

F.A.S. *PUBLIC INTEREST REPORT*

Journal of the Federation of American Scientists (F.A.S.)

Volume 51, Number 3

May/June 1998

The Good, the Bad, and the Wasteful in the Defense Budget

This newsletter identifies the dozen leading candidates for reduced funding or cancellation in this year's defense budget debate, and proposes the ten highest priority programs that deserve additional funding and support

Nearly a decade after the end of the Cold War, the Department of Defense (DoD) budget has declined greatly as a percentage of the gross national product (GNP) from about 6% to roughly 3% of GNP. But half of this decline is due to economic growth, rather than significant shrinkage in the defense budget. Furthermore, reduced military spending has merely liquidated the excesses of the Reagan era build up, as evidenced by the quarter of a trillion dollars spent each year on the Defense Department, which is, in real terms, about the same as the average level of peacetime spending during the Cold War era.

Eliminate Waste, Improve Security

With the euphoria of the end of the Cold War fading, and with the budget deficit disappearing, public debate over military spending has largely faded as well. In the absence of countervailing public pressure and compelling external threats, the unsurprising result is that defense planning and budgeting has been shaped by what is convenient to the services and contractors, rather than what is essential for American national security. Some of these bureaucratic favorites are merely wasteful, such as superfluous procurement of combat aircraft, others are surely pernicious, such as national missile defense, which could make nuclear reductions more difficult, and others are dangerous, such as the failings of current counter-terrorism and intelligence programs.

The American military establishment has not changed in proportion to the seminal change in world circumstances. Overwhelmingly, today's weapons systems and force structures are the product of a bygone era. A military establishment so rooted in the past century will be poorly organized, trained, and equipped to meet the challenges of the next century.

Threat Reduction

During the Cold War a "robust" nuclear war-fighting force was thought to be central to the American posture towards the Soviet Union in order to defend Western Europe. But, today, nuclear weapons work against us as the great leveler that threaten to negate current and prospective American conventional preeminence. While the implementation of the START II agreement will represent substantial progress in reducing deployed strategic nuclear weapons on each side from over 10,000 to 3,500, the residue is still 100 times more than necessary to deter Russia from attacking the West, which it has no intention or motivation to do. More effort is needed to move toward a nuclear free world and to clean up the nuclear debris of the past.

During the Cold War, conventional war planning focused on the ability to fight two simultaneous wars: one in Europe against the Soviet Union, and another in some other theater. This two-war planning requirement remains, now oriented on Iraq and North Korea, despite the declining plausibility of a simultaneous war with these adversaries. While threats remain, we are approaching, if we have not reached, the moment when the two-war planning assumption will manifestly fail to describe the real world. Refocusing

Dirty Dozen: Programs for Reductions or Termination, pg. 3
Top Ten: Programs for Continuation or Augmentation, pg. 8

requirements on an increasingly sufficient single-war scenario would facilitate over time eliminating surplus force structure, as well as permitting a "procurement holiday" that would support a transition to "next generation" weapons systems.

The post-Cold War world poses new and complex challenges to security planning. Intelligence collection and exploitation require a better focus on new and emerging requirements. Modest improvements to domestic programs responding to the threat of terrorists armed with weapons of mass destruction offer far greater security payoffs than continued spending on missile defenses.

But none of these needed changes will occur in the absence of greater public involvement. Left to their own devices the national security establishment will follow the paths of least resistance. □

Military Spending Working Group (MSWG)

<http://www.fas.org/pub/gen/mswg/index.html>

In this issue of the Public Interest Report, John E. Pike abstracts the 1998 edition of the Military Spending Briefing Book. The Briefing Book was produced with the support of the Military Spending Working Group (MSWG) and prepared primarily by FAS and the Council for a Livable World Education Fund.

Formed in mid-1994, MSWG, a coalition of two dozen research and advocacy organizations, seeks to educate members of the public, news media, and government about the possibility and desirability of reducing excess military spending globally.

See the MSWG Web site, maintained by FAS, for the complete Military Spending Briefing Book, links to participating organizations, and other related online resources.

FAS FUND

The Federation of American Scientists Fund, founded in 1971, is the 501 (c)(3) tax-deductible research and education arm of FAS.

Frank von Hippel, Chairman

Jeremy J. Stone, President

BOARD OF TRUSTEES

David Armington
Cely Arndt
Ann Druyan
Marvin L. Goldberger
Rush Holt
Mark A.R. Kleiman

Richard Muller
Peter Reuter
William Revelle
Margaret R. Spanel
Robert Weinberg
Herbert F. York

The *FAS Public Interest Report* (USPS 188-100) is published bi-monthly at 307 Mass. Ave., NE, Washington, D.C. 20002. Annual subscription \$25/year. Copyright © 1998 by the Federation of American Scientists.

Periodicals Postage Paid at Washington, D.C.

POSTMASTER: Send address changes to FAS, Public Interest Rep., 307 Massachusetts Avenue, NE, Washington, D.C. 20002.

FAS

Chairman: CARL KAYSSEN

Vice Chairman: ROBERT MCC. ADAMS

President: JEREMY J. STONE

Secretary: PRISCILLA J. McMILLAN

Treasurer: MICHAEL MANN

The Federation of American Scientists (FAS), founded October 31, 1945 as the Federation of Atomic Scientists by Manhattan Project scientists, engages in research and advocacy on science- and society issues, especially global security.

Current war and peace issues range from nuclear war to ethnic conflict and from nuclear disarmament to arms sales; sustainable development issues include disease surveillance, climate modification, poverty, food security and environment. FAS also works on human rights of scientists and on reductions in secrecy.

SPONSORS

*Sidney Altman (Biology)
Bruce Ames (Biochemistry)
*Philip W. Anderson (Physics)
*Kenneth J. Arrow (Economics)
*Julius Axelrod (Biochemistry)
*David Baltimore (Biochemistry)
Paul Beeson (Medicine)
*Baruj Benacerraf (Immunology)
*Hans A. Bethe (Physics)
*I. Michael Bishop (Molecular Biology)
*Konrad Bloch (Chemistry)
*Nicolaas Bloembergen (Physics)
*Norman E. Borlaug (Wheat)
Anne Pitts Carter (Economics)
*Owen Chamberlain (Physics)
Abram Chayes (Law)
Morris Cohen (Engineering)
*Stanley Cohen (Biochemistry)
Mildred Cohn (Biochemistry)
*Leon N. Cooper (Physics)
*E.J. Corey (Chemistry)
Paul B. Corneley (Medicine)
*Johann Deisenhofer (Structural Biology)
Carl Djerassi (Organic Chemistry)
Ann Druyan (Writer/Producer)
*Renato Dulbecco (Microbiology)
John T. Edsall (Biology)
Paul R. Ehrlich (Biology)
*Gertrude B. Elion (Medicine)
George Field (Astrophysics)
*Val L. Fitch (Physics)
Jerome D. Frank (Psychology)
*Jerome I. Friedman (Physics)
*D. Carleton Gajdusek (Medicine)
John Kenneth Galbraith (Economics)
*Walter Gilbert (Biochemistry)
Edward L. Ginzton (Engineering)
*Donald Glaser (Physics-Biology)
*Sheldon L. Glashow (Physics)
Marvin L. Goldberger (Physics)
*Joseph L. Goldstein (Medicine)
*Roger C.L. Guillemin (Physiology)
*Herbert A. Hauptman (Chemistry)
*Dudley R. Herschbach (Chem. Physics)
Frank von Hippel (Physics)
*Roald Hoffmann (Chemistry)
John P. Holdren (Energy/Arms Control)
*David H. Hubel (Medicine)
*Jerome Karle (Physical Chemist)
Nathan Keyfitz (Demography)
*H. Gobind Khorana (Biochemistry)
*Arthur Kornberg (Biochemistry)
*Edwin G. Krebs (Pharmacology)
*Willis E. Lamb, Jr. (Physics)

*Leon Lederman (Physics)
*Wassily W. Leontief (Economics)
*William N. Lipscomb (Chemistry)
Jessica T. Mathews (Public Policy)
Roy Menninger (Psychiatry)
Robert Merton (Sociology)
Matthew S. Meselson (Biochemistry)
Neal E. Miller (Psychology)
*Franco Modigliani (Economics)
Philip Morrison (Physics)
Stephen S. Morse (Virology)
*Joseph E. Murray (Medicine)
*Daniel Nathans (Biochemistry)
Franklin A. Neva (Medicine)
*Marshall Nirenberg (Biochemistry)
*Douglas D. Osheroff (Physics)
*Arno A. Penzias (Astronomy)
*Martin L. Perl (Physics)
Gerard Piel (Sci Publisher)
Paul Portney (Economics)
Charles C. Price (Chemistry)
Mark Ptashne (Molecular Biology)
George Rathjens (Political Science)
*Frederick Reines (Physics)
*Burton Richter (Physics)
David Riesman, Jr. (Sociology)
*Richard J. Roberts (Molecular Biology)
Vernon Ruttan (Agriculture)
Jeffrey Sachs (Economics)
*Arthur Schawlow (Physics)
*J. Robert Schrieffer (Physics)
*Glenn T. Seaborg (Chemistry)
Andrew M. Sessler (Physics)
*Phillip A. Sharp (Biology)
Stanley K. Sheinbaum (Economics)
George A. Silver (Medicine)
*Herbert A. Simon (Psychology)
*Richard E. Smalley (Chemistry)
Neil Smelser (Sociology)
Alice Kimball Smith (History)
*Robert M. Solow (Economics)
*Jack Steinberger (Physics)
*Henry Taube (Chemistry)
*James Tobin (Economics)
*Charles H. Townes (Physics)
Myron E. Wegman (Medicine)
Robert A. Weinberg (Biology)
Victor F. Weisskopf (Physics)
*Torsten N. Wiesel (Medicine)
Robert R. Wilson (Physics)
C.S. Wu (Physics)
Alfred Yankauer (Medicine)
Herbert F. York (Physics)

*Nobel Laureate

NATIONAL COUNCIL MEMBERS (elected)

Eric H. Arnett (Arms Control)
Rosemary Chalk (Political Science)
Steve Fetter (Physics)
*Val Fitch (Physics)
Linda Gottfredson (Sociology)
David Hafemeister (Physics)

Morton Halperin (Political Science)
Daniel Kammen (Physics)
Priscilla J. McMillan (History)
Arthur H. Rosenfeld (Energy)
Robert Socolow (Engineering)
Burns H. Weston (International Law)

Dirty Dozen: Programs for Reductions or Termination

1. Cut Ballistic Missile Defense Programs and Preserve the ABM Treaty

The Clinton Administration FY 1999 budget request for missile defense programs is \$4.0 billion. For FY 2000 through FY 2003 an additional \$12.8 billion is planned. This \$16.8 billion total for missile defense programs in FY 1999-2003 includes funds added as a result of the Quadrennial Defense Review (QDR), and this budget is likely to be significantly increased by the Republican Congress.

Missile defense programs include work on both Theater Missile Defense (TMD) and National Missile Defense (NMD) systems. TMD systems, aimed at protecting military forces on the field of battle, have thus far experienced limited and largely unsuccessful testing. The NMD effort, on the other hand, purports to protect the entire country against an incoming missile threat. The Administration intends to make a decision on proceeding with deployment in 2000 after a single integrated systems test, though the Congress has pressed for making a deployment decision prior to this test.

These missile defense programs (like Star Wars) contradict the intent of the Anti-Ballistic Missile (ABM) Treaty, leading to decreased stability and thus *less* world security. Though the Administration negotiated, in 1997, modifications to the 1972 ABM Treaty to accommodate TMD programs, Congressional acceptance of continuation of the ABM Treaty

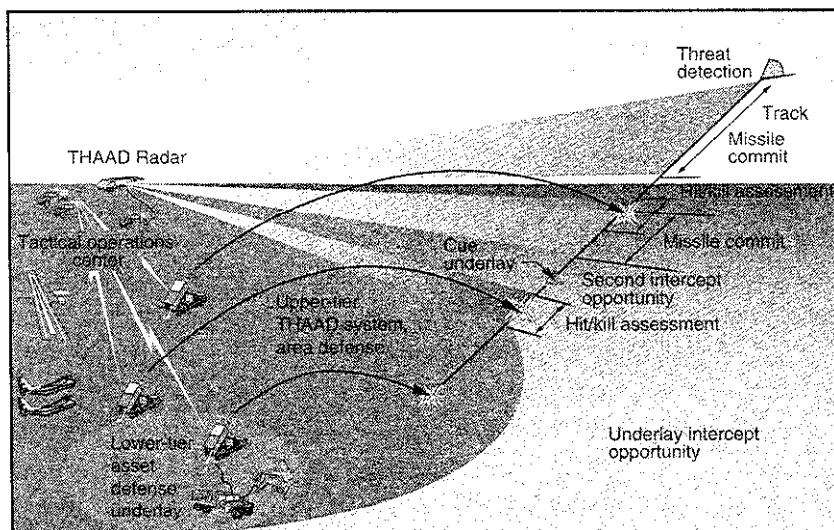
remains in doubt.

Working within the framework of the ABM Treaty, a reasonable anti-missile research program would require funding of only about \$1.25 billion in 1998, and funding that level in subsequent years. Such a missile defense program would cover deployment of the improved Patriot (PAC-3/ERINT), with no deployment of other longer-range TMD systems, or NMD systems. The parties to the ABM Treaty should reverse course, away from negotiating liberal interpretations of this Treaty, and instead focus on more restrictive limitations distinguishing between permitted and prohibited systems. The costs of currently contemplated anti-missile systems are modest compared with the trillion dollar fantasies of a decade ago. But the four billion dollars that is proposed for anti-missile systems each year from now on is far in excess of actual requirements.

2. No Further NATO Expansion

The initial round of expansion of the North Atlantic Treaty Organization (NATO) will conclude when Poland, Hungary, and the Czech Republic become NATO members in 1999. Subsequent rounds admitting additional new members are anticipated thereafter. The Administration estimates that the cost of enlarging NATO with the first three new members will range from about \$27 billion to \$35 billion from 1997 through 2009. The American share of these costs was estimated between \$1.5 billion and \$2 billion, or between \$150 million and \$200 million annually over the next decade. But other estimates have ranged considerably higher, and NATO enlargement could entail costs beyond those included by the Administration. There will certainly be additional financial costs associated with subsequent decisions to invite additional countries to join NATO.

The Congress should require that United States subsidy of the national expenses of Poland, Hungary, or the Czech Republic to meet their NATO commitments should not exceed 25 percent of all assistance provided to those countries by all NATO members. The



Theater High Altitude Area Defense (THAAD) systems are the centerpiece of the Theater Ballistic Missile Defense Program currently under development.

Congress should also require a full accounting of all US contributions for NATO expansion by including the US contributions to the national governments when calculating the US share of enlargement costs.

NATO should suspend the momentum towards the early admission of additional members. A more prudent policy would concentrate on supporting the continued development of a democratic, market-oriented society in Russia, with the European security environment shaped through the more comprehensive Partnership for Peace framework. While these initiatives would not result in budget savings for 1999, they would avoid significantly greater financial and political costs in later years.

3. Reduce Nuclear Force Levels

The Congressional Budget Office recently concluded that the Pentagon spends between \$20 and \$30 billion annually to maintain and operate our current level of nuclear weapons—roughly 7,000 deployed strategic weapons and between 500 and 1,000 tactical weapons. Reducing to the Senate-ratified START II level of 3,500 strategic weapons would save the Pentagon nearly \$1 billion a year in constant 1998 dollars.

Under a potential START III plan already discussed with the Russians, strategic warhead numbers

would be reduced to between 2,000 and 2,500. This would be a major cost-savings initiative for the Russians, as it would alleviate their need to finance building a major new single-warhead weapons program after the multiple-warhead cuts mandated by START II. On the American side, if 200 Minuteman missiles and 10 bombers were taken from the force while Trident missiles were modified to carry 4 instead of 5 warheads, this 2,500-warhead limit would save about \$1.5 billion a year compared to today's START I force levels.

4. Defer Combat Aircraft (F-22, F/A-18, JSF)

The Defense Department has requested nearly \$6 billion for new fighter aircraft in the FY1999 budget submission. In 1997 the costs of these programs included \$70.8 billion for purchasing 440 F-22s, as much as \$79.5 billion for as many as 1,000 F/A-18E/Fs, \$23 billion for developing the Joint Strike Fighter (JSF) aircraft, and at least \$100 billion for producing nearly 3,000 JSF aircraft (though by some estimates the eventual price could be twice this amount). The QDR imposed modest reductions in the total procurement of these aircraft, and slowed their production, but did not impose major changes in overall plans.

These programs are expensive and unnecessary—

Dirty Dozen Programs for Reductions or Termination

	Change to FY 1999 Clinton Budget (\$ Billions):
1. Cut Ballistic Missile Defense Programs and Preserve the ABM Treaty	-2.75
2. No Further NATO Expansion	~0.0
3. Reduce Nuclear Force Level	-1.5
4. Cancel Unneeded tactical aircraft modernization programs	-5.5
5. Stop B-2 Bomber at 21 Planes	~0.0
6. Eliminate Pentagon's two-war requirement	-5.0
7. Reduce Nuclear Weapons Activities	-1.0
8. Reduce Total Foreign Intelligence Budget by 10%	-2.7
9. Cancel Aircraft Carriers CVN-76 & CVN-77; cut to eight aircraft carriers	-3.1
10. Cancel New Attack Submarine	-2.0
11. Discontinue Trident II (D-5) Building and Backfit	-0.3
12. Cut Taxpayer Support for Arms Transfers	-0.5
Total Savings	-25.85

the existing inventory of Air Force and Navy combat aircraft will provide the United States with qualitative and quantitative superiority for many years to come. The Congress should cancel F-22 procurement and direct the Air Force to use existing highly capable F-15 aircraft. The Congress should also cancel the F/A-18E/F procurement, and direct the Navy to use surplus F/A-18A/B aircraft from inactivated Navy squadrons as well as Marine Corps assets to sustain a reduced eight aircraft carrier-wing force structure. And the Congress should defer production plans for the JSF, while continuing research on advanced fighter technology.

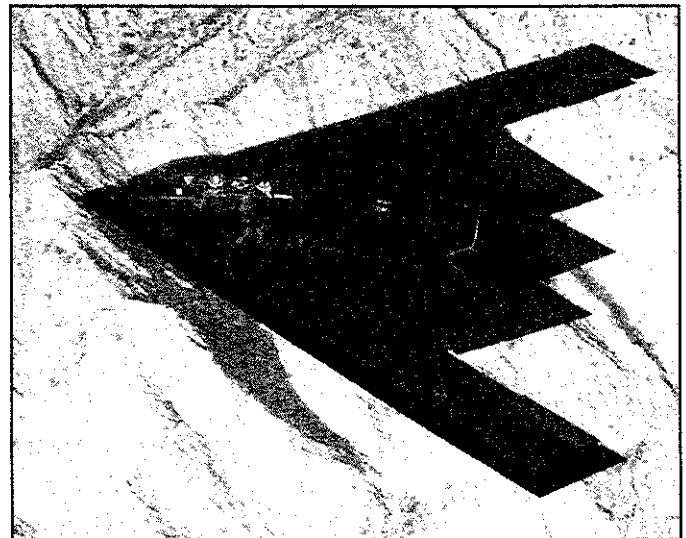
5. Stop B-2 Bomber at 21 Planes

Congress has authorized the purchase of 21 B-2 stealth bombers for \$45 billion. The last of these 21 bombers is to be produced in FY 1997 and delivered to the Air Force in FY 2000. The President has not requested funds to buy additional B-2 bombers. Proponents of further stealth bomber production have called for spending an additional \$14 billion to acquire 20 additional B-2s (\$690 million each), and a total additional expenditure of \$30 billion to acquire, operate, and maintain them over their 20-year expected lifetime (\$1.5 billion per plane).

The Congress should support plans to finish procuring the 21 B-2s on order, and support the President's decision and the Pentagon's recommendation not to procure additional B-2s and not to provide additional industrial base support.

6. Eliminate Pentagon's Two-War Requirement

Post-Cold War force planning as reflected in the Bottom-Up Review of 1993 and the Quadrennial Defense Review of 1997 has carried forward methodologies of the Cold War era. Since the end of the Cold War, US defense strategy has required that US forces be capable of fighting two nearly-simultaneous regional wars. North Korea and Iraq or Iran in Southwest Asia have defined the notional threats. This requirement to fight two Major Regional Contingencies was established in the 1993 Bottom Up Review, and while the 1997 QDR changed the terminology to Major Theater War (MTW) it did little else to alter the focus of US defense planning. This strategy requires that the US would quickly deploy forces to defeat a



The B-2 "stealth" bomber

second aggressor while successfully engaging the first. This posture is based on the belief that an ability to fight two nearly-simultaneous wars would deter an adversary in one theater from striking while the United States was preoccupied in the other theater.

The threat posed by the notional adversaries in the postulated two Major Regional Wars continues to decline. Iraq remains under international sanctions that have rendered its military forces, already devastated by the Gulf War, no more than a political annoyance (albeit a serious one), incapable of posing a significant offensive conventional threat in the region. With the new leadership in Iran, the prospects for military conflict with that country are lower than at any point over the past two decades. And the continuing economic crisis in North Korea appears to have significantly reduced that country's appetite for confrontation with the outside world, and certainly reduced its capacity for sustained military operations.

Force structure reductions begun in 1998 should reflect a moderate revision of national strategy to a single-war requirement would save about \$5 billion in the first year and \$120 billion to \$150 billion over a five year adjustment period ending in 2002. Significant savings would be realized in procurement, personnel, and operations and maintenance, without reducing the readiness or capabilities of individual units. The goal would be to reduce active personnel from 1.4 to 1.1 million, with Divisions, Carrier Battle Groups & Air Wings reduced accordingly to those force levels identified in the 1993 Bottom Up Review as being required to sustain a single Major Theater War.

7. Reduce Nuclear Weapons Activities

The Department of Energy budget request for 1999 includes \$2.2 billion for Stockpile Stewardship activities. Advance appropriations are requested for twenty-two projects that support this program. The largest project is the National Ignition Facility (NIF), which will be used to perform experiments, including inertial confinement fusion experiments, at high pressures and temperatures. The budget requests \$284 million in 1999 for NIF and \$394 million in advance appropriations for 2000-2003 to complete the project, which is under construction at the Lawrence Livermore National Laboratory.

Although the Cold War is over, and a comprehensive ban on nuclear weapons testing is within reach, the US continues to invest heavily in new projects and facilities for weapons designers. We need to scale back our stockpile stewardship efforts and approach the "safety and reliability" issue from a more fiscally conservative, cost-effective perspective. The Congress should cancel the National Ignition Facility and cut funding of DARHT, CFF, Atlas, ASCI, Jupiter, and other similar proposed facilities. National policy should mandate a more austere integrated stewardship capacity that focuses on passive maintenance (inspection and replacement) of the arsenal. The United States does not need to move forward with a tritium program that has the potential to undercut long standing non-proliferation policy.

8. Reduce Foreign Intelligence Budget by 10%

Despite the end of the Cold War the United States continues to spend vast amounts on the intelligence community, with an overall foreign intelligence budget of nearly \$28 billion. Approximately \$27.6 billion was requested for 1999, and the Congress has proposed an increase over the Clinton Administration request. This includes agencies such as the National Reconnaissance Office - NRO (over \$6.5 billion), the National Security Agency - NSA (\$4 billion), and the Central Intelligence Agency - CIA (\$3 billion). Far too much of our intelligence budget remains devoted to expensive satellites rendered obsolete by the demise of the Soviet Union.

The Congress should reduce the total foreign intelligence budget request by 10%, primarily from NRO spending on new intelligence satellites, saving

about \$2.7 billion in 1999 and over \$17 billion from 1999 through 2004.

9. Cancel Aircraft Carriers CVN-76 & CVN-77 Cut to Eight Aircraft Carriers

The March 1993 Bottom-Up Review (BUR) of the nation's defense strategy and force structure concluded that a force of 8 carriers was adequate to meet requirements to fight a single major regional contingency, and a force of 10 carriers was adequate to meet requirements to fight two nearly simultaneous major regional contingencies. But the BUR concluded that 12 carriers (11 active and 1 reserve/training carrier) were needed to maintain overseas presence. The FY 1999 budget request includes \$38 million in research and development funding to support incorporation of new technologies in CVN 77, as well as \$124.5 million in advanced procurement. For FY1998 the Defense Department proposed a substantial change in the procurement profile of the tenth and final NIMITZ Class aircraft carrier, CVN 77, moving the full funding of CVN 77 from FY 2002 to FY 2001. Under current plans CVN-77 will replace the Constellation (CV-64) when it retires in the year 2008.

The stated Navy requirement for 12 aircraft carriers is based on unrealistic forward presence requirements that could be readily met by less expensive surface forces. The Navy should reduce to the 8 carriers identified as the appropriate force level to satisfy warfighting requirements for a single Major Theater War. This would entail canceling construction of CVN-77, saving \$162.5 million in FY99, and canceling construction of CVN-76 Ronald Reagan, for a total procurement savings of as much as \$1 billion. It would also require the FY1999 inactivation of CV 64 Kitty Hawk, CV 65 Constellation, and CV 67 John F. Kennedy for an annual savings of approximately \$2.0 billion from reduced operating and support costs generated by retiring the three carriers and eliminating two air wings.

The Navy could sustain the aircraft carrier industrial base by ongoing Refueling and Complex Overhaul activity at Newport News Shipbuilding. The Navy should also retain currently inactive and newly inactivated carriers at the Naval Inactive Ship Maintenance Facilities (NISMF) in Philadelphia and Bremerton. These recently and newly inactivated ships have an average of more than fifteen years of

useful operating life remaining, and can be reactivated in later years to sustain future force level requirements. Maintaining an 8-carrier force without new construction would require the reactivation and modernization of CV 67 John F. Kennedy beginning in 2010 in anticipation of the replacement of CVN 65 Enterprise in 2013.

10. Cancel New Attack Submarine

The FY 1999 budget request includes \$1.5 billion for the construction of the second New Attack Submarine plus \$0.5 billion for advance procurement for the third ship in this class of new attack subs. New Attack Submarine production is intended to increase to a rate of two per year in order to maintain a multi-mission attack submarine force level of 50 nuclear-powered submarines by 2003 as mandated in the QDR. The FY98 \$153.4 million budget request was the final increment of funding required for the third Seawolf, and no further shipbuilding funding is planned for this class.

The Congress should cancel production of the New Attack Submarine, and support programs to upgrade the current Los Angeles 688I attack submarines, and to undertake a long-term development program of submarines which respond to today's budgetary needs and threat environments (focused on "littoral" or coastal warfare). Such submarines should include innovative non-nuclear propulsion designs, be significantly smaller, and significantly less costly. These submarines should be part of a high--low force

structure of nuclear and non-nuclear designs. Such restructuring would effectively result in a much smaller, less costly but more capable submarine force structure.

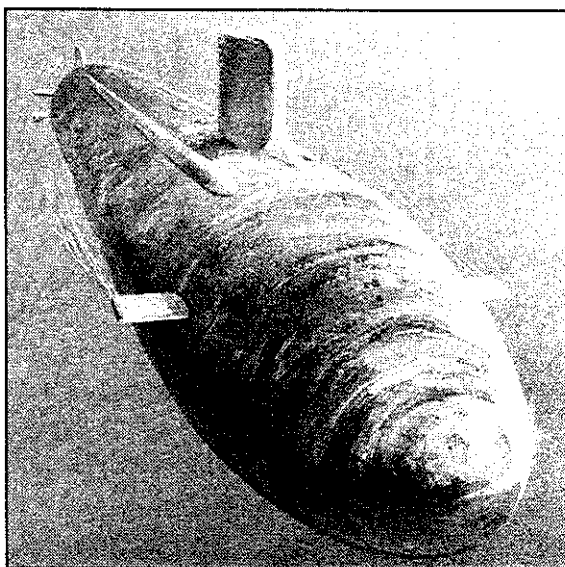
11. Discontinue Trident II Building and Backfit

The Navy requested \$323 million in Fiscal Year 1999 for the Trident II D-5 submarine launched ballistic missile program, which includes funding for the procurement of 5 new missiles. In addition, the Navy is planning to modernize four Trident submarines to carry the D-5 missile, starting in FY 2000. Total cost of these backfits are estimated at \$3-5 billion through 2003, based on Navy figures. The Navy says it can sustain the existing Trident I C-4 fleet for \$1 billion. In order to comply with the START II Treaty, the Navy is planning to retire four of the older subs carrying the C-4 missiles, but under current plans the Navy will backfit the other four with the new D-5 missiles.

The backfit is unnecessary. Trident C-4 missiles now deployed are more than adequate to meet the current and expected threat. The D-5's hard-target kill capability is not required now that the Cold War is over. The Russians have fewer hard targets (missile silos) than in the past, and the US already deploys a significant number of D-5s. The Congress should cancel the Navy's plans to modify four Trident I submarines to carry the bigger more powerful D-5 Trident II missiles, and reduce the total purchase of D-5 missiles to 350, thereby saving over \$300 million in 1999.

12. Cut Taxpayer Support for Arms Transfers

With the end of the Cold War, the United States has become the world's preeminent arms supplier. Since 1990, the Bush and Clinton Administrations have racked up more than \$100 billion in foreign military sales. Approximately two-thirds of these weapons have gone to developing countries. This huge figure does not even include billions more in sales allowed through the Direct Commercial Sales Program—a largely secret avenue for weapons exports managed by the State Department. Weapons sales have become an integral component of US bilateral relations and few countries that have good relations with the US do not possess American



Seawolf nuclear-powered attack submarine.

military equipment. As a result, the US spends vast sums each year to provide grants and loans for the purpose of acquiring American weapons. In addition, millions of dollars worth of used military equipment are simply given away yearly.

The Congress should pass the "Code of Conduct on Arms Transfers Act" which prohibits arms transfers to countries that are not democratically elected, abuse human rights, attack neighboring countries or do not participate in the U.N. Arms Register. Other needed measures include the repeal of a new \$15 billion arms sale loan guarantee program and an end to US government support for private companies at international weapons trade shows. The Congress should support measures to reduce the levels of foreign military grant and loan aid, and reduce the size of the worldwide arms trade bureaucracy.

The United States should take a leadership role

among suppliers to promote reduced arms sales to developing countries, work within regional fora to promote reductions in arms purchases, technology levels and force sizes, and help establish transparency of weapons holdings including verification and compliance procedures. One important budgetary measure would be to require the repayment to taxpayers for public funds expended to research and develop weapons which are exported abroad. This would require recoupment fees on all sales of major military equipment. The exact amount of savings in a given year would depend on the amount of arms sales made. However, the General Accounting Office has estimated that if recoupment fees were charged on all sales of major military equipment, at least \$500 million per year would be returned to the Treasury.

□

Top Ten: Programs for Continuation or Augmentation

1. Assist Foreign Nuclear Weapons Dismantlement

In 1991, Congress directed the Department of Defense to help secure former Soviet weapons of mass destruction (WMD). Since 1991, Congress has provided \$2.3 billion to support Cooperative Threat Reduction (CTR) efforts, including \$327 million for 1997.

The Congress should support expanded nuclear security cooperation, including establishing new non-proliferation centers, developing cooperative technical means of monitoring warheads, components and fissile material, reconstructing past fissile material and warhead production and report on totals, expanding plutonium disposition cooperation, including conversion of plutonium pits, and establishing laboratory and university fellowships. These initiatives would require first-year funding of \$21 million. The Congress should also support expanded technology evaluation and commercialization, including evaluating Russian-proposed technologies, creating commercial project "Tiger Teams," training new business and commercialization specialists, and creating joint issue review teams. This would require first-year funding of \$15 million.

2. Increase De-Mining Activities

There are some 100 million unexploded landmines in the ground today, responsible for injuring or killing about 25,000 people every year, many of them civilians. The landmines stay once the wars end and the soldiers go home, long after anybody even remembers who was fighting whom, or why. The victim might be an unsuspecting child going to school, someone going to gather water or firewood, someone trying to raise crops to feed their family, or a missionary or aid worker.

There are Russian mines, American mines, Italian mines, and mines from other countries in hundreds of varieties in over 68 countries. It is estimated that about 100,000 landmines are being removed each year while about 2.5 million mines are being placed in the earth each year.

Ending the devastation of these "weapons of mass destruction in slow motion" is a high priority. The United States should sign the Ottawa Treaty, outlawing production, stockpiling, export and use of anti-personnel landmines. The Defense Department should develop alternative anti-handling device technology to protect anti-tank mines to replace the anti-personnel mines currently used to protect



Demining operations in Cambodia

PHOTO BY JOHN RODSTED

anti-tank mines. This would require an annual investment of \$50 million. The US contribution to the "Demining 2010 Initiative" to accelerate global humanitarian demining efforts requires a five-fold increase to \$250 million each year of US government resources devoted to identifying and clearing landmines. In order to provide for comprehensive programs of assistance to mine survivors, there should be an international commitment of \$3 billion over ten years, including \$300 million a year of US government resources.

3. Implement Base Closings More Rapidly, Close More Bases

Sustaining US military strength requires spending less on excess infrastructure, but the Defense Department is encumbered with many facilities that are no longer needed. The Quadrennial Defense Review report noted that DoD has reduced active duty personnel by 32 percent between 1989 and 1997, while the number of people performing infrastructure functions has been reduced by only 28 percent. The military is weighed down by facilities that are too extensive for current needs, more expensive than the taxpayers can afford, and detrimental to the efficiency and effectiveness of US military forces. These facilities drain resources that could otherwise be spent on higher priorities. Base closures can eliminate excess capacity, save money and improve efficiency.

The Congress should support the two additional rounds of military Base Realignment and Closure (BRAC) proposed by Defense Secretary Cohen. While the magnitude of savings expected from this initiative can only be roughly approximated at this time, successful implementation will require substantial up-front costs. The Defense Reform Initiative report projects that each additional BRAC round would provide annual recurring savings of \$1.4 billion after the closures have been implemented. An independent BRAC-like commission, such as provided in the original Vision 21 legislative package, is needed to reduce DoD's research, development, test, and evaluation infrastructure.

4. Clean Up DoD and DoE Facilities

The cleanup of radioactive and toxic contamination at the DoE's weapons complex will possibly be the most technically challenging and costly public works project ever conceived. The DoE's Office of Environmental Management (EM) is responsible for waste management, environmental remediation, maintenance of facility safety, transportation, and technology development costs for 137 sites in 34 states. The facilities include several major facilities and dozens of smaller and formerly-utilized sites involved in weapons research, assembly and testing, nuclear materials production, and waste storage. Current DoE life-cycle estimates for cleanup total \$147 billion (constant 1998 dollars) between 1997 and 2070. Of this amount, about \$57 billion would be expended through 2006. However, these estimates significantly understate the scope and cost of the required effort.

Nuclear arms reductions and the widespread radioactive contamination throughout the weapons complex make it possible and necessary to continue to reduce the size and cost of DoE weapons activities and shift resources to meet the "cleanup" challenge. Funding for the Administrations' FY 1999 DoE Environmental Management program should be increased by \$500 million to fully fund activities identified in the Paths to Closure analysis not covered in the Administration's current program plan. DoD must focus on clearly defining the scope, schedule, and cost of BRAC cleanup activities in light of the expiration of the BRAC account in FY01 to ensure protection of human health and the environment.

Budget decisions, the sequencing of projects, and the critical actions taken to meet program objectives after the FY01 expiration of the BRAC account must be carried out in collaboration with regulators and stakeholders.

5. Enhance Domestic Terrorism Response (Nunn-Lugar-Domenici and Related Programs)

Since the end of the Cold War, materials and technologies related to weapons of mass destruction—nuclear, radiological, chemical, and biological weapons—have become increasingly more available to rogue states, terrorist groups, and unstable individuals. Controls over nuclear materials in the former Soviet Union continue to require significant improvement. Easy access to dual-use materials and technologies to fabricate chemical and biological weapons make the proliferation of these weapons arguably the most urgent and serious threat the United States faces today. When an act of terrorism occurs, local fire and emergency services departments will be required to immediately deal with the incident and begin mitigation. Without proper training and equipment a nerve agent attack could kill or disable fire fighters who failed to recognize the threat upon their arrival.

While the existing Train-the-Trainer program is a good beginning to get first responders focused on domestic preparedness, it is not the final answer to domestic preparedness training. There is a clear need to provide sustainment training and ongoing exercises

to retain proficiency Training must continue to be funded and expanded to go beyond the training of the initial 120 cities. Oklahoma City would have been ranked low on a scale of potential targets of terrorists. Yet it was the site of the single worst terrorist event in the United



This prototype, miniature biological detector was developed through a Department of Energy research and development program to reduce the US vulnerability to chemical and biological terrorism.

States. All firefighters and rescue personnel must be properly trained and equipped, including suburban and rural first responders as well as their urban counterparts. First responders must have the equipment to detect and respond to the presence of chemical, biological, and radiological material.

The lack of funding for the necessary equipment for these responders is directly related to the lack of effective preparedness, and the greatest shortfall remains funding for first responders. The extensive training and outfitting needed to respond to chemical and biological agents will cost many times what has been allocated to date, at least a four-fold increase in funding, to \$200 million annually. Training must be provided by specialists in the fields of emergency management and hazardous materials management, rather than military specialists. Managing the consequences of the use of such weapons in civilian settings requires a civilian approach. Training of first responders on domestic response to terrorist incidents should be done through the National Fire Academy under the United States Fire Administration and Federal Emergency Management Agency (FEMA). Responsibility and funding for the Domestic Preparedness Program should be transferred from the DoD to the FEMA. The recommended \$200 million funding would constitute more than a 50% increase in the overall FEMA budget.

6. Reform Military Procurement Further

Annual procurement spending of \$49 billion accounts for nearly one-fifth of the total DoD budget. As with much of the \$36 billion spent on research and development and the \$95 billion spent on operations and maintenance, this money is paid to defense contractors. Overall, DoD prime contract awards over \$25,000 totaled \$116.7 billion during FY 1997. The amount paid to defense contractors is fundamentally affected by the laws that govern the purchases not only of weapons, but also a vast array of equipment and supplies. It has been estimated that the amount spent on procurement could be cut by as much as 20% if the Pentagon learned to buy smart.

The recent reforms defined a commercial item as one not necessarily sold to the public, but merely "offered for sale." The Congress should pass legislation to tighten the definition of "commercial" so that it only applies to items that do have a true free market,

setting prices based on a broad amount of supply and demand. The recent reforms stopped the requirement to provide certified cost and pricing data when items are bought based on competitive bidding, but competitive bidding was defined as one bid, as long as others could have bid. This is just one more step away from a true free market. The new rules should restore the definition of competitive bidding to be at least two bidders.

7. Train Soldiers for Peacekeeping and Humanitarian Missions

The United States military is highly skilled at a range of operations, with a primary focus on combat missions. In today's world, however, the US military is more likely to face operations involving regional conflicts and crises, often in multilateral peace operations. While the US military, especially the Army, has moved forward in developing doctrine, training, and exercises for personnel serving in peace operations, this effort needs to be continued and broadened.

Existing training and education should be extended and enhanced, at minimum additional cost. Improvements in international training, funding for operations, and U.N. capabilities also are needed. The Defense Department should continue and enhance specialized training for all troops before and after a mission, whether for a US or U.N.-led operation. Include language training, cultural awareness and

subject matter expertise for officers. This would include incorporating training for peace operations, including "lessons learned," into the professional military education programs for all services. The services should integrate peacekeeping training in general training for US military active and reserve personnel and increase both field training and officer-level game exercises, to expand working knowledge of peace operations scenarios. DoD should support standardized, consistent training programs for international troops most likely to serve in U.N. or regional peace operations.

8. Refocus Intelligence Priorities

Approximately \$27.6 billion is requested for intelligence in the 1999 budget, and the Congress has proposed an increase over the Clinton Administration request. Almost all of this effort is devoted to exploiting the disciplines that were of primary importance during the Cold War: imagery intelligence (IMINT), signals intelligence (SIGINT), and human intelligence (HUMINT). But with the end of the Cold War new disciplines, measurements and signature intelligence (MASINT) and open source intelligence (OSINT) are of far greater relevance to contemporary and emerging security concerns and intelligence needs, ranging from counter-proliferation activities to peacekeeping operations.

The Director of Central Intelligence should

Top Ten Programs for Continuation or Augmentation

	Change to FY 1999 Clinton Budget (\$Billions):
1. Assist Foreign Nuclear Weapons Dismantlement	+0.04
2. Increase De-mining Activities	+0.6
3. Implement Base Closings More Rapidly, Close More Bases	+0.5
4. Clean Up Environment at Defense and Energy Department Facilities	+0.5
5. Enhance Domestic Terrorism Response	+0.15
6. Reform Military Procurement Further	-1.0
7. Train U.S. Soldiers for Peacekeeping and Humanitarian Missions	~0.0
8. Refocus Intelligence Priorities	+0.5
9. Enhance Role and Readiness of Guard and Reserve	+0.6
10. Invest in "Generation After Next" Research and Development	+1.0
Total Additional Cost +2.9	

consolidate counter-proliferation and measurements and signature intelligence activities into a new national Special Weapons Intelligence Agency, that would combine the Air Force Technical Applications Center (AFTAC), the Missile & Space Intelligence Center, FOREST GREEN, and kindred organizations under the direction of the Central MASINT Office to provide a clear focus for counter-proliferation intelligence. This new agency would be supported by an increase in funding of \$250 million for counter-proliferation related activities.

In addition, a variety of open source intelligence initiatives are required. The National Imagery and Mapping Agency should initiate a program to purchase \$250 million a year in commercial imagery through commercial procurement practices over the next five years.

9. Enhance Guard and Reserve

Military operations around the world have required the Defense Department to increasingly rely on the National Guard. Guard units and air assets have been called to active duty by the President and deployed throughout the world with increasing frequency to serve with their active duty counterparts. Guard units are organized, trained and equipped to the same standards as active forces.

To ensure the representation of the National Guard at the highest levels of DoD, in 1997 Senator Stevens proposed legislation co-sponsored by 48 other Senators that would elevate the rank, and role, of the Chief of the National Guard Bureau. To ensure adequate representation of the Guard in defense decision-making, the Chief of the National Guard Bureau

should be appointed at the four-star level, and made a full participating member of the Joint Chiefs of Staff. The Congress should fully resource National Guard readiness requirements and increase funding for National Guard operations, maintenance and military personnel by the \$634 million recommended by the National Guard Association. More of the Army's combat power must be moved into the National Guard. The active component of the Army should be given the structure for those missions that only the Active component can perform, with the balance of the structure being placed in the Guard and Reserve components.

10. Invest in "Generation After Next" Research and Development

The Administration is proposing \$76.4 billion in outlays for all Federal research and development activities in 1999, including \$36.1 billion for the Defense Department and \$36.4 billion for civilian R&D. Funding for the Defense Research Projects Agency (DARPA) has remained static at roughly \$2 billion in recent years.

DARPA should enhance its focus on developing the means to quickly transform commercially available technology into military capability more rapidly than potential military competitors. DARPA should embark on a systematic campaign of evaluating systems and platforms that offer radical departures in concept, configuration, and capabilities relative to existing legacy weapons systems. Both these initiatives should be funded by a 50% increase in DARPA funding, adding \$1 billion to the agency's annual budget.

FAS PUBLIC INTEREST REPORT (202) 546-3300

307 Mass. Ave., N.E., Washington, D.C. 20002

Return Postage Guaranteed

May/June 1998, Volume 51, No. 3

Periodicals
Paid at
Washington, D.C.

I wish to join FAS and receive the newsletter as a full member.
Enclosed is my check for 1998 calendar year dues.

\$25 \$75 \$150 \$1000 \$15
Member Supporting Patron Life Student/Retired

Subscription only: I do not wish to become a member but would like a subscription to:
 FAS Public Interest Report - \$25 for calendar year.

Enclosed is my tax deductible contribution of _____ to the FAS Fund.

NAME AND TITLE _____
Please Print

ADDRESS _____

CITY AND STATE _____ Zip _____

PRIMARY PROFESSIONAL DISCIPLINE _____