our response to the threat of terror weapons, and it is part of our broader efforts to counter the threats of the future.

To guide these efforts, we must ensure NATO takes full account of nuclear, chemical and biological risks in its upcoming update to the strategic concept. We need strong defense guidelines for all of us to prepare our forces to counter these threats.

Related to these familiar threats, we must realize the national security implications found in the explosion in information technologies. Computers and virtual linkages make it possible for us to communicate tremendous amounts of information to our allies and partners. The militaries of all of our countries rely on this technology. But information technology can be both benefit and burden.

It used to be that our national and alliance critical infrastructures were defined by geography and physical equipment -- that is no longer true. There are no borders in cyber space. Critical infrastructure now includes a vast dependence on information systems. All of our nations depend on these systems to run our communications, power grids, air traffic control systems, hospitals, banks -- all of our key functions. It is absolutely imperative we prepare now to protect these systems.

In the United States last year, we ran an exercise in the defense department in which we tried to test whether or not we were susceptible to computer attack. We asked a small group of employees to use off-the-shelf, commercially available computers and software to see if they could attack the computer systems that control our infrastructure, our electric power system for example.

We learned that it only requires a modest capability that is easily available to seriously disrupt vital services like electric power distribution and telecommunications systems. A small handful of capable computer specialists -- a capability well within the reach of even moderately developed countries -- using off the shelf, existing tools and techniques can wage war on the largest nations in the world.

We in the United States have implemented a presidentially mandated national plan to implement information assurance measures. We are establishing lead agencies who will act as coordinating bodies working with private companies and concerns in the American economy. We have designated a senior national coordinator for infrastructure protection on our national security council. We created a new national infrastructure protection center. We are establishing a national warning and analysis center, and are increasing expenditures for information assurance.

We can't fix this problem unless we develop working partnerships with the private sector. We cannot accept weaknesses in allies, since in cyberspace the weakest link breaks the entire chain. Coordination among NATO and partnership countries and between NATO

functions will be the key to effectively implementing information assurance measures. The fear that the US will outpace our allies in technology will only get worse if NATO weakness undermines our security through cyberattacks. We must make these critical infrastructures in all of our countries less vulnerable to easy cyberattack. We must implement information assurance regimes so that we can reliably and securely protect our information systems.

This spring I traveled to Europe to talk to several of you about this - U.S. senior defense officials have also been here discussing this threat. We have laid the groundwork but much more must be done.

It is vitally important we address the threat of cyberattack. This too should be addressed in the new strategic concept. [NATO](#) should seek a coordinated response. The senior civil emergency planning committee is an existing structure that could assume a coordinating role.

Thus far I have discussed evolving threats -- but it is also imperative to address one of the most dangerous ways in which these threats can be visited on our forces and our populations.

The threat of terrorism, especially involving chemical, biological or nuclear weapons, poses yet another challenge for the future. NATO has already focused significant amounts of time and money to address the terrorist threat. Terrorism demands close cooperation with all of our partners. There is nothing uniquely national in dealing with the terrorist threat -- we must continue and expand our cooperation. Force protection initiatives include not just defensive anti-terrorism efforts; they also includes proactive counterterrorism efforts.

The results of just a single terrorist attack if it involves chemical and biological weapons justify our efforts to combat this scourge. We must prepare now so that when a horrific event does occur we do not act in haste and jeopardize the civil liberties we cherish in our democracies.

I have only scratched the surface in discussing what I view as the threats of the future. You will soon hear from our under secretary for acquisition and technology, [Jacques Gansler](#); the director of our [ballistic missile defense office](#), [Lt. Gen. Lester Lyles](#); and the director of our [Defense Special Weapons Agency](#), [Maj. Gen. Gary Curtin](#).

They will discuss some of these specialized, emerging threats at greater length. Doctor Gansler will address the major acquisition and technology issues facing the alliance. General Lyles will address the critical area of missile defenses -- a key part of the NATO senior-defense-group-on-proliferation report. General Curtin will address our efforts to both enforce existing controls on weapons of mass destruction and prepare for new threats.

I hope I have stimulated your thinking on how we respond to asymmetric threats. We stand poised at a great moment in history, and have overcome many of the threats of the past. In

order to realize the great potential of Europe in the 21st century, and the great potential of America's partnership with Europe, we must maintain our vigilance against these threats.

I congratulate and thank you for your interest in this most important of endeavors. I hope historians 50 years from now look back and say the leaders in 1998 had the same foresight as our leaders in 1949 to put in place the foundation of security that brought us all safely through the most dangerous epoch in human history.

Other Related Sites of Interest:

- [*President's Commission on Critical Infrastructure Protection*](#)
- [*Infrastructure Protection Task Force*](#)
- [*Defense Policy on WMD*](#)
- [*DoD Counterproliferation and Chemical Biological Defense*](#)

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