

## Why GAO Did This Study

In September 2009, the President announced a revised approach for ballistic missile defense (BMD) in Europe. The European Phased Adaptive Approach (EPAA) is designed to defend against existing and near-term ballistic missile threats and build up defenses over four phases as threats mature and new BMD technologies become available. Although the approach will include capabilities such as radars and land- and sea-based BMD assets, the Department of Defense (DOD) has not yet established EPAA life-cycle costs. EPAA is DOD's first implementation of its new, regional approach to BMD.

GAO was asked to evaluate DOD's plans for implementing EPAA. GAO reviewed the extent to which: (1) DOD has developed guidance and addressed management of cost and schedule for EPAA, and (2) DOD planning for EPAA is informed by operational performance data. GAO reviewed key legislation, policy and guidance, and initial plans for implementation and asset allocation.

## What GAO Recommends

GAO recommends that DOD provide guidance on EPAA end states; develop EPAA life-cycle cost estimates; and integrate its phase schedule with acquisition, infrastructure, and personnel activities. GAO also recommends that DOD adopt operational performance metrics and include them in the BMD test program. DOD generally concurred with GAO's recommendations.

View [GAO-11-220](#) or key components. For more information, contact John Pendleton at (202) 512-3489 or [pendletonj@gao.gov](mailto:pendletonj@gao.gov).

# BALLISTIC MISSILE DEFENSE

## DOD Needs to Address Planning and Implementation Challenges for Future Capabilities in Europe

## What GAO Found

DOD has initiated multiple simultaneous efforts to implement EPAA but faces three key management challenges—the lack of clear guidance, life-cycle cost estimates, and a fully integrated schedule—which may result in inefficient planning and execution, limited oversight, and increased cost and performance risks. Since the September 2009 announcement of EPAA, stakeholders throughout DOD—including U.S. European Command, the Missile Defense Agency, and the military services—as well as the State Department, have taken steps to implement this policy, including considering options for the deployment of assets, requesting forces, preparing for testing, and analyzing infrastructure needs. However, effective planning requires clear guidance regarding desired end states and key BMD stakeholders, including the combatant commands and military services, believe that such guidance is not yet in place for EPAA. Further, key principles for preparing cost estimates state that complete and credible estimates are important to support preparation of budget submissions over the short-term as well as to assess long-term affordability. DOD has not developed EPAA life-cycle cost estimates because it considers EPAA an adaptive approach that will change over time. However, best practices for cost estimating include methods for developing valid cost estimates even with such uncertainties. These estimates could serve as a basis for DOD to assess its goal of fielding affordable and cost-effective ballistic missile defenses as well as determine if corrective actions are needed. Finally, the EPAA phase schedule is not fully integrated with acquisition, infrastructure, and personnel activities that will need to be synchronized. As a result, DOD is at risk of incurring schedule slips, decreased performance, and increased cost as it implements the phases of EPAA.

DOD also faces planning challenges for EPAA because DOD has not yet established key operational performance metrics that would provide the combatant commands with needed visibility into the operational capabilities and limitations of the BMD system they intend to employ. DOD is incorporating some combatant commands' requirements into BMD testing, in part, by having U.S. European Command participate in the test design process. However, the system's desired performance is not yet defined using operationally relevant quantifiable metrics, such as how long and how well it can defend. The combatant commands are attempting to define operational performance metrics to enable credible assessment of operational performance gaps. However, these metrics have yet to be finalized and implemented. Without a more complete understanding of BMD operational capabilities and limitations, the combatant commands face potential risk in EPAA operational planning.