



# **AUSA BACKGROUND BRIEF**



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## **Army Issue: THEATER AIR DEFENSE**

### **EXECUTIVE SUMMARY**

The basic issue with respect to theater air defense (TAD) is one of missions, roles and functions, and is essentially an issue between the Army and Air Force.

The threat has changed significantly since the end of the Cold War. The possibility of massive manned aircraft and ballistic missile attacks on the United States and its allies by the former Soviet Union is now highly unlikely. We can be fairly confident that the U.S. Air Force can dominate the skies and guard against medium- and high-altitude aircraft. The future is uncertain because weapons such as ballistic missiles, cruise missiles, unmanned aerial vehicles and helicopters pose new threats. The proliferation of ballistic missiles among Third World countries — and cruise missiles in the future — present real threats to forces in the field and to critical command and support facilities, particularly when mounted with mass destruction warheads. The antimissile aspects of U.S. defense become very important.

The Army has had a leading role in the development of ground-based air defense and theater missile defense. Stinger, Hawk and Patriot are existing Army air defense systems. Developmental air defense missile systems include Non-Line of Sight (NLOS), Patriot PAC-3, Corps Surface-to-Air-Missile (Corps SAM), and Theater High Altitude Air Defense (THAAD).

At present, all the services operate theater air defense systems. Coordination and control of fires is a joint function exercised by the theater commander. The Air Force proposed that the entire TAD function come under its responsibility. The Army opposes the Air Force view on the basis that the ground commander must retain control of these weapon systems to protect the force.

If the TAD mission were transferred, considerable up-front costs of approximately \$2 billion would be required for training, logistics, personnel transfers, contract modifications, and facility and technical base transfers. The result would involve major structural disruptions without any foreseeable improvements in efficiency or mission accomplishment.

The February 10, 1993, report titled "Roles, Missions, and Functions of the Armed Forces of the United States," sent by the Chairman of the Joint Chiefs of Staff (JCS) to the Secretary of Defense, supports the present status of TAD responsibilities. A joint working group concluded that full

integration of ground-based TAD assets into Army maneuver forces was key to providing for their protection.<sup>1</sup>

In summary:

- Ballistic and cruise missiles represent a future threat to ground forces.
- The ground force commander needs to have the means to protect the force against air attack, particularly enemy missiles.
- The Army should continue to develop and operate TAD systems. It has the technical capability and the technical base to do so.
- The Army should retain its present operational responsibility for TAD; any shifting of TAD roles and missions at this time would not be cost effective or responsive to the Army's requirements.

## **ISSUE**

The issues pertaining to theater air defense (TAD) involve the assignment of service roles, missions and functions; and more specifically, the question as to whether there should be any realignment of these functions between the Army and the Air Force.

## **BACKGROUND**

Theater air defense (TAD) includes defensive measures to counter or destroy attacking enemy aircraft and missiles. It includes all air-, ground-, sea- and space-based systems which provide anti-air or antimissile capabilities. All the military services operate TAD systems. This paper addresses Army and Air Force roles in TAD.

### **The Evolving Threat**

The threat of Warsaw Pact attack in Europe has evaporated and the threat of massive attacks by the former Soviet Union is almost nonexistent. There has been a significant shift in the nature of potential attack from the air. While attack by manned aircraft remains a threat in some areas, attack by ballistic missiles has evolved as a greater threat. This is particularly true in the Third World, where the ballistic missile has often been referred to as the "poor man's air force."

The superiority of Western air forces, with their sophisticated avionics and command, control and intelligence systems, has rendered the employment of aircraft by Third World states a highly dangerous activity. Consequently, many states are turning to ballistic missiles, which provide regional strategic striking power.

## **The Army's Concept for Theater Air Defense**

The Army does not envision a major demand for defense operations against manned aircraft in the future. The U.S. Air Force would probably be able to intercept most potential manned penetrators. Army air defense units would be concerned with the few "leakers" that may get through. The Army's principal focus would likely be the engagement of tactical ballistic missiles, cruise missiles, helicopters and unmanned aerial vehicles (UAVs). Ground-based air defense units are better suited to deal with these targets than are fighter aircraft.<sup>2</sup>

The overall Army concept for theater air defense envisions multilayered systems of light antiaircraft missiles which can also be employed against low-flying, air-breathing cruise missiles, and larger, longer-range weapons for dealing with higher-flying aircraft and ballistic missiles. The layering envisioned for the theater of operations places shorter-range weapons forward and increasingly long-range systems to the rear. The result is a virtually seamless web of complementary defensive systems which minimize enemy opportunities for penetration.

The Army air defense concept includes four major systems: forward area air defense (FAAD); corps area air defense (CAAD); theater area air defense (TAAD); and theater strategic active defense (TSAD).<sup>3</sup>

The Army is developing a family of complementary systems to fulfill the functions envisioned for the various defense areas sometime after the year 2000. Forward area air defense (FAAD) would include non-line of sight (NLOS) and Avenger missile launching vehicles and appropriate warning and command and control systems. Combat units would have organic Stinger missile teams for self-defense, but no air defense artillery (ADA) units would be assigned below corps level. An ADA brigade would be assigned to each corps.<sup>4</sup>

Coordinated at the corps level by the corps area air defense (CAAD) will be the Patriot (PAC-3) missile system for air and limited ballistic missile protection and the Corps Surface-to-Air (Corps SAM) system, which will gradually replace the aging Hawk system as the basic antiaircraft weapon. For theater area air defense, the Army is developing a theater high altitude area defense (THAAD) system to provide ballistic missile protection for the entire battle zone. THAAD will intercept incoming missiles at much greater ranges than the Patriot, ensuring that hardware fallout occurs over enemy held territory. THAAD will be designed to be sufficiently mobile to keep pace with the movement of troops in the forward area.

## **DISCUSSION**

### **Air Force and Army Views of Theater Air Defense**

The Air Force questions Army control of longer-range air and theater ballistic missile defense systems. In the fall of 1992 the Air Force deputy chief of staff for plans and operations pointed out that U.S. joint military doctrine holds that all air assets are under the control of a joint force area air defense commander (JFAAC). During Operation Desert Storm, area air defense responsibility was assigned to the JFAAC.

Seizing upon this, the Air Force operations chief argued for full responsibility. "We already have operational control of all these assets now. ... It's a normal function of the JFAAC. So all we're saying is in times of reduced budgets and the heightened need to cut out duplications, this approach of having one service responsible for the defense of the battlefield appears to be most sensible."<sup>5</sup> The Air Force interest in theater air defense does not extend to shorter-range systems like the Stinger or Hawk.

The Army, on the other hand, sees little reason to change and believes there is no persuasive case to be made for reassignment of responsibility. There are distinct advantages for the Army to continue its traditional responsibility for ground-based air defense. Whatever marginal advantages may be achieved by change would be off-set by the disruption of personnel and functional responsibilities which would take place. The Army's vice chief of staff had a rejoinder. "The air defense we have got in place works well. We've got a lot of experience. We think it was a success during Desert Shield and Desert Storm, and we see no reason to change it at this particular point in time."<sup>6</sup>

Any plan to shift the entire responsibility for TAD to the Air Force must consider the near-term transfer costs. When training, logistics, personnel transfers, contract modifications, and facility and technical base transfers are all taken into account, the resulting cost will be \$2 billion or more.

The February 10, 1993, report on service roles and missions sent by the Chairman of the JCS to the Secretary of Defense on the subject of TAD would support the present arrangements for air defense responsibilities. It is quoted in part as follows: "The joint working group concluded that full integration of ground-based TAD assets into Army maneuver forces was key to providing for their protection. Furthermore, making changes in TAD roles and missions did not significantly improve efficiency or the ability to address the emerging missile threat to critical assets."<sup>7</sup>

The report pointed out that there would be substantial short-term costs and no long-term savings or improvements in defensive capabilities if the Army's theater air defense assets were reassigned to the Air Force. The possession by each service of a role in air defense, the report asserted, gives the best protection to our forces.

## **CONCLUSIONS AND RECOMMENDATIONS**

Since the end of the Cold War, the nature of the air threat has changed.

Medium- to high-altitude manned aircraft threats have diminished significantly. The U.S. Air Force can dominate the skies and will be effective in countering most enemy threats in this category, although ground defense will be necessary for "leakers."

The emerging threat to operating ground forces will come from ballistic missiles, cruise missiles, UAVs and helicopters. The growing danger from missiles with mass destruction warheads means that theater antimissile defense is increasingly important.

At present, all services are responsible for self-defense and all services operate TAD systems.

While the Air Force has proposed the consolidation of TAD under direct Air Force control, the Army opposes this view on the basis that defense of ground forces is a proper Army mission and that the integration of ground-based TAD into Army maneuver forces is key to providing the necessary protection. Also, such a change would be at considerable cost and without any assured improvement in efficiency or effectiveness.

In the process of transfer, the Army would have to dismantle its highly regarded technical base in antimissile technology and would lose control of such key weapon systems as THAAD, Patriot and Corps SAM.

The key is protection of the force and the ground commander should retain control of the weapons necessary to provide this protection. TAD falls into this category.

While coordination and control of fires in a theater is necessary, this is a joint function to be exercised by the theater commander.

AUSA strongly recommends that the Army retain its present responsibility for TAD.

#### ENDNOTES

1. Chairman, JCS "Report on the Roles, Missions and Functions of the Armed Forces of the United States, February 1993.
2. Glenn W. Goodman, Jr., "Army's Air Defense Artillery Expands its Battlespace," *Armed Forces Journal International*, October 1992.
3. U.S. Army modernization Plan, Vol. II, Annex E, *Air Defense*, January 1993, pp. # E 25-36; and Pete Olson, "Winds of Change," *Air Defense Artillery Magazine*, July-August 1991.
4. John H. Little, "State of ADA," *ADA Magazine*, January-February 1992.
5. Barbara Opall, "AF Stakes Air Defense Claim," *Defense News*, 5-11 October 1992, p. # 4.
6. Opall, p. 42.
7. Chairman, JCS.

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