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DEPARTMENT OF DEFENSE

SUPPORT OF NATO STRATEGY IN THE 1990's

A REPORT TO THE UNITED STATES CONGRESS IN COMPLIANCE WITH PUBLIC LAW 100-180

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SECRETARY OF DEFENSE
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THE SECRETARY OF DEFENSE

WASHINGTON, THE DISTRICT OF COLUMBIA

January 25, 1988

TO THE CONGRESS OF THE UNITED STATES

This Report is in response to requirements in the National Defense Authorization Act for Fiscal Years 1988-1989, of December 4, 1987, that I discuss the ability of the North Atlantic Treaty Organization (NATO) to maintain its strategy of deterrence through the 1990s.

Our confidence in maintaining the Alliance's flexible response strategy is explained in President Reagan's January 1988 National Security Strategy Report. Before entering into our agreement with the Soviets we made sure that from the standpoint of the military implications of the INF Treaty, NATO's resulting force structure would be fully capable of supporting deterrence -- provided that we vigorously pursue the necessary modernization, and make effective use of the gains in capability achieved over the last few years.

Consistent with the President's guidance, this report outlines a framework for achieving what the National Security Strategy states must be accomplished to maintain the credibility and viability of NATO forces and strategy. The U.S. is prepared to work in close consultation with our allies to carry out a NATO Defense Program to achieve these objectives.

I am confident that the Congress will support both what we propose, and the INF Treaty.

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SUPPORT OF NATO STRATEGY IN THE 1990's

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OVERVIEW

Purpose

The following report concerns U.S. and allied planning for the future security posture of the North Atlantic Treaty Organization.

It responds to the Congressional request (spelled out in the Appendix) that the Secretary of Defense discuss how Intermediate-Range Nuclear Forces (INF) missile reductions fit with NATO objectives and how they relate to the Alliance's flexible response strategy. In so doing, the report reflects consultation with NATO's Supreme Allied Commander, Europe (SACEUR) and the Chairman of the Joint Chiefs of Staff.

It includes seven supporting sections matched to specific questions from the Congress. This Overview discusses these important matters involving flexible response, defense requirements, arms control and developing programs. All involve issues which are integral to the support of NATO and America's overall strategy -- aimed at bolstering deterrence, strengthening our alliances, and decreasing Soviet military advantages.

The INF Agreement

The INF Treaty provides for the U.S. and the Soviet Union to eliminate all their ground-launched missile systems with ranges between 500 and 5,500 kilometers, worldwide.

This is a major achievement for NATO and its policy. It not only represents the culmination of years of negotiation with the Soviet Union, but also years of steadfast NATO resolve in maintaining and advancing our shared security interests. At the same time, it should not stimulate a false sense of security nor become an excuse to reduce defense efforts. For decades we have included arms control as one of several measures available to improve our security posture. We have never pursued it as an end in itself.

In 1979, NATO met the rapid expansion in the dangerous nuclear missile threat to Europe with a "dual-track" decision to deploy U.S. PERSHING IIs and Ground-Launched Cruise Missiles (GLCM), and at the same time work to negotiate the reduction of Soviet INF missiles. In the 1980's, the U.S. and NATO also began comprehensive modernization efforts directed toward restoration of badly needed nuclear and conventional capabilities. Together, these initiatives will strengthen our Alliance and will enhance our security, if we are steadfast in pursuing them.

The INF Treaty contributes to NATO security in several ways. First, it will reduce the military threat to Western Europe and Asia. Under its provisions the Soviet Union will eliminate forces capable of delivering over 1600 nuclear warheads. Many of the systems have conventional and chemical warfare capabilities which, of course, will also be eliminated. For this reason, such reductions complement efforts by NATO and other allies to deal with the existing and very serious Soviet advantages in non-nuclear forces.

The removal of a complete class of missile systems will reduce the Soviet Union's ability to strike critical targets throughout Western Europe without recourse to its strategic weapons. In addition to relieving pressures on our own nuclear forces, and related command and control facilities, this should improve NATO's ability to reinforce its conventional forces during wartime by reducing the Soviet threat to air bases, ports, depots, and other facilities essential to that reinforcement effort.

Accompanying this reduction in the Soviet threat is the requirement that our side eliminate forces capable of delivering about 400 nuclear warheads. This will remove a part of our ability to strike targets in Eastern Europe and the Western USSR. Nevertheless, both East and West still will retain robust nuclear and conventional forces and capabilities, including ground-based nuclear systems as well as those carried by aircraft, ships and submarines. Significant risks to us, our allies, and friends in Europe as well as in Asia will remain.

We still have the pressing need to revitalize and strengthen our military capabilities for the 1990s, as was the case prior to the INF Agreement.

The Treaty, in addition to eliminating a category of weapons in which the Soviet Union has enjoyed a significant preponderance, will not impede NATO's ability to maintain and modernize a credible mix of nuclear and conventional forces. The United States will remain prepared to respond to aggression with its full range of forces, including its strategic nuclear arsenal, if necessary. Moreover, British and French independent nuclear forces will not be affected by the Treaty.

A second major way in which the INF Treaty promises to buttress NATO security is by enhancing the credibility of NATO as a whole and showing that our nations have the political will to make -- and stand by -- the tough decisions necessary to ensure our security, and to preserve our shared values.

The INF Treaty also promotes security by validating sound arms control principles. It affirms the principle of asymmetrical reductions to achieve equal U.S. and Soviet levels, which is now an important precedent for future negotiations in both the strategic nuclear and conventional fields. Moreover, the eliminations are global; they do not simply transfer the Soviet threat from one region of the world to another. And, the agreement does not rely on stated intentions, but rather on a very stringent verification regime.

The Treaty contributes to NATO's objectives. It promises to advance both NATO's military security and its political cohesion.

NATO Objectives

In May 1987, the U.S. Joint Chiefs of Staff completed a review of the military significance of arms reductions. They concluded that our security interest would be served by a verifiable agreement to eliminate U.S. and Soviet INF missiles worldwide. That assessment has not changed. However, because of long-standing asymmetries, the INF Treaty must be an integral part of coordinated force planning which is designed to support our strategy. We must ensure the effectiveness and strength of NATO's nuclear and nonnuclear forces as NATO carries out INF reductions. This is a fundamental objective.

The INF Treaty preserves intact NATO's strategy of flexible response as a credible framework for deterring aggression and intimidation. To be effective, flexible response has always required that NATO possess deterrent capabilities that encompass a spectrum of possible responses to aggression. As a part of this overall deterrence posture, NATO maintains a spectrum of nuclear options which could be used to defeat an attack if needed, and to increase the Soviet risks in continuing the aggression.

It remains U.S. and NATO policy to deploy the minimum number of theater nuclear weapons in Europe required to do this job. Though its ground-launched nuclear missiles will be reduced in number, NATO will continue to maintain the forces needed to implement its strategy of flexible response and forward defense. This remains our consistent goal.

NATO Military Posture

Our military strengths and weaknesses are well-understood by NATO and there is consensus about needed improvements in defense capabilities. The U.S. and NATO also look to arms control where agreements will clearly support our efforts to improve security. In recent times, Congress and this Administration have emphasized

armaments cooperation as another means for speeding progress in NATO improvement efforts and for encouraging more acceptance of shared responsibilities.

Our allies, in fact, do more for NATO defense than is commonly recognized, but they can and should do even better. If we are to lower the risks associated with existing and projected conventional imbalances, our European and Canadian allies must find ways to help sustain and go beyond what has been achieved in the past few years. However, our allies are also independent nations, with individual priorities. In the coming months and years, we will all need to do more than perhaps ever before to limit possibilities for weakening our common purpose.

The U.S. commitment to the Alliance mission is clear. We will retain over 300,000 troops and about 4,000 theater nuclear warheads in Europe in support of U.S. and allied forces. An allocation of U.S. Submarine Launched Ballistic Missile (SLBM) warheads remains assigned to SACEUR. U.S. and allied strategic nuclear capabilities should also improve significantly in the 1990s.

Shortcomings in NATO's military posture would have been much more severe had it not been for the greater U.S. investment in defense over the past seven years. However, basic asymmetries still exist because of the Warsaw Pact's geographic advantage in its ability to reinforce land and air forces from the USSR, and the major quantitative advantages it maintains in essentially every category of offensive forces.

Ultimately, the strength of our military posture will depend on whether NATO nations will sustain the political will to take steps necessary to ensure their security. The Kremlin will certainly seek to engender an air of euphoria about East-West relations in order to undermine the resolve of NATO citizens to make difficult choices in spending for defense. The Soviets have already been quick to portray NATO modernization measures as circumvention of the INF Treaty and counterproductive to future arms agreements, while at the same time continuing to improve their own offensive capabilities.

To strengthen our security posture and to maintain the effectiveness of the Alliance as it enters its fifth decade, NATO political and military leaders will have to work harder at not letting our citizens forget the basic lessons we have learned about Soviet respect for strength and how they are prepared to exploit weakness.

NATO Plans

The nuclear and conventional modernization and improvement programs which NATO has underway are founded on consistent Alliance policy direction and extensive military planning.

With respect to nuclear forces, these requirements stem most directly from NATO's 1983 decision taken by Defense Ministers at Montebello to modernize NATO's theater nuclear force posture. The program calls for a range of measures to ensure that NATO's nuclear weapons are responsive, survivable, and effective, and on this basis the European nuclear stockpile was also reduced by over 1,400 warheads. NATO must continue with the modernization of its remaining nuclear forces. The NATO modernization programs which have high priority include: development of a dual-capable (nuclear-conventional) longer range follow-on to the LANCE surface-to-surface missile system; development of a tactical stand-off air-to-surface missile (TASM); modernization of nuclear artillery projectiles, dual-capable aircraft, and nuclear bombs; and continued improvement in nuclear security and survivability. None of these programs are constrained by the INF Treaty because the agreement in no way limits systems with ranges below 500 kilometers or dual-capable aircraft.

The NATO Nuclear Planning Group (NPG) is reviewing how the theater nuclear force posture might be further adjusted in light of the security situation following implementation of an INF Agreement.

We will be consulting with our allies in the NPG and will address such adjustments in the U.S. program and budget process. In this way we will narrow the options and focus on approaches which reinforce stability and NATO's force improvement programs.

With respect to conventional forces, the need for substantial improvements was well established long before the Soviets returned to the INF negotiating table. NATO's current Conventional Defense Improvement (CDI) program is designed to remedy or ameliorate the most critical deficiencies in our Alliance's conventional force posture, including areas relating to reinforcement, Follow-on Forces Attack (FOFA) mission, and the counter-air mission in all its dimensions. Moreover, given the massive Soviet chemical arsenal, modernization of U.S. retaliatory chemical weapons also is crucial to our ability to deter at any level of conflict. In addition to pressing ahead with these and other ongoing programs, we will explore certain adjustments to our conventional force structure as well as new initiatives for strengthening flexible response. For example, we will vigorously pursue the potential of longer range air- and sea-launched cruise missiles for a wide range of missions.

Certainly we can envision conventional forces arms control agreements that could complement -- although by no means substitute for -- our maintenance of an effective military posture. In that regard, the prospective NATO-Warsaw Pact negotiations designated "Conventional Stability Talks" (CST), are still a priority for NATO.

While Soviet and Warsaw Pact intransigence have stalemated the Mutual and Balanced Force Reduction (MBFR) talks in Vienna, NATO has called for the new CST negotiations to deal with the threat arising from Warsaw Pact advantages in Europe. The new talks would encompass a broader geographic zone than MBFR, from the Atlantic to the Urals. We expect East and West can agree that the goal of these negotiations should be to strengthen security in Europe by establishing a more stable balance of conventional forces at lower levels. Our interest must be in eliminating the Pact's capability for surprise attack and large-scale offensive action.

Although we have already negotiated certain confidence building measures, such as notification and observation of large military exercises, major reductions in Pact offensive capabilities are the only arms control cuts which could improve the basic security situation. NATO's conventional force posture can ill-afford sizeable reductions in its standing forces if it is to defend Alliance territory against a Warsaw Pact surprise attack. Any Warsaw Pact reductions should be large and highly asymmetrical. Small reductions, or less asymmetrical ones, would simply make the conventional force balance worse, and more unstable.

The INF Treaty provides no basis for significant changes in U.S. or Canadian force levels in Europe. These forces are the most tangible, most credible guarantee of the fundamental North American commitment to the defense of Europe. Holding our troop levels more or less constant is essential to providing an incentive for the Soviets to negotiate meaningful reductions and to maintaining and, if possible, improving the current conventional balance.

The INF Treaty heightens awareness of that balance; of persisting NATO deficiencies; of the trends in Soviet force posture; of Soviet lines of communication and reinforcement advantages; and of the importance of stepping up the momentum behind NATO's force improvement efforts.

Some force adjustments may need to be made and are being considered as a result of the INF Treaty. However, the realities of the basic security situation in Europe exist with or without the INF Treaty. The predominant impact of the INF Treaty, in this regard, is not to exacerbate NATO's problems but rather to highlight the risks of neglecting them.

Strengthening Flexible Response

NATO's military posture will continue to deter. This is so because it is sufficiently robust to confront a potential aggressor with major uncertainties about the consequences of using or threatening the use of nuclear or conventional forces in an attack against NATO. But this favorable judgment is conditional. It depends upon NATO's ability to act decisively to sustain both nuclear and conventional modernization.

The NATO strategy of Flexible Response is itself a reflection of the inherent strength of the Alliance, and of the profound commitment of its members to the common defense of their citizens and of fundamental shared values. We must build on this foundation and revitalize a sense of shared priorities and responsibilities -unambiguously directed toward the absolute requirement for strengthening Flexible Response. This is our mission.

There are many ways to approach this task. We should welcome proposals which are clearly consistent with our mission. However, we cannot afford a debate about that mission. From the perspective of an accountable NATO Defense Minister, the preferred approach is a direct one. The outlines of such a program, relevant to our security in the 1990s, are quite clear. Its goal is well established. The following is a framework for a NATO Defense Program directed toward strengthening Flexible Response in all of its dimensions:

1. In strengthening Flexible Response we must confront two challenges.

- First, NATO's most difficult challenge will continue to be providing adequate resources for defense.

- Second, NATO's enduring challenge is exploiting the West's technological edge. We must continue to use quality in offsetting the Warsaw Pact's greater numbers. In meeting this challenge we need greater cooperation among NATO nations in all aspects of our defense programs -- from research to production to increased interoperability.

2. Strategic forces must remain the backbone of NATO's deterrent. Therefore, continued modernization of systems comprising this element of the NATO Triad is essential to strengthening Flexible Response.

- We are hopeful that such modernization will at some point be complemented by the limits of a strategic arms treaty, ideally achieving the 50 percent mutual reductions we have

been seeking. However, we must not make our plans dependent upon such an outcome.

Under President Reagan's Strategic Defense Initiative, we also are researching the feasibility of defenses against all types of missiles -- defenses which could strengthen our deterrence of attack against our allies, as well as against us.

3. NATO dual-capable forces and forward defense capability must be strengthened. This requires modernization of tactics, systems, and forces which can provide the best assurance for blocking Warsaw Pact attacks on NATO's front lines; for slowing and halting reinforcing forces; for knocking out critical targets in the enemy's rear areas; and for confronting the Soviets with grave risks if they mass troops for concentrated attack.

- Achievement of a modern Follow-on Forces Attack (FOFA) capability complemented by vital offensive and defensive counter-air forces, as well as command and control, and active and passive measures for dealing with the combined air-and-missile threat must remain priority objectives. We must also thoroughly explore technology to deliver systems with modern capacity to strike deeper targets. Conventional Stability Talks (CST) may provide options for reinforcing such a strengthened posture, but in the course of such negotiations our dual-capable systems and critical conventional armaments must be appropriately protected. As in the case of START, we must not make our plans dependent on arms control.

4. NATO initiatives for strengthening our defenses must build upon what has been established in planning improvements and in modernizing our forces over the last few years. We must not slide backward. Our Canadian and European allies must take on a greater share of the responsibility we all have for protecting the gains that have been made and building upon them.

5. We must emphasize a better sense of shared priorities in every aspect of the NATO Defense Program. In so doing, we must ensure that there is sufficient balance in the total program to prevent any decisive weakness from developing for NATO or for the U.S. as a result of emphasis placed on any special interest or single priority. This requires much more long-range strategic and budget planning. The following functional management areas must be a major part of such planning. We will thoroughly coordinate priorities among them, and protect such priorities in defense budgets.

- a. We must <u>first</u> maintain high-level consultations using the NATO Nuclear Planning Group (NPG) for the development of long-range nuclear policy, strategy, and forces recommendations.

The aim must be to most effectively maintain the credibility, survivability, security, and safety of NATO's nuclear and dual-capable forces by implementing our modernization programs while also planning for NATO's future security.

- b. Second, we must focus (1) on those elements of NATO's Conventional Defense Improvement (CDI) Program which have the best long-term prospects for narrowing the gap in the balance; (2) on those which can most effectively be advanced by NATO arms cooperation that results in fielded, highly leveraged systems; and (3) on those which are appropriate for our Canadian and European partners to carry a greater share of responsibility. In this respect, the U.S. approach should not be limited to NATO alone, but must embrace other allies around the world. In setting specific priorities we will seek to avoid inefficient duplicative efforts among nations, as well as military services. Opportunities will be sought for our allies to take the lead in fielding systems for certain missions.

- c. Third, in guiding our defense preparations, NATO leaders must be creative and open-minded in identifying and refining all possible low-cost measures which can enhance security. We must develop means for ensuring that plans and tactics achieve the most deterrence for our investment. For example, we should find ways for making better use of terrain for barrier planning, and for planning greater flexibility in defensive operations.

- d. Fourth, we also must further develop what we call "Competitive Strategies", which seek to guide our acquisition process so as to align enduring Western strengths against persistent Soviet weaknesses. Initial analysis indicates that investment in areas such as countering air-and-ground penetration and command and control operations could contribute to raising Soviet uncertainties about the Warsaw Pact's ability to successfully conduct offensive operations.

Ultimately, the future of NATO and our democratic institutions is determined by the judgments of our citizens about how best to allocate resources for their security.

This emphasizes how important it is for our political and military leaders to provide our citizens with a straightforward framework which clearly shows how their resources are applied to missions and a strategy which can be directly related to deterrence and their security. The NATO Defense Program outlined above provides a basis for strengthening Flexible Response and for gaining the support of our publics in pursuing prudent choices for the common defense.

There is no safe and easy way to avoid the burdens of assuring our security through adequate military strength. Arms control can help -- as the INF Treaty shows -- but only if increased security can be demonstrated to be the goal.

NATO Defense Ministers support the need to move ahead with force improvements consistent with the Montebello nuclear modernization framework and with the NATO Conventional Defense Improvement (CDI) initiative. We will move swiftly to work out the specifics in consultation with them. We will also offer the NATO Defense Program we have outlined to help tie together other elements of our planning and management to focus a revitalized sense of mission for NATO.

We will need Congressional support to advance the NATO Defense Program in the years ahead. Even though defense is likely to be confronted with increasingly constrained budgets, we must ensure -- and will so encourage the NATO Defense Ministers -- that the prioritized elements of an integrated program along these lines are given special attention as they compete with other priorities.

We have already established our NATO Defense Program priorities in the Department of Defense and are proceeding in their refinement. We must now consult with our allies to ensure that we are joined in a newly relevant sense of direction strengthening our security posture. Above all, we need the firm backing of our citizens, here in America and in Europe.

We need to coordinate our effort and more than ever before to deal with the two basic challenges which confront the NATO Defense Program -- getting the most from (1) our resources and, (2) from our technology. Modern cooperative armaments management is a major factor in dealing with these challenges.

Cooperative Armaments Management

Because both the U.S. and our Allies have significant technological capabilities in areas important to the NATO Defense Program, we see increased cooperation in exploiting our collective industrial strengths to develop and field the weapons and other military assets we will need well into the future. We are taking two important steps in that direction. One involves cooperative research and development efforts, including new and continuing activities supported by the NATO Cooperative Research and Development Program, as well as new work to be carried out under the Balanced Technology Initiative (BTI). The second step involves the planned establishment of a NATO Conventional Armaments Planning System (CAPS).

The NATO Cooperative Research and Development Program was established in 1986 to support joint weapons and material development work on an equitable cost-sharing basis by the U.S. and one or more NATO Allies. Important cooperative activities involving precision guided munitions, standoff weapons, sea mines, high performance aircraft; radar systems for reconnaissance, surveillance and target acquisition applications; target identification, and NATO frigate for the 1990s have been started. Additional efforts related to air-to-air warfare, missile mobility and tactical missile systems, advanced sensors communications systems, battlefield intelligence, surface ship defense, and other areas important to the defense of Europe are currently being developed. To date, $445 million has been appropriated for this program.

The Balanced Technology Initiative is another new defense program that is addressing many problems of considerable importance to our NATO Allies. This program was explicitly established to support the development of technologies important to conventional defense. The program was described in detail in a report to Congress submitted in May, 1987. The estimated cost of the planned work described in the report was more than $1.5 billion over a five-year period. As the BTI program continues, we intend to develop cooperative technology development efforts - as opposed to the systems development activities of the NATO Cooperative Research and Development Program - with our NATO Allies.

The NATO Conventional Armaments Planning Systems (CAPS) is intended to increase cooperation in exploiting our collective industrial strengths and provide a framework for developing armaments plans consistent with NATO long-term planning guidelines. As a part of this effort, NATO force planning adjustments will be identified, addressed, and plans will be made to develop and field weapons and other military systems to meet mission needs. NATO has agreed to begin a two-year trial of CAPS beginning in 1988. We strongly support this initiative. CAPS will provide a much improved framework for harmonizing requirements and setting priorities directed toward strengthening Flexible Response.

The activities described above represent only a small segment of the much larger, comprehensive DoD NATO Defense Program. Included in this major defense effort are much of the DoD Science and Technology Program, numerous advanced tactical weapon and platform development programs, conventional and nuclear weapon modernization programs relevant to the European

theater, and a significant fraction of ongoing communication, command, control, and intelligence work. The program also includes extensive planning and training efforts to enable effective use of all of our developing capabilities. Many of the elements of the NATO Defense Program are described in detail in other sections of this report.

Conclusion

Improved cooperative armaments management is, of course, a major way of contributing to Alliance confidence and cohesion by reinforcing efficient coordination of priorities and demands made on limited resources. We must improve NATO military and political management structures across the board to ensure that we also reinforce a clear sense of shared priority and responsibility. Consultations among the military and political leaders of the Alliance remain key in that regard.

The following sections of this report provide further background on strategy, nuclear forces, and conventional forces considerations which bear on support of the NATO Defense Program and strengthening Flexible Response in the next decade. Management of modern munitions, Follow-on Forces Attack, and counter-air operations is also elaborated. Finally, the views of NATO political and military leaders, so critical to our mission, are summarized. These discussions all reflect our confidence that we have the strategic vision, the technical capacity, and the will to carry out our mission for the 1990's. We see very difficult challenges, but we have defined them, and are prepared to face them.

SECTION I: FLEXIBLE RESPONSE STRATEGY

NATO Strategic Concept

The combined military capabilities of NATO exist in order to maintain security by deterring armed attack, the threat of aggression, or intimidation at any level. If deterrence failed NATO forces would seek to deny the enemy's military objectives and terminate any conflict quickly -- restoring deterrence at the lowest level of violence consistent with NATO's objectives.

The military force postures of both NATO and the Warsaw Pact consist of three major elements -- strategic systems, theater nuclear forces, and conventional forces. On the NATO side the posture is sometimes referred to as the NATO Triad.

By maintaining the ability to execute military options across a spectrum of conflict from conventional defense up to a large scale nuclear response, the NATO force posture provides for deterrence. Ultimately deterrence depends on the political cohesion of the Alliance, the credibility of the envisaged response, and the willingness of all of its members to share the risks and responsibilities of collective defense.

INF Treaty and NATO Strategy

The INF Treaty is fully consistent with NATO's strategic concept. The Treaty's main provisions call for the following:

- Elimination of ground-launched INF missiles within three years after the Treaty enters into force.

- A ban on all production and flight testing of Treaty-limited systems.

- Cessation of all training, repair, storage, or deployment of Treaty-limited items after elimination is completed.

- A stringent verification regime, including on-site inspections.

Elimination of a complete class of missiles eliminates Soviet preponderence in those missiles. In addition, Warsaw Pact conventional and chemical warfare capabilities associated with these missiles are eliminated. Although its land-based nuclear missiles are reduced in number, NATO will retain the forces with which to implement its strategy of flexible response and forward defense.

Among the elements of the Treaty which directly support our security objectives are the following:

- Land-based Longer-Range INF Missiles (LRINF). Since the formal talks with the Soviet Union began in November 1981, we have sought to eliminate all U.S. and Soviet missile systems in this category. Achievement of this goal is the main aspect of the INF Agreement.

- Land-based Shorter-Range INF Missiles (SRINF). We have also insisted that an INF Agreement must constrain shorter-range land-based INF missiles to prevent erosion of a LRINF missile accord by Soviet deployment of such systems. The Treaty satisfies this requirement by eliminating all Soviet missiles in this category. The U.S. has no deployed SRINF systems. The Federal Republic of Germany has unilaterally decided to eliminate its PERSHING IA missiles (armed with U.S. nuclear warheads) after elimination of U.S. and Soviet INF missiles has been achieved.

- Reductions on a Global Basis. We have long insisted that any limitations on INF missiles must be worldwide to prevent the transfer of the threat from one region to another. The Soviets have accepted this in the context of global elimination of both longer and shorter-range U.S. and Soviet INF missiles.

- Limits on Only U.S. and Soviet Systems. Throughout the negotiations, we made clear that bilateral agreements between the U.S. and the Soviet Union will not constrain Third Country forces nor affect existing nuclear programs of cooperation with our Allies. The INF Treaty is true to this principle.

- No Involvement of Conventional Forces. No U.S. or NATO conventional capabilities are limited. No limits are imposed on dual-capable (nuclear and conventional) aircraft.

NATO Policy Development

These outcomes will, of course, require policy and planning action to develop detailed target plans, operation concepts, and other actions related to force management. NATO's Nuclear Planning Group (NPG) reviewed the implications of the INF Agreement before it was signed, and has further planning and analysis underway. In this regard, nothing in the INF missile reduction regime suggests any change in fundamental requirements for modernization and improvement which have been long established by the Alliance -- prior to, and independent of an INF Agreement. The critical modernization of theater nuclear forces not limited by the Treaty remains a high-priority for NATO. In addition to nuclear planning, some adjustments and changed priorities may prove desirable in NATO's non-nuclear posture. For example, the air defense mission area is certainly no less important as a

result of reliance placed on dual-capable aircraft for longer range missions. Support and attention to the Follow-on Forces Attack mission area and associated long-range conventional delivery missions are no less important.

Although many of the Soviet INF systems being eliminated have chemical capabilities, we remain faced with a substantial chemical warfare threat to all of the NATO allies from other Soviet systems. This was a problem before the INF Treaty and will remain a problem independent of the Treaty. In the absence of an adequate modern chemical retaliatory capability we continue to be forced to rely on the threat of nuclear retaliation to deter Soviet chemical attack. With or without the elimination of INF missiles our posture continues to place too much reliance on nuclear weapons to deal with the chemical threat.

Planning for NATO's Future

A new challenge that faces NATO in preparing to support its strategy for the 1990s is how to revitalize the coordinated planning that will be essential to successful force modernization in the face of current budgetary problems. We must ensure that Alliance political will is reinforced by U.S. leadership and that allied solidarity remains as strong as it has been. This can be helped with long-range strategic planning, prioritization, and regular consultation -- among other things.

The U.S. must offer a clear and coordinated position in such approaches. At the same time, every aspect of activity must be founded on allied participation. National program decisions will be increasingly linked through Alliance planning relationships.

We will need new initiatives to make best use of our strengths, our technology, and our limited resources. The sections of this Report which follow address various structural components which will contribute most importantly toward strengthening Flexible Response in the 1990s.

SECTION II: NUCLEAR FORCES FOR EUROPE

NATO Nuclear Planning

For 20 years, NATO's Nuclear Planning Group (NPG) has provided a forum for NATO Defense Ministers to discuss and provide strategic direction to the Alliance's nuclear policy and posture. The NPG and its subordinate body, the High-Level Group, worked to help formulate NATO's December 1979 "dual-track" decision on INF deployment and arms control negotiation.

In 1983, the NPG agreed on modernizing NATO's theater nuclear force posture. This included appropriate reductions in NATO's nuclear stockpile in Europe. Specifically, they identified critical modernization needed, independent of the INF Treaty, to maintain a credible deterrent posture. The resulting program is designed to ensure the remaining warheads and their delivery systems will be responsive, survivable, and effective in the modern environment. The associated warhead withdrawals, in conjunction with an earlier reduction of 1,000 warheads, will bring NATO's stockpile in Europe, following INF reductions, to about 4,000 nuclear weapons.

The main elements of this NATO theater nuclear force modernization program are now as follows:

- The development of a Follow-on to the LANCE (FOTL) surface-to-surface missile with increased range, improved accuracy, and improved operating characteristics;

- The development of a standoff Tactical Air-to-Surface Missile (TASM);

- The modernization of NATO's Artillery-Fired Atomic Projectiles (AFAPs); and

- The continued modernization of NATO's dual-capable (nuclear-conventional) aircraft and associated nuclear bombs.

In addition to these measures, the modernization program also provides for correction of maldeployment of nuclear capabilities among and within regions; improvements in the survivability of NATO's nuclear forces; and improvements to their command and control.

For the United States, the Secretary of Defense, as a member of NATO's NPG, has consistently joined NATO Ministers in endorsing this Alliance modernization plan and the "Montebello" framework for the implementation of its range of measures. Many are in progress, but decisions are needed on a number of development programs in order to maintain the momentum of this priority NATO effort.

Strategic Systems Posture

U.S. forces provide the backbone of the strategic deterrent. United Kingdom and French forces are also part of the strategic equation, although France still remains outside of NATO's formal military structure. In addition, the U.S. commits Submarine Launched Ballistic Missile (SLBM) warheads to SACEUR's plans. Continued modernization of strategic systems is essential for support of NATO strategy in the 1990s.

NATO Theater Nuclear Systems Posture

The INF Treaty does not place any limits on nuclear missiles above the range of 5,500 kilometers. Also, Sea-launched and Air-launched Cruise Missiles are not limited. Dual-Capable Aircraft (DCA) which carry nuclear and non-nuclear bombs, and Air-to-Surface Missiles (ASM) are not limited. Short-Range Nuclear Forces (SNF) under 500 kilometers range are not limited. This includes ballistic missiles and artillery capable of firing nuclear projectiles -- Artillery Fired Atomic Projectiles (AFAP). It does eliminate ground-launched Longer-Range INF (LRINF) including the SS-20, and Shorter-Range INF (SRINF) missiles.

Needed improvements in our conventional capabilities would help deal with the threat posed by Soviet systems in all the foregoing categories. Just as ours, Soviet systems in this category are essentially all dual-capable and as much a part of the conventional balance as the nuclear balance. Most of theirs pose a chemical warfare threat, as well.

With this said, the Soviets are expected to maintain their vast numerical superiority in the SNF category of missile systems for the foreseeable future. In addition to the 70 kilometer Soviet FROG, the greater range SS-1 (SCUD B), SS-21, and follow-on missiles will continue to present a formidable threat to many NATO airfields, command and control centers, and other facilities. We are not planning to try to directly match this Soviet superiority with our own force of dual-capable systems. However, we will give priority attention to the quantity and quality of capabilities we

do have available, or might have, and to the modernization of all our systems. We will also give priority to conventional forces mission areas which can help to offset this threat. That includes, in particular, the FOFA and air defense mission areas -- including defensive and offensive counter air, survivability measures, and command and control.

At the same time, conventional arms control proposals which might seek to reduce or limit dual-capable armaments also require careful attention in order to protect fundamentally important NATO capabilities which can be conventional as well as nuclear.

Sections III, IV, V, and VI of this Report elaborate on non-nuclear capabilities which address these objectives.

Planning for NATO's Future

The NATO Nuclear Planning Group (NPG) is reviewing how NATO's nuclear force posture might best be readjusted in light of the security situation following implementation of an INF Agreement. This review is aimed at ensuring NATO retains an appropriate spectrum of nuclear capabilities and options.

The Secretary of Defense is prepared to ensure a high-priority for all aspects of the NATO "Montebello" modernization framework, as development programs mature and consultations with our allies proceed. The following views will bear on the evolution of this planning. They address specifically, (1) Follow-on to LANCE, (2) the Tactical Air-to-Surface Missile, and (3) Artillery-Fired Atomic Projectiles.

1. Follow-on to LANCE.

We should seek to lift the Congressional restriction on development of the Army Tactical Missile System (ATACMS) as a nuclear follow-on to LANCE (FOTL), and that we should seek to implement this modernization element. A combination of MLRS and the ATACMS would offer savings in time to develop the program, in force structure, and in overall costs.

2. Tactical Air-to-Surface Missile.

We should make development of Tactical Air-to-Surface Missile (TASM) a high priority.

3. Artillery-Fired Atomic Projectiles.

We should continue to seek legislation to remove the Congressional restriction limiting further production of modern artillery-fired projectiles (AFAPs), which are required, as a minimum, to replace deployed older weapons.

As we proceed to evaluate specific systems and programs to support the NATO requirement for theater nuclear modernization it is increasingly important that our overall planning with respect to theater nuclear capabilities, NATO conventional forces, and any arms control proposals is coordinated.

In that regard, it is crucial that we improve NATO's conventional forces in areas which can counter Warsaw Pact theater nuclear systems. This strengthens the conventional component of the NATO Triad and also helps deal with potent Warsaw Pact dual-capable threats.

Status of Systems

Some relevant U.S. programs which bear on consideration of the NATO theater force posture are outlined below. Many of these systems are dual capable, and therefore can contribute to capability needed in a non-nuclear environment. They include LANCE, TASM, AFAPS, Bombs, DCA, Communications, and SLCM. Allied aircraft and other systems are not included.

1. LANCE and Follow-on to LANCE (FOTL)

The LANCE is a dual-capable, liquid-fueled missile. Deployed with U.S. forces in Europe in 1973, it is also assigned to the ground forces of five NATO allies. The FOTL is a development program to offer increased range, improved safety, force structure savings, and improved survivability and reliability. Survivability would be enhanced as compared to LANCE.

The Army Tactical Missile System (ATACMS) is a conventional missile to be fielded for use with the MLRS. There is a Congressional restriction that precludes a nuclear warhead for the missile. However, study of a nuclear ATACMS concept is permitted. This system could be used to fulfill the FOTL requirement. However, this would require funding and immediate lifting of all Congressional restrictions.

2. Tactical Air-to-Surface Missile (TASM).

TASM is a development program to provide both U.S. and allied dual-capable aircraft (DCA) with the capability to attack high value, heavily defended targets throughout the theater. Currently, NATO's DCA can deliver several types of gravity bombs, but have no standoff nuclear delivery capability -- that is, the capability to attack targets without having to penetrate enemy air defenses. Development of a TASM compatible with U.S. and Allied DCA would extend the range of target coverage of these aircraft, improve their in-flight survivability, and allow widespread allied participation in NATO's nuclear forces capable of executing longer range missions.

3. Artillery-Fired Atomic Projectile (AFAP).

AFAPs provide a combination of accuracy, low-yield, and responsiveness that could help defeat large enemy force concentrations near friendly troops. They are deployed with ground forces of eight NATO countries. There are currently several types of AFAPs in the NATO stockpile. These include the older 155mm and 8-inch howitzer system projectiles as well as the modern 8-inch AFAP.

Modernized AFAPS provide significant improvements in security, effectiveness and range compared to the older systems. Currently, we are limited in the total number of modernized AFAPs which can be in the U.S. inventory. This is because of legislation placing a ceiling on total production of such new weapons. Due to this restriction a substantial number of the older AFAP systems must be retained indefinitely in the stockpile in order to meet current requirements and deployments.

4. Nuclear Bombs.

The Nuclear Bomb Modernization Program involves replacement of older bombs with modernized bombs. It is directed toward improving the overall safety, security, and effectiveness of the nuclear bomb stockpile. This program is funded, but has been slowed due to Congressional cuts in the DoE and DoD budgets.

5. Dual-Capable Aircraft (DCA)

Three U.S. DCA (the F-111, F-16 and F-15E) are, or will be, available for employment in NATO.

Currently, F-111 aircraft are deployed at two bases in the UK. Additional aircraft are based in the western U.S. All of these continental U.S. (CONUS-based) F-111s could be used in a conventional role; these aircraft also are available for employment by U.S. commanders in other theaters and provide a rotation and reinforcement base for the worldwide F-111 force. The F-111s provide NATO's only conventional interdiction capability at longer ranges.

The F-15E is a new, long-range interdiction fighter-bomber variant of the F-15 air superiority fighter. It will deliver the full range of precision-guided conventional weapons and tactical nuclear weapons in day or night, and under all-weather conditions. The F-15E will begin entering the force in the early 1990s. These aircraft will significantly augment the capabilities of NATO's DCA, albeit at shorter ranges than F/FB-111s.

The F-16 is a multi-role fighter which is capable of performing close air support, interdiction and air superiority tasks. The F-16 has less range than the F-15E. However, like the F-15E, the newest models will have the capability of delivering precision-guided conventional weapons and tactical nuclear weapons by day or night, and under all weather conditions.

6. Command, Control and Communications.

A high priority program to strengthen the survivability of nonstrategic nuclear force communications is deployment of MILSTAR (an EHF satellite system).

7. Sea-Launched Cruise Missiles (SLCM).

The U.S. SLCM is a subsonic, winged missile designed for four different configurations: conventional antiship, conventional land-attack, conventional submunition land-attack, and nuclear land-attack. TOMAHAWK variants are capable of being launched from armored box launchers on surface ships, vertical launchers on submarines or surface ships, and torpedo tubes on submarines with the requisite fire control suite. The nuclear variant of the TOMAHAWK Land-attack Missile (TLAM/N) was introduced in 1984.

The mission of TLAM/N is to enhance the U.S. world-wide nuclear deterrent, and deter Soviet nuclear attack on U.S. naval forces. The TLAM/N concept of operations envisions that the system constitutes an important nuclear capability, but one which should not detract from the ability of general purpose naval combatants to execute critical sea control missions in wartime. Ultimately, the responsiveness of the TLAM/N is dependent both upon the degree of prior mission planning and upon coordination in execution.

SECTION III: NON-NUCLEAR FORCES BALANCE

NATO Non-nuclear Force Posture

NATO is a defensive Alliance facing an adversary postured with significant offensive potential. This potential is characterized by in-place force ratios that substantially favor the Warsaw Pact in main battle tanks, artillery, and numerous other categories of capability including dual-capable (nuclear and conventional) missiles and other Warsaw Pact systems. The potential exists for Pact forces to mount an offensive with high relative force ratios that could overwhelm NATO defenses through concentrated attacks at times and places of the attacker's choosing.

NATO nations program conventional forces to successfully counter a limited non-nuclear attack, and to help deter larger non-nuclear attacks by confronting the aggressor with the prospect of non-nuclear hostilities on a scale that would involve a grave risk of escalation to the use of nuclear capabilities. Should aggression occur, NATO's conventional forces are designed to provide a coherent forward defense. They must afford the flexibility necessary for political control and decision-making, under all circumstances.

NATO relies upon the combination of its full range of non-nuclear, nuclear, and dual-capable (nuclear-conventional) capabilities and its flexible response strategy to deter. Risk assessment is ultimately a continuous subjective process that is carried on in the Department of Defense and Alliance planning headquarters, as well as by political authorities. Supporting analytical inputs vary considerably, depending on assumptions about resources, leadership, warning time, training, mobilization, and uncertainties about political decisions as well as the confusion of the battlefield.

Such analysis done in support of force planning and arms control activities does consistently demonstrate the large Soviet advantages in numbers of forces and quantity of armaments. NATO forces are stretched thin, by comparison. Therefore, our focus in evaluating the balance is on (1) what the significant NATO deficiencies are in that regard; and (2) how to prioritize programs to achieve improvements directed at the most critical deficiencies.

The area of conventional capability is quite complex in terms of planning, programming, and budgeting, to say nothing of measuring "the balance". First, many nations are involved in the NATO force planning context. A variety of national capabilities, doctrines, and programs must be fitted into an

overall international military structure. Second, for the U.S., planning must cover worldwide requirements and fit into an integrated global strategy, in addition to European Theater needs. Third, planning involves not only force structure (units, systems, and manpower) but must also provide for a balance of capabilities including the state of readiness of the forces; sustaining them in combat; in some cases, moving them to Europe with reinforcement capabilities; and, finally, investing sufficiently in research and development so that future force structure will be sufficiently modernized to be viable in future environments.

Weighing all these factors, and others, our judgment with regard to NATO forces is that although conventional capabilities have improved over the past few years, major limiting factors remain.

Apart from elimination of certain Soviet INF dual-capable missiles, the INF agreement will not affect the current inventory of conventional force capabilities. However, remaining NATO and Warsaw Pact theater nuclear forces (not banned by the INF Treaty) are essentially all dual-capable (nuclear-conventional). Thus, NATO improvements or Warsaw Pact threats in the nuclear area impact on capabilities in the conventional area, and vice versa. Taking dual capability into account, some adjustments among priorities will prove desirable to accord with the evolving military situation.

Planning for NATO's Future

We particularly support current and planned improvement programs in key areas of deficiency and where they provide us leverage. Programs in areas which enhance NATO capability receive high priority in the U.S. Defense Program. To the extent possible, many such programs will be undertaken in cooperation with the allies to take advantage of cost-savings and interoperability benefits realized through cooperative development, production and logistic support.

NATO Defense Ministers, in pursuing Conventional Defense Improvements (CDI), are agreed on planning in accord with nine critical conventional priorities. We are following these baseline priorities carefully, but they will require further refinement and prioritization in planning for the 1990s.

The U.S. must continue its efforts to fulfill security assistance program goals in the Southern Flank Region. These programs support weapons modernization in Greece, Portugal and Turkey as well as help cement cooperative defense

arrangements. Security assistance to these NATO allies remains a high priority, even though the programs are under increasing pressure because of overall reductions in the Foreign Assistance Budget.

In reviewing these priorities we also need to consider other factors, for example, the U.S. has a commitment to field ten divisions in Europe within ten days of a mobilization decision. Important to this goal are programs such as POMCUS, strategic lift, host nation support, and unit readiness.

NATO's conventional defense improvements must upgrade NATO's capability to defend both its nuclear and conventional forces. In addition, our chemical modernization program is designed to give NATO a more credible chemical retaliatory capability and reduce our reliance on nuclear weapons to deter a chemical attack. A priority is production of modern binary munitions capable of safe, rapid deployment wherever required. We are also proceeding with important programs to improve our defensive capability for individual and unit protection and decontamination.

We must now seek to further focus well established CDI and other U.S. priorities to ensure we are best investing for the 1990s. In addition to consideration of priorities among these improvements, we intend also to address overall requirements in the context of the recently developed DoD "Competitive Strategy" (CS) initiatives.

Competitive Strategies

Work of the first DoD Competitive Strategies Task Force led to a series of recommendations which could improve NATO's military position in relation to the Warsaw Pact. These proposals can complement the CDI and other priorities for strengthening Flexible Response by guiding our acquisition process so as to align enduring strengths against persistent Soviet weaknesses.

Through analysis we are looking for ways to channel long-term military competition into areas where the Soviets function ineffectively and where they obtain minimum results for given costs in time, effort, and money. To enhance deterrence, the recommendations aim at altering the Soviet perception of the correlation of forces and raising the level of Soviet uncertainty about their ability to conduct a successful offensive in the European theater. Should deterrence fail, the proposed programs and strategies would strengthen Flexible Response.

Recommended competitive strategies which we are actively

addressing focus on Soviet command and control operations and countering Soviet air and ground penetration capacity. These concepts take advantage of the Soviet requirement for strict time management and maintenance of high tempo operations. NATO advantages in data automation and processing, target acquisition, and intelligence fusion and dissemination can be used to exploit this dependence and provide a springboard for more effective use of NATO's conventional capability.

Soviet lack of success in redressing this problem would force them to compete in an arena in which they recognize they have serious weaknesses. Proposals from the Task Force which we are examining in this area offer an improved military capability reflecting a combination of new doctrinal and organizational approaches, innovative operational concepts, existing systems, and emerging technologies. The aim is to channel competition into areas in which we can take advantage of core, long-term strengths enjoyed by the Alliance.

Highlights of four initiatives are as follows:

- Countering Soviet Air Operations: The task force recommended that NATO, led by the United States, enhance its offensive capabilities against Soviet sortie generation by developing a phased attack on the Soviets' main operating bases and air infrastructure led by unmanned aircraft. From a defensive air perspective, the task force recommended measures to strengthen the integrity of NATO's air and ground operations.

- Countering Soviet Penetration of NATO Forward Defenses: The task force recommended developing an asymmetric force capability comprised of an integrated network of long-range, mobile weapons platforms and target acquisition and command and control assets capable of engaging Soviet mobile targets beyond the range of Soviet artillery and Multiple Launcher Rocket Systems.

- Stressing the Warsaw Pact Troop Control System: The task force recommended frustrating Soviet tactical operations by blocking preplanned options. This would force communications to the operational level where a replanning capability exists. By use of direct attack, special operations, and deception, NATO could counter the Pact's ability to devise and execute operational responses.

- Countering Soviet Global and Multitheater Operations: Finally, to exploit Soviet aversions to a multitheater, protracted conflict, the task force recommended developing an offensive warfighting capability for conducting large scale joint and combined conventional offensive military campaigns.

As we develop our broad strategic thinking and address the conventional force posture, we must increasingly tie together our strategic perspective focused on flexible response with (1) our approach to conventional and strategic arms control, and (2) the NATO force planning process.

Conventional Arms Control

For two decades NATO has worked at meaningful conventional arms control in Europe directed toward improving the Alliance security posture. The guiding principle is that the Alliance will not settle for essentially cosmetic outcomes which can result in a false sense of security and no real improvement in stability.

From the beginning, it was on this basis that NATO insisted, first, that the Soviet-proposed European Security Conference (now CSCE) address human rights and other fundamental East-West differences along with building confidence and increasing security in Europe. Second, NATO insisted that before any of its members would participate in such a conference, specific military issues must be addressed. Thus, NATO demanded initiation of talks on Mutual and Balanced Force Reductions (MBFR) in Central Europe. Both negotiations began in the early 1970s.

In the CSCE arena, in 1975, a "Helsinki Accord" was concluded. It contained inter alia a security "basket" that required prior notice of certain military maneuvers and encouraged participants to invite observers to such exercises. This was a modest approach to improving stability through confidence-building measures (CBMs).

With respect to the sister MBFR talks, the focus has always been on improving stability at negotiated lower levels of forces. In other words, actual force reductions were the aim, as opposed to confidence-building measures being addressed in CSCE.

By 1986 the Stockholm Conference (Conference on Confidence- and Security-Building Measures and Disarmament in Europe, or CDE), continuing the Helsinki process, reached agreement on a more ambitious, though still modest, package of CBMs. The most significant aspect of this agreement is the inclusion of all Soviet European territory to the Urals. After years of Soviet insistence that Soviet territory must be a sanctuary from the European security equation, that barrier was broken.

This approach to CBMs continues through the CSCE process at the current Vienna Review Conference. NATO countries have agreed that additional confidence-building measures may improve stability. If a balanced outcome at Vienna can be achieved,

most importantly including improvement in Soviet human rights performance, it appears that all 35 participating CSCE states will agree to new negotiations in 1988 on more confidence-building measures. We support this.

In the MBFR talks, negotiations have continued for fourteen years. During most of that period the Warsaw Pact refused to discuss current force levels. This meant that there was no way to agree on the size reduction required to reach equal ceilings. In December 1985, NATO proposed dropping its requirement for agreed data, and advanced the idea of taking small asymmetrical reductions. Determining existing force levels through an exchange of data and verification would follow. Then both sides would later reduce to parity within a defined geographic area in Central Europe. The Soviet Union has not yet seriously responded to this proposal.

Having established the principle that all of Europe "from the Atlantic to the Urals" is subject to military measures, NATO called for conventional arms control negotiations covering forces of both alliances in that wider area in 1986. Indeed, continued Warsaw Pact force buildup and modernization, force restructuring, doctrinal changes and considerable improvement in reinforcement capabilities have made it imperative that Soviet forces in the wider zone be addressed if an agreement on conventional forces is to insure security.

By February 1987, all countries of both alliances began meeting in Vienna to negotiate a mandate for these conventional forces negotiations. They are expected to begin in 1988.

At the mandate discussions, NATO and Warsaw Pact nations have agreed on objectives as follows: "to strengthen stability and security in Europe through the establishment of a stable and secure balance of conventional armed forces, which include conventional armaments and equipment, at lower levels; the elimination of disparities prejudicial to stability and security; and the elimination, as a matter of priority, of the capability for launching surprise attacks and for initiating large-scale offensive action."

Difficult work remains to be done in reaching agreement on armaments and forces subject to negotiation. NATO participants have stated that nuclear weapons will not be included. The Warsaw Pact began by insisting upon inclusion, but their position is no longer clear.

The record of the last fifteen years shows how the U.S. and NATO are committed to working at conventional forces arms control which supports NATO's security interests and improved stability in Europe. Because of the large asymmetries in

offensive forces, especially in tanks and artillery, such agreements require substantial reductions in Pact combat capability in forward deployed forces. Small reductions even at favorable ratios would not be in NATO's interest because (a) such reductions do not alter the Warsaw Pact's fundamental advantages, and (b) because they immediately and directly affect NATO's already limited conventional capabilities. The likelihood that the Soviet Union will accept the kind of agreement that protects NATO security interests cannot be predicted. For our part, we will place no reliance on the outcome of such negotiations until it is actually achieved, and a treaty ratified.

Negotiations of this type involve 16 sovereign NATO nations. A Western proposal must be agreed upon by all and take into account a range of security and political concerns. The details of Western proposals are being discussed in a High Level Task Force chaired by NATO's Assistant Secretary General. Not all details have been settled, but there is a remarkable convergence of views. All agree that reductions can help improve stability but cannot in themselves achieve stability. All agree that to be acceptable, reductions must be highly asymmetrical and large on the Warsaw Pact side. Moreover, the massive concentration of Soviet invasion forces in Eastern Europe will have to be significantly reduced. All agree that any agreement must be subject to extensive verification measures and other measures that will contribute to stability. Finally, all agree that a negotiated outcome must not weaken our nuclear deterrent capacity.

Our objective is to reduce offensive capabilities, which means the major ground invasion forces of the Warsaw Pact. However, there are substantial risks for NATO in measures in which armaments are involved in such negotiations. Our goal must be strengthened Flexible Response. SACEUR views are an important consideration in our approach to these talks, and are summarized in Section VII.

NATO Force Planning

U.S. planning and programming, NATO's coordinated planning, and the budget processes of all the NATO members are increasingly interconnected. For the 1990s they must be better structured to respond to Alliance consensus on goals, objectives, and specific programs responsive to strategic guidance.

As we proceed in seeking to exploit NATO strength, we will take care to work within these integrated national and international force planning structures but we will and must address new initiatives and approaches to solving our complex security problem. In so doing, we will want to reduce the danger of using our limited resources inefficiently. This is possible if we: (1) avoid acting without adequate international consultation; and (2) seek to strengthen the established strategic planning and program budgeting systems to make them more responsive to integrated strategic thinking. A simple framework for our NATO Defense Program is key to this.

In order to advance and refine CDI priorities as well as new initiatives based on a NATO strategic framework for the 1990s, we must see that they are coordinated and reflected in specific force proposals by the NATO Military Authorities. NATO Military leaders propose force plans based on the senior NATO Military Committee's Annual Military Appreciation, and detailed annual combat-effectiveness reports by each of the three Major NATO Commanders (SACEUR, SACLANT and CINCHAN). NATO force goals for each country, covering a six-year period, are taken into account in those inputs. The goals deemed to be of particular importance for CDI are now "highlighted", and nations have undertaken to make more efforts to implement such "highlighted" goals. The U.S. has been a leader in this process.

We must work to keep this process responsive and modern, tailored to a shared sense of priorities throughout NATO and its supporting organization.

SECTION IV: ADVANCED CONVENTIONAL MUNITIONS

Role of Advanced Conventional Munitions (ACM)

Modern technology has permitted great strides in improving conventional system capability and we intend to do more to make best use of our technology. However, in a NATO versus Warsaw Pact confrontation, theater nuclear capabilities form a unique element of the Alliance deterrent. NATO must sustain the capability of forward-based and land-based systems for delivery of nuclear weapons against a wide variety of targets. These include direct defense capabilities with short-range nuclear weapons, nuclear weapons which put massed concentration of Warsaw Pact forces at risk, and weapons which can engage critical targets at longer ranges. At the same time NATO must strengthen its forward conventional forces and give its ground forces greater battle depth and flexibility through modern fire support. It is here that ACM are important, not as substitutes for nuclear fire power.

We believe our allies can cooperate significantly in joint efforts involving ACM in what we call Competitive Strategies. We remain sensitive to NATO's weaknesses and to the Warsaw Pact's established advantages -- its quantitative superiority, in particular. However, new opportunities exist for executing Competitive Strategies which attack Soviet weaknesses rather than attempting to match their strengths. ACM can provide options in this regard, but are certainly not an exclusive solution. In any event they have wide application on the modern battlefield.

Allied Cost-Sharing

Some examples of cooperation among the allies in the application of ACM technology are as follows:

Advanced Conventional Munitions (ACM)	Sharing Allies	Application
o Multiple-Launched Rocket System/Terminally-Guided Warhead (MLRS/TGW)	USA, UK, FRG France	Anti Armor
o 155mm Autonomous Precision-Guided Munition (APGM)	Canada, France, Germany, Italy, The Netherlands, Spain, Turkey, US	Anti Tank
o Modular Stand-off Weapon (MSOW)	US, UK, France, FRG, Canada, Italy, Spain	Multiple
o INFRARED Maverick (65-D)	Italy, Denmark, Germany, The Netherlands, Turkey, Spain	Anti Armor
o Anti-Tactical Missile (ATM)	Germany, US	Air Defense
o Under the Conference of National Armaments Directors (CNAD), resides cadre group AC/310, that is presently setting up an information center that will contain technical information that NATO ACM engineers/scientists will be able to draw from when designing insensitive/high performance munitions.	France, The Netherlands, USA, UK, FRG, Norway	All

Cost-sharing with our NATO allies is already an ongoing, integral aspect of advancing ACM programs. These efforts have been given impetus by FY 86 and subsequent NATO Cooperative Research and Development legislation promoting cooperative programs. NATO allies are actively engaged in cooperative ACM programs that span the acquisition arena from technology through procurement. The potential exists to do more.

Applications

Many types of munitions and systems fall into the general category of ACM. Thus, applications are not restricted to a

single mission area. The foregoing table shows that ACM contribute to the Follow-on Forces Attack (FOFA) mission, discussed in Section V; they are part of our modernization of air defense capabilities, discussed in Section VI; and could also be involved in some cases in dual-capable (nuclear-conventional) systems.

Without a doubt ACM contribute in a most important way to the munition, or lethal end of the FOFA capability. However, as is elaborated in Section V, the application of lethal technology to a target involves advanced sensors, fusion capability, and target acquisition means as much as it does an advanced conventional warhead.

Cost-Effectiveness

No general assessment can be made about cost-effectiveness in this area of technology application. It depends on the total concept; strategic and tactical objectives; and on the relative effectiveness of each weapon against specific targets. This becomes more apparent in the discussion of an overall concept employing ACM, such as FOFA, described in Section V.

A potential "effective" application for ACM could focus on a Competitive Strategy based on a "Win Early" concept. Under this concept, if our adversary chooses to strike, our response would be to attack his most vulnerable points using ACM. Our success would be dependent upon our ability to identify critical targets and destroy them through selective application of modern conventional munitions in the early days of the conflict. This solution is directed toward rapid attrition of targets having a high payoff.

If we consider the prospect of converting all of our munitions to ACM, this might well be extremely "cost-effective". However, no sophisticated analysis is needed to show that we could not afford to do this no matter how effective the result. Total ACM substitution of the current US $70B stockpile could well cost hundreds of billions. An affordable option, as called out in a "Win Early" strategy, is to utilize our new modern munitions in a way to allow an early transition to the standard stockpile, thereby limiting the total number of ACMs needed to do the job. This solution envisions significant application of modern munitions during the early days of a conventional conflict in Europe. These modern munitions would attack those enemy targets that pose the greatest threat to the survivability of our delivery systems and maneuver units. By engaging the enemy's critical targets early in the war, we would be able to efficiently transition to the employment of the standard stockpile. As our forces become more survivable and the critical enemy target

capabilities are reduced, the mix would shift from the utilization of modern munitions to larger quantities of the standard munition.

Planning for the Future

The US approach to Advanced Conventional Munitions is managed through the Department of Defense Conventional Munitions Master Plan (CMMP). This planning offers integration, and coordination for the development and acquisition of conventional munitions. It provides programmatic information and analyses on munitions-target pair, that is, those modern munitions or combinations of modern munitions that have been designed and are best suited to defeat specific target types. The planning activity ensures that critical issues associated with conventional munitions are given high-level attention. It also calls for trade-off analyses to be conducted between specific ACMs in which one conventional munition is substituted for another with the objective of optimizing our potential on the battlefield.

Development of the Master Plan provides the basis for orchestrating a "Win Early" competitive ammunition strategy and produces a document that addresses the feasibility and cost-effectiveness of applying a proper mix of ACMs to the problem of conventional force imbalance. NATO cooperative programs and opportunities are addressed as part of the overall planning objective.

The CMMP is designed to create an affordable, effective mix of conventional munitions in support of our strategy. The Plan addresses near- to long-term objectives through: (1) procurement and/or product improvement of selected modern munitions; (2) accelerated development and/or preplanned product improvement programs; and (3) acceleration of promising munitions R&D programs which have potential for defeating next generation threats. Output from the Department of Defense Balanced Technology Initiative (BTI) is also used to introduce matured technologies into our conventional munitions, and becomes an integral part of the CMMP.

We anticipate the full implementation of the CMMP by April 1988. It will serve as the basic DoD document to guide and support planning to best utilize conventional munitions of every type to achieve a "Win Early" strategy and support our overall modernization efforts.

SECTION V: FOLLOW-ON FORCES ATTACK

The Concept

The aim of Follow-on-Forces Attack (FOFA) is to significantly strengthen NATO's forward defense. The concept employs non-nuclear systems and capabilities, including advanced conventional munitions, to help stop the advance of enemy forces. It is a technical and military approach, in this case, designed to delay, disrupt and destroy enemy forces. The concept calls for an improved posture to engage the aggressor at longer range by integrating advanced and emerging technologies into established conventional forces.

FOFA should be viewed as a targeting strategy that supports an overall requirement to interdict an enemy's capacity to launch and sustain an attack. It is one means by which numerically inferior NATO forces can counter numerically superior opponents. In this regard it is a primary focus of the interdiction campaign. It is not a new concept. NATO has always faced the need to conduct such interdiction operations to restrict an aggressor's capacity to introduce forces at the Allies' forward line of defense.

Advances in sensor, microprocessing, communications, and munition technologies now make it possible to develop the capabilities to reduce to manageable proportions the number of enemy forces arriving at NATO's battle lines.

FOFA involves operations which employ air-to-surface and surface-to-surface weapons to attack enemy reinforcements and supporting elements enroute to the forward battle area. We combine acquisition, targeting, C^3I and attack systems to mount an integrated interdiction campaign. The FOFA area of operations stretches from just behind the front lines as far into the enemy's rear as our target acquisition and weapon systems capabilities will permit.

Such technologies are now embodied in systems currently in full-scale development and will be entering the inventory starting in 1989. The Advanced Conventional Munitions programs discussed in Section IV support the advance of the FOFA concept.

Employment of conventionally-armed Sea-Launched Cruise Missiles (SLCM) carried on naval combatants in support of SACEUR missions can also contribute to FOFA operations. Employment of SLCMs as well as Air-Launched Cruise Missiles (ALCMs) and other concepts will be thoroughly explored as part of our Competitive Strategies approach.

U.S. and NATO Planning for the Future

Complementary planning for the FOFA concept is maturing in the U.S. and the Alliance. SACEUR is now developing an operational concept for FOFA in the 1990s and beyond. NATO also has a Long Term Planning Guideline that provides for coordinating armaments and force planning in support of FOFA. SACEUR is focusing on the need for long-range target acquisition and attack requirements, in the context of a conceptual military framework which ties together the various components and prioritizes them.

Most NATO nations have recognized the need to address new and improved FOFA capabilities, and U.S. leadership has provided an important stimulus. The U.S. is developing joint doctrine for FOFA and coordinating the planning for procurement and fielding of FOFA-related systems in an integrated manner among the services and within the Alliance. The Services have jointly identified contributing systems and are working to expedite fielding of key programs.

FOFA Systems

The FOFA concept is essentially operationalized through a "system of systems" approach involving sensors, communications, fusion, munitions, and delivery systems. Some of the programs important to the concept are highlighted below. The systems to support FOFA missions are not being developed as FOFA unique or dedicated elements, but rather are part of our overall effort to modernize conventional capabilities. Many of these systems are being cooperatively developed or produced with our allies. However, the integration of the architecture for special missions characterizing FOFA may eventually require dedicated communications equipment.

The actual numbers and types of systems we procure will depend on further development of the concept of operations for FOFA. This will determine the amount of money dedicated to FOFA in the future. Coordinated planning with regard to all the types of systems outlined below is underway in the Department of Defense, and a full range of delivery system options will be evaluated through Competitive Strategies planning and related analysis. In the interim, the Secretary of Defense is ensuring appropriate funding of the projects, summarized on the following pages, among others, as they relate to supporting the NATO Defense Program.

Sensor Systems

Air Force

The Advanced Synthetic Aperature Radar System II (ASARS II) is an Air Force theater asset employing a high resolution imaging radar system carried aboard the TR1 aircraft. It collects and processes radar imagery in near real time.

Army

GUARDRAIL Common Sensor combines the GUARDRAIL V (COMINT) with QUICKLOOK (ELINT) and the Communications High Accuracy Airborne Location system (CHAALS) on a single platform, the RC-12K.

Intelligence and Electronic Warfare-Unmanned Air Vehicle (IEW-UAV) is a member of an Army family of UAVs. It consists of an air vehicle with a long loiter capability used for reconnoitering areas deep in enemy territory. It can operate in day or night and in all weather environments; it includes several different sensor packages.

Joint

Joint Surveillance and Target Attack Radar System (JSTARS) is a multi-mode joint Army/Air Force program, Air Force lead, to provide Moving Target Indicator (MTI) radar surveillance of the Corps area of influence. The single radar system incorporates both wide area (MTI) surveillance and a limited synthetic aperature spot mode radar capability. Cooperative development with our allies is being pursued in both the NATO Air Force and Army Armament Groups.

Communications Systems

Air Force

Joint Tactical Information Distribution System (JTIDS) will provide jam resistant secure information distribution. Through advanced access and counter EW measures JTIDS will conduct rapid, reliable C2 and status information distribution.

Army

The Mobile Subscriber Equipment (MSE) provides secure static and mobile communications to Corps and Division level commanders. Army MSE is based upon the French RITA system and was selected by the U.S. Army after an intensive international competition. MSE allows voice/data/facsimile transmissions which are interoperable with the joint Tactical Communication Systems (TRI-TAC) combat net radios, and commercial telephone systems.

The Army Data Distribution System (ADDS) will assist in near real-time information transmissions using the Enhanced Position Location Reporting System (EPLRS) User Unit (EPUU), Joint Tactical Information Distribution System (JTIDS), and Net Control Stations. The combination of EPLRS with JTIDS will capitalize on the previously separated projects to meet the data transfer requirement throughout Division and Corps.

Fusion, Correlation, and Processing Systems

1. Tactical

Air Force

The Battlefield Coordination Element (BCE), in coordination with the Ground Attack Control Center (GACC), will provide air attack planning support to the tactical ground coordinator. The units will coordinate the air attack plan for use of controlled assets, the execution of these plans, and the reporting of the results of the attack.

Army

The Ground Station Module (GSM) for JSTARS and several other sensors will display and report MTI and FTI (Fixed Target Indicator) data on the enemy situation and his movement. Communications with attack coordinators will be provided by JINTACCS, Landline, and FM radio transmission. A downsized GSM will process sensor data for light forces. The Airborne Radar Demonstration System (ARDS) is an active NATO project which will demonstrate interoperability of both British (ASTOR) and French (ORCHIDEE) development systems with the Army's GSM.

Joint

The Limited Operation Capability Europe (LOCE) currently provides intelligence collection, analysis, and distribution to NATO users over secure communications systems, for early warning, situation assessment and targeting activities. Information provided will assist early target nomination for strike or reconnaissance, and support threat analysis.

In 1990, LOCE is to be developed into the Battlefield Information Collection and Exploitation Systems (BICES) and will combine U.S. and NATO fused intelligence in support of the NATO Central Region.

All Source Analysis System/Enemy Situation Correlation Element (ASAS/ENSCE) will provide commanders a near real time detailed picture of enemy positions from the fusion of data gathered by organic, theater, and national sensors. Automated processing of high volume data and interoperability between Army Divisions/Corps and Air Force Wings will allow coordinated deep attack planning.

2. National

Army

Electronic Processing and Dissemination System (EPDS) is a ground-based, computer-assisted Electronic Intelligence (ELINT) correlation facility for theater and national sensors.

Enhanced Tactical User Terminal (ETUT) is a processing and visual display for ELINT and Imagery Intelligence (IMINT) support to the Corps.

Imagery Processing and Dissemination System (IPDS), the operational version of the Digital Imagery Test Bed (CITB), will provide the tactical commander with the capability to receive and exploit digital imagery in near real time from national and theater level sensors.

Tactical Radar Correlator (TRAC) is a direct downlink system receiving radar imagery in digital format from the ASARS II.

The Echelon Above Corps (EAC) test bed is a limited, interim, soft copy, digital imagery exploitation capability which has been deployed in advance of fielding the Joint Service Image Processing System (JSIPS) and the Image Processing Dissemination System (IPDS) in Europe.

Weapons Systems

1. Penetrators

Air Force

The B-52G, originally designed to perform strategic, intercontinental, high altitude nuclear strikes, has been modified to provide long-range, deep-attack, conventional missions in some scenarios. It provides a platform for conventional ground attack missions with surface attack missiles as well as conventional bombs in standoff and penetrating modes.

The F-15E (a dual-capable aircraft) will perform interdiction and is capable of carrying guided and unguided conventional weapons and dispensers with various submunitions which will allow it to conduct interdiction and other missions.

In a major standardization effort, the F-16 is in use with five of our NATO allies and is coproduced by them. An advanced model of the F-16, the F-16C/D, is a light weight, multi-role aircraft capable of performing air-to-air, and air-to-ground missions. The aircraft's versatility and its munitions capabilities will enable it to conduct FOFA.

The F-111 is a long-range fighter bomber capable of delivering a range of weapons for deep strike and deep interdiction missions, including FOFA operations.

2. Stand-Off:

Air Force

Modular Stand-Off Weapon (MSOW): The purpose of the MSOW Program is to build a series of both short- and long-range stand-off weapons to attack fixed and running targets using a modular approach. Weapons built under this approach can attack a variety of targets including airfields, air defense units, hardened C^3 nodes, and armor. MSOW is a major codevelopment effort in which six allied NATO nations

are participating. The funding for U.S. participation in this program has recently been reduced dramatically.

TACIT RAINBOW is a missile system designed to attack enemy radars and is capable of loitering for an extended time over a target until the radar goes active. The missile is currently designed to be launched from air platforms. Cooperative opportunities for TACIT RAINBOW have been offered to selected NATO allies to promote achievement of this capability on a broad basis in the NATO Central Region.

Army

LANCE is an Army Surface-to-Surface Missile (SSM) with conventional as well as nuclear capabilities. It is deployed in relatively small numbers.

Multiple Launch Rocket System (MLRS) is a tracked, ground launcher for the basic, guided semi-ballistic missiles. MLRS is to be the launch platform for the Army Tactical Missile System (ATACMS). MLRS is the result of a cooperative development with four NATO nations, and European production is about to begin.

Army Tactical Missile System (ATACMS) is a short-range Surface-to-Surface Missile (SSM) developed to attack area targets deep in the Corps commander's area of responsibility. Launched from an MLRS platform, the missile is designed to carry various submunitions. It will replace LANCE in the latter's conventional role and is a potential candidate for the Follow-On to LANCE in the nuclear role as well. The U.S. has offered this program for NATO co-development and coproduction; it has been offered to all U.S. partners in the MLRS Program.

Navy

The U.S. Sea-Launched Cruise Missile (SLCM) is currently budgeted and on schedule. The conventional SLCM, TOMAHAWK Land-Attack Missile (TLAM/C/D) has an extended range, and could contribute significantly to FOFA by providing a conventional deep-attack capability against fixed installations in the Warsaw Pact.

Air Force

Tactical Munitions Dispenser (TMD) is a new general purpose, 1000 lb. class submunition dispenser capable of

dispensing SKEET, Boosted Kinetic Energy Penetrator (BKEP), and Combined Effects Munitions (CEM). It is currently available for use with F-15, F-16, F-4 and F-111.

Combined Effects Munitions is a cluster weapon of 202 CEBs. The bomblets consist of armor-penetrating charges, a fragmenting case, and a zirconium incendiary.

The Booster Kinetic Energy Penetrator (BKEP) is a runway attack submunition. When configured for in a TMD for the Direct Attack Combined Munition (DAACM) the system consists of eight BLU-106/B BKEP and twenty-four Hunting HB876 area-denial mines.

SKEET or Sensor Fuzed Weapon (SFW) is an antiarmor warhead, dispensed from a Tactical Munitions Dispenser (TMD). After leaving the dispenser, the submunition detects a tank and fires a self-forging armor-piercing plug at the target.

Laser-Guided Bomb consists of a laser guidance kit attached to a MK-84 warhead. The target is designated from an aircraft, using Forward Looking Infrared Radar (FLIR) or Low-Altitude Night Targeting Infrared Navigation (LANTRIN) targeting pod.

GBU-15/AGM-130 (glider and rocket version) carry MK-84 or I-2000 warheads and are targeted against high value point targets. They are guided either by television or an imaging infrared seeker and deployed from F-4E or F-111 aircraft.

I-2000 Bombs (Improved 2000 lb Bombs) are designed to attack hardened targets such as bridges, bunkers runways, or command posts. Utilizing a redesigned warhead, in a thicker steel casing, they are able to penetrate hardened targets.

Army

Terminally Guided Warhead (TGW) is a submunition for the MLRS rockets; it is designed to search for and destroy enemy armor. TGW development is being undertaken in a cooperative project with France, Germany, and the UK.

Anti-Personnel/Anti-Material (APAM) are air dispensed, high explosive fragmentation submunitions designed for release at a designated height above the ground from LANCE and ATACMS. The APAM submunitions are fuzed to burst on contact with the ground.

SECTION VI: NATO AIR DEFENSE

NATO Air Defense Mission Area

NATO's counter-air capability -- both offensive and defensive -- represents an important and flexible firepower capability which can be employed against fixed installations and against attack from the skies. US air and air defense assets provide a major contribution to NATO, and they also comprise capabilities we need to meet our global defense responsibilities. This mission area will receive continuing high priority.

A significant share of the NATO Conventional Defense Improvement (CDI) effort is already aimed at sustaining a modern and robust air defense capability in the face of an increasingly potent Soviet/Warsaw Pact nuclear, conventional and chemical warfare threat.

The INF Treaty will relieve somewhat the missile threat facing NATO, particularly in the rear areas of Western Europe which are beyond the reach of Warsaw Pact short-range missiles, but the otherwise relentless pace of Soviet weapons modernization continues to threaten critical NATO assets. Increased numbers of attack helicopters, new close air support aircraft, and conventionally-armed, dual-capable, short-range missiles are increasing the threat to our forward fighting forces, key defenses, and certain vital assets. We and our NATO allies have given special emphasis to near term practical steps to defend against the threat through both active and passive defenses. Allied planning has also been quite successful in this mission area.

The Warsaw Pact attaches great importance to the rapid achievement of air supremacy in any conflict. One means available to the Pact to assist in achieving this objective is the use of tactical missiles. In the 1990s, NATO will continue to be threatened by the traditional air threat as well as by remaining theater missiles. The Soviet SS-21s, SS-1s (SCUD Bs), FROGS, SLCMs, ALCMs, and Tactical Air-to-Surface Missiles (TASMs) are not limited under the INF Treaty. NATO's ability to defend against the threat depends on a full range of integrated capabilities and their effective employment. These include modern aircraft, air-to-air and air-to-ground munitions, land-based air defense missiles and guns, tactical missile defenses, as well as command and control, survivability and other passive measures, and electronic warfare systems. Research on new systems and capabilities is also critical to protect against an uncertain future. Investment in all of these areas will be important if we are to achieve needed improvements.

Planning for the Future

We are embarked on a significant improvement of NATO's Command and Control system that is crucial to the Alliance's future air defense posture. NATO's Airborne Early Warning and Control (NAEW&C) Program is proving to be an exceptional performer in this area. However, impacting on our air defense capability is the lack of a modern system for discriminating between friend and foe in the air; this is being addressed in NATO through the development of NATO Identification System (NIS). With respect to air base defense, we are making marked improvements, but our posture remains uneven among allies and among different categories of bases. Continued priority planning and action are needed for air base defense, recovery, chemical protection, and dispersal.

The NATO capacity for Defensive Counter Air (DCA) operations is being significantly upgraded with U.S. and allied deployments of PATRIOT and other modern surface-to-air missiles, increases in more capable aircraft, and deployment of modern air-to-air munitions. However, Allied Command Europe faces shortages in surface-to-air missiles (SAMs) and air defense gun systems. To redress these and future shortcomings, we intend to take advantage of a number of technological and other opportunities for building on advances made to date in our defensive stance.

NATO plans now provide for marked improvements in aircraft and munitions to carry the battle to the enemy by attacking his airfields, other sources of his air power, and his follow-on forces, as outlined in Section V. However, we have not yet advanced sufficiently in NATO's capacity for standoff attack and hard target kills. It is here that a number of emerging technology initiatives could have the potential for significant payoff. We are limited in long-range aircraft and must examine the mix of stand-off and direct attack munitions, aircraft, and missile delivery systems, as well as target acquisition capabilities appropriate to conducting Offensive Counter Air (OCA) missions. We intend to pursue this.

Countering Soviet air operations (involving both missile and aircraft attacks) is among our highest priorities for the future. There are opportunities in this area for exercising competitive strategy operations, in particular. The Secretary of Defense is ensuring appropriate funding of air defense programs as they relate to the NATO Defense Program. Intensive U.S. and NATO planning in this area will continue to be key and an appropriate balance among all areas in the counter air mission area will continue to be important.

Status of NATO Air Defense Improvements

Important ongoing efforts are summarized below:

US Bilateral Efforts: Active Air Defense

- US/UK RAPIER Initiative. This was the first of several US bilateral agreements with NATO allies for improving active air defenses in NATO Europe. This initial US/UK effort, became known as the "RAPIER role model." Under the terms of the 1981 agreement, the US has procured and the UK is manning, operating, and maintaining 32 RAPIER Short-Range Air Defense (SHORAD) fire units for the point defense of seven US air bases in the UK.

- US/FRG PATRIOT/ROLAND Agreement. This initiative provides for Germany to purchase 14 PATRIOT fire units while the US will provide Germany with 14 additional PATRIOT fire units from previously planned US deployments. In return, Germany will man and operate 12 of the 54 US PATRIOT fire units in Germany (providing medium-to-high altitude air defense) and also procure, man, operate, and maintain 27 ROLAND fire units providing short range protection to three US bases. Because of the coverage provided by PATRIOT, six more U.S. bases will also receive air defense coverage.

- US/The Netherlands Agreement. In February 1984, the Dutch Government signed an agreement for the purchase of four PATRIOT fire units. They are planning to buy additional missiles and launchers for these fire units. Moreover, the Dutch have an option to purchase an additional two fire units for a total of six; they are currently studying this option. The Dutch have taken delivery of two fire units and will complete delivery of their four fire units in March 1989.

- US/Turkish RAPIER Agreement. In November 1984, the US and Turkey agreed to enter into a cooperative air base defense program. The US will procure 14 RAPIER fire units and associated equipment from the UK as an extension of the 1981 US/UK RAPIER Agreement, and Turkey will man, maintain, and operate them. US Air Force and the Turkish Air Force Command have jointly produced a comprehensive Turkish air defense master plan for future air defense C^3 and weapon acquisition in Turkey.

Priorities for Active Air Defense

- The PATRIOT Missile System in NATO. NATO's agreed air defense program called for the fielding of PATRIOT fire units by the US and other NATO allies. US deployment began in 1985 and will be completed in the early 1990s. In addition to providing medium-to-high altitude air defense coverage against the traditional air-breathing threat, PATRIOTs will also have a self-defense and a limited capability to defend NATO vital assets against attack by conventionally-armed tactical ballistic missiles.

- The Army's Forward Area Air Defense System (FAADS). With the August 1985 decision to cancel the Army's Division Air Defense (DIVAD) gun weapon system, the Army was forced to reassess just how it would meet its air defense requirements in the forward area. A combination of factors -- the cancellation of DIVAD, the need to address other air defense deficiencies which were independent of the DIVAD decision, and an increased threat capability led the Army to seek a systemic solution. Following several months of study, the Army established its FAADS approach to the problem. FAADS, as formulated, consists of five elements: a non line-of-sight rear system; a line-of-sight forward heavy system; a line-of-sight rear system; a combined arms element; and finally, the FADD C^2I element (command, control, and sensors). The chosen system for the non-line-of sight missile system is the FOG-M (Fiber Optic Guided Missile). This system has gone into advanced system development. The Army recently held a competitive selection process to choose an "off-the-shelf system" to fill the line-of-sight forward heavy role. The Air Defense Anti-Tank System (ADATS) built by Martin Marietta/Oerlikon Buhrle (US/Swiss teaming) was selected and deployment is expected to begin in 1988 and be completed by 1992. Pedestal Mounted STINGER, which is being built by Boeing Aerospace, has been selected as the line-of-sight rear system. FADDS weapons will be added to US corps as an additional or organic capability, providing a capability which does not exist today.

- Fighter Aircraft. With the planned deployment of F-15Es to NATO Europe along with NATO's existing US F-111s and allied TORNADOS, capabilities for conducting Offensive Counter Air missions will be greatly increased. Likewise, improvements to US and allied F-16s and a capability to employ the Advanced Medium-Range Air-to-Air Missile (AMRAAM) will serve to improve NATO's traditional Defensive Counter Air operations. Together, these improvements will enhance NATO's ability to gain and maintain a favorable air situation (to conduct offensive and defensive counter-air operations) should the Warsaw Pact choose to attack.

- HAWK and the Medium Surface-to-Air Missile (MSAM). The US and several NATO allies maintain the HAWK medium altitude air defense system. HAWK, originally designed in the 1950s, has undergone several Product Improvement Programs (PIPs) to modernize and upgrade its capabilities. The US HAWKs are currently being upgraded by the phase-3 PIP. This PIP improves the reliability, availability, and the maintainability of the HAWKS. Furthermore, phase-3 will enhance the system's mobility and provides the HAWKs with a low altitude multiple engagement capability. The Army has also proposed a plan to further enhance the capability of the HAWK against cruise missiles. Finally, it should be noted that Norway has decided to retain HAWK, but in a modified and upgraded fashion unique to Norway in a system called NOAH -- Norwegian Adapted HAWK.

The foregoing highlights do not detail every facet of our priorities in the improvements to NATO's active air defenses, but they do offer an overall picture of some important aspects. The following information highlights other air defense initiatives and passive air defense measures which are priorities in NATO.

Other Priorities

- UK and French AWACS Purchase. In December 1986, the UK announced plans to purchase six Boeing AWACS aircraft from the US; in 1987 they further announced that they planned to exercise their option for a seventh AWACS aircraft. In February 1987, the French agreed to purchase three AWACS from the US. Further, France has announced that it expects to exercise its option to acquire a fourth AWACS aircraft. Given their compatibility with US AWACS and NATO's 18 Airborne Early Warning & Control (NAEW&C) aircraft, the French and UK AWACS acquisition should greatly enhance NATO's overall capability in this vital area of airborne early warning and control.

- The NATO Identification System (NIS). NIS consists of two components: the Direct Sub-System (DSS) component which primarily consists of the Question and Answer (Q&A) component, and the Indirect Sub System (ISS) component. While both components are important, the Q&A component has received the greatest NATO cooperative effort to date as well as the most visibility and public attention. In response to the designation of NIS by the Conference of NATO Armament Directors (CNAD) as a cooperative R&D legislation endeavor (Nunn Amendment), a five nation MOU was signed in October 1987 by representatives of the US, Germany, France, Italy, and the UK. In essence, the MOU provides for cooperation and collaboration on the design and development of the Q&A component. In the US, the Q&A component is referred to as the MARK XV. An October 1987 demonstration and validation of the US, UK, French, and German Q&A components

was conducted at the Patuxent River Naval Test Center. This test was highly successful and proved that the systems were compatible and interoperable.

- The NATO Air Command and Control System (ACCS). In February 1982, the North Atlantic Council (NAC) tasked the NATO Air Defense Committee (NADC) to undertake a revision of the 1979 Refined Program for Air Defense in Allied Command Europe. The NADC's Panel on Airspace Management and Control Systems (PAMCS) was assigned the task of devising a NATO ACCS Master Plan as part of that revision process. The PAMCS established an ACCS Team to lead and direct the development of the ACCS Master Plan. When fully implemented, the ACCS Master Plan will provide for the total airspace management in NATO, an extremely important undertaking. Of the five volume ACCS Master Plan, Volumes I through IVA have been approved; Volume IVB (the ten regional annexes) are currently out to nations for national staffing. Volume V is the transition/funding plan; it is still being drafted. At the NADC meeting of 17-18 November 1987, national representatives agreed to establishing an Interim ACCS Management Organization under the Defense Support Division of NATO's International Staff (IS). Therefore, an organization will soon be in place to work the difficult issue of ACCS implementation.

- US Bilateral Agreements with NATO Allies. In 1985, USAFE worked out bilateral arrangements with Norway and Denmark for the construction of revetted dispersed aircraft parking at US Collocated Operating Bases (COBs). Under the terms of the agreement, the US would provide material and training for allied teams to manufacture the two-meter square Rapid Runway Repair (RRR) concrete slabs. The allies would then be responsible for manufacturing the slabs and installing them so as to construct dispersed parking pads for US reinforcement aircraft. Additionally, they would install four-meter high reinforced concrete revetments (US provided) on three sides of the parking pad to provide some blast and splinter protection to parked aircraft. USAFE personnel are exploring similar arrangements with Turkey and Italy. The revetted dispersed parking pads offer increased protection to reinforcing aircraft (when hardened aircraft shelters are not available) while at the same time increasing the number and availability of concrete slabs required for RRR should airfield attacks occur.

- Hardened Aircraft Shelters. The NATO goal is to provide hardened aircraft shelters for 100% of the aircraft; however, NATO infrastructure funds will only finance shelters for 70% of the aircraft. To provide sheltering above the 70% level requires funding by the nation involved. For the US, CINCUSAFE has established a policy to shelter 100% of in-place and reinforcing aircraft at US Main Operating Bases (MOBs) and 70% of

reinforcing aircraft at collocated operating bases. The Air Force currently has aircraft shelter construction programmed in the FYDP to meet the 100% goal for US MOBs.

- Other Passive Measures for NATO Air Defense. The US has been exploring other elements of passive defense with our NATO allies such as the construction of Alternate Launch and Recovery Surfaces (ALARS) for aircraft and the provision of Emergency Landing Strips (ELS) for aircraft; Camouflage, Concealment, and Deception (CCD); Survivable Collective Protection Shelters (SCPS) for chemical/biological warfare protection; Base Recovery After Attack (BRATT) measures to include air base reconnaissance/ damage assessment to determine the extent of the damage; Explosive Ordinance Disposal (EOD); Rapid Runway Repair (RRR); and Mobile Aircraft Arresting Systems (MAAS). Camouflage and concealment involve the use of netting to cover equipment and the use of paint to "tone down" runways and structures. Deception includes the use of aircraft decoys and decoys for radar antennas. The U.S. Air Force and Army regularly conduct exercises during which the use of chemical/ biological protective clothing and procedures are used and evaluated. The Air Force is engaged in installing SCPS at three US MOBs: Spangdahlem, Bitburg, and Ramstein. Hahn Air Base will be next to receive SCPS. France is also installing its chemical/biological protective shelters, AMF-80, at its air bases. The French have conducted discussions with the Belgians, Dutch, and Canadians trying to win support for use of the French AMF-80 system. To date, only the Canadians have purchased a variant of the French system, AMF-82, for their air bases at Lahr and Baden-Sollingen.

SECTION VII: LEADERS' VIEWS

Confidence in NATO Strategy

In their approach to INF, the allies made a solid commitment from which they never deviated. Since 1979 the political and military leaders of NATO in Europe have addressed the Soviet theater nuclear forces buildup directly and unambiguously. In that regard, their actions concerning Alliance security posture speak for themselves.

The decision to deploy INF systems while supporting U.S./Soviet negotiations was taken in the face of considerable political unrest and turmoil which continued to grow for several years. For the European leaders steadfast adherence to this dual-track decision demonstrated the type of political courage so important to the NATO security concept. We should neither presume nor expect anything less in the future.

Both the Ministers of Defense at their December 1987 Defense Planning Committee meeting and the Foreign Ministers at their meeting endorsed the Agreement finally achieved as a result of collective Alliance efforts. The Foreign Ministers said: "We welcome and fully support the Washington INF Treaty. It is fully consistent with the security requirements of the Alliance. It accomplishes an important and longstanding Alliance objective: the elimination of a class of Soviet nuclear weapons threatening the European allies and other regions of the world."

The approach taken in the dual-track process has certainly strengthened NATO because of the confidence demonstrated by the allies in their security policy. NATO ministers, after considering the implications of an INF Agreement, affirmed the viability of NATO's strategy. In November 1987, the Defense Ministers stated that the "strategy of flexible response will continue to be vital to the security of the Alliance."

Support of Modernization

The allies have indicated a clear recognition of the need for modernization of both nuclear and conventional components of NATO's forces in support of the strategy. The issue for the future is how well the U.S. and our allies do in protecting the gains we have made and in building upon them.

Although the real increases in U.S. defense spending exceeded by a wide margin the average growth rates on non-U.S. defense programs in the early through mid-1980s, U.S. spending reflected major efforts to make up for real decreases we experienced in the 1970s. At that time our allies were achieving steady real increases. U.S. real defense spending for the early 1970s through the mid-1980s was equivalent to an annual decline of roughly 1 to 2 percent. Comparable non-U.S. spending for defense was two percent real growth per year.

In the Nuclear Planning Group and its related bodies, our allies have recognized, with us, that NATO must continue to fulfill requirements to modernize and increase the survivability of the nuclear forces remaining after an INF Agreement. Our allies have also recognized that additional adjustments may be necessary to ensure a full spectrum of nuclear deterrent options at all ranges.

Our allies also join in supporting our conviction that coordinated programs to modernize and improve NATO's conventional forces must be revitalized. This was established in NATO's CDI Program to redress key deficiencies in NATO's conventional posture. The European allies have shown generally strong performance in meeting established modernization objectives.

Reports from the EUROGROUP nations indicate they are planning to introduce a wide range of new equipment into their forces in 1988. In that year, 250 main battle tanks, over 1,000 other armored vehicles and over 50 pieces of heavy artillery will be introduced into service. The air forces of those nations will bring 200 new combat aircraft into service in 1988, mostly of the advanced TORNADO and F-16 types. Improvements will continue in existing aircraft, survivability and airfield defense. At sea, the EUROGROUP nations plan to introduce seven escorts, three submarines and five mine-warfare vessels, together with smaller vessels and support ships, as well as 25 new aircraft in a maritime role. Support for new initiatives for the future will certainly be based on the effectiveness of transatlantic consultation.

Conventional Arms Control

Indications are that most of the allies believe the INF accord signals a breakthrough in arms control and security policy. They, of course, support continuing U.S/Soviet START negotiations, and are committed to planning for Conventional Stability Talks (CST) addressing forces in Europe.

Most allies appear to be intent on NATO management of an allied approach to CST negotiations to ensure that these talks complement NATO force improvement initiatives. NATO military authorities will be consulted by political leaders as we prepare for these negotiations, and throughout their conduct. For this reason, SACEUR's criteria for such negotiations are an important consideration. His current views on this subject are as follows:

- Suggestions for initial U.S./Soviet asymmetric reductions have possibilities but need more analysis. All reduction proposals should be accompanied by conventional defense capability improvements.

- Soviet efforts to circumscribe Alliance force modernization goals must be firmly resisted. The likelihood of a new agreement cannot be determined and will depend on Soviet perceptions and willingness to negotiate.

Further SACEUR Views

The NATO commander in Europe, SACEUR, has focused on specific military considerations related to the execution of the flexible response strategy. SACEUR points out the need to differentiate between deterrence of Warsaw Pact aggression and NATO's ability to respond flexibly to restore deterrence if the nuclear threshold is crossed. As long as NATO maintains a credible linkage between European-based theater nuclear forces, conventional forces, and strategic systems, and a viable and unquestioned ability to execute military options across a spectrum up to general nuclear response, we will continue to have credible deterrence, according to SACEUR.

SACEUR believes it is critical that NATO continue to field nuclear systems that provide a credible, visible (European land and sea-based) mix of both short- and long-range systems. These sytems, he believes, must be capable of holding at risk militarily significant targets of the Warsaw Pact to include those in the USSR.

Fundamentally, SACEUR supports the nuclear modernization and CDI programs upon which NATO is embarked. With respect to nuclear forces modernization, SACEUR cites the need for additional dual-capable aircraft (DCA) of longer range, the development of the tactical air-to-surface missile, the LANCE missile follow-on, and modernized artillery munitions and bombs. Also critical, in his view, is the lifting of current congressional restrictions on the number of modernized artillery munitions and also the restrictions on development of a nuclear follow-on to LANCE. According to SACEUR, a nuclear force containing these systems

would maintain target coverage while continuing to provide widespread NATO nation participation and the sharing of burdens and risks.

In advancing technology to achieve improvements in non-nuclear deterrence, SACEUR has pointed out that visible nuclear capability has a deterrent value that conventional systems, however high their technology, cannot match.

In the area of conventional capabilities, SACEUR strongly supports the concept of FOFA which is designed to delay, disrupt, and destroy those forces arriving at the forward edge of the battle area (FEBA) and thereby enhance significantly the integrity of NATO's forward defense.

SACEUR believes that NATO's air defense picture is improving. His view is that there are several programs both in development and procurement to bring air defense capability to an adequate level. Among specific systems and programs in the air defense area evaluated by SACEUR are the following:

- The introduction of PATRIOT in the central region starting in 1986 greatly enhances NATO's air defense.

- The deployment of an adapted HAWK for Norway starting in 1987 will improve vital point defense in Norway. Danish deployment of further HAWKS will add to defense of the Danish Islands. The U.S. plans to further enhance the capabilities of its Hawks with the Product Improvement Program (PIP) phase III. Defense of troops and vital assets is being improved by the introduction of new generations of man-carried and short range weapons like ROLAND, Self Propelled RAPIER, JAVELIN and STINGER.

- The provision of aircraft for the NATO Airborne Early Warning (AEW) force is complete. Ground environment tasks are due to be completed in the next two to three years. The decision by the UK to obtain its component of AEW will add considerably to the NATO AEW force. Improved deployment options are planned in the northern region.

APPENDIX

PUBLIC LAW 100-180, NATIONAL DEFENSE AUTHORIZATION ACT, FY 1988-89

TITLE X Matters Relating to NATO Countries and Other Allies

PART A- NATO Deterrence, Section 1001. Report on Requirements for Maintaining NATO's Strategy of Deterrence

(a) Requirement. - The Secretary of Defense shall submit to Congress a report regarding the ability of the North Atlantic Treaty Organization (NATO) to maintain its strategy of deterrence through the 1990s. The report shall include a specific discussion of the implications for such deterrence if the United States and the Soviet Union agree to a treaty which requires the elimination of all intermediate-range nuclear force (INF) missiles having a range between 500 and 5,500 kilometers. The report shall be prepared in consultation with the Supreme Allied Commander, Europe, and the Chairman of the Joint Chiefs of Staff.

(b) Form and Content of Report. - The Secretary shall submit the report required by subsection (a) in both CLASSIFIED and UNCLASSIFIED forms and shall include in the report the following:

(1) A discussion of the effect that the elimination under an INF Treaty of intermediate-range missiles deployed by the United States and the Soviet Union would likely have on the ability of NATO to maintain an effective flexible response strategy and credible deterrence.

(2) The appropriate numbers and types of nuclear weapons and nuclear-capable delivery systems of the United States not limited by the proposed INF Treaty which the Secretary of Defense recommends for deployment in or redeployment to the European theater if an INF Treaty is ratified and enters into force, including a description of any nuclear modernization program the Secretary has recommended or proposes to recommend as necessary to ensure that NATO will be able to maintain a credible and effective military strategy.

(3) A discussion of the balance between the nonnuclear forces of NATO and the Warsaw Pact in the European theater, the likelihood of NATO making significant improvements in that balance over the next few years, the potential effect of conventional force balance alternatives currently under consideration by the United States Government, and the likelihood and potential effect of a new agreement between NATO and the Warsaw Pact limiting nonnuclear forces on that balance.

(4) A discussion of the feasibility and cost-effectiness of substituting advanced conventional munitions for nuclear weapons currently deployed by NATO, including a discussion of the costs of such weapons and prospects for sharing such costs among NATO allies.

(5) A description of nonnuclear forces that would be needed to support the operational concept of Follow-on Forces Attack (FOFA).

(6) The status of improvements being made in the air defense of NATO in Europe.

(7) A discussion of the views of the leaders of member nations of NATO (other than the United States) and of the Supreme Allied Commander, Europe (SACEUR), on the matters described in paragraphs (1) through (5).

(c) Deadline of Report. - The Report required by subsecton (a) shall be submitted not later than the earlier of - (1) 90 days after the date of the enactment of this act; or (2) the date on which the President submits to the Senate for its advice and consent a Treaty described in subsection (a).