

GAO

Report to the Chairman, Subcommittee  
on Military Readiness, Committee on  
Armed Services, House of  
Representatives

June 2001

MILITARY  
READINESS

Management Focus  
Needed on Airfields  
for Overseas  
Deployments



G A O

Accountability \* Integrity \* Reliability

## Form SF298 Citation Data

<b>Report Date</b> <i>("DD MON YYYY")</i> 00JUN2001	<b>Report Type</b> N/A	<b>Dates Covered (from... to)</b> <i>("DD MON YYYY")</i>
<b>Title and Subtitle</b> MILITARY READINESS: Management Focus Needed on Airfields for Overseas Deployments	<b>Contract or Grant Number</b>	
<b>Authors</b>	<b>Program Element Number</b>	
<b>Performing Organization Name(s) and Address(es)</b> U.S. General Accounting Office P.O. Box 37050 Washington, DC 20013	<b>Project Number</b>	
<b>Sponsoring/Monitoring Agency Name(s) and Address(es)</b>	<b>Task Number</b>	
<b>Distribution/Availability Statement</b> Approved for public release, distribution unlimited	<b>Work Unit Number</b>	
<b>Supplementary Notes</b>	<b>Performing Organization Number(s)</b> GAO-01-566	
<b>Abstract</b> The National Military Strategy calls for the Department of Defense (DOD) to maintain the transportation capability to quickly move the large amounts of personnel and equipment needed to win two nearly simultaneous major theater wars anywhere in the world. To provide this mobility, DOD relies on a transportation system that includes an airlift fleet of cargo aircraft and a critical network of overseas airfields that provide logistical support to aircraft on their way to the war zones. DOD calls this network of bases the En Route System (ERS). Although the two-war requirement and other aspects of the National Military Strategy are currently under review by the new Administration, the ERS remains critically important as the primary means of quickly moving U.S. soldiers and equipment to areas of conflict around the world. Because of concerns about the adequacy of U.S. mobility capabilities, the former Chairman of the Subcommittee asked us to assess whether U.S. airlift capabilities and the supporting ERS infrastructure are up to the task of carrying out the National Military Strategy. This report is the third in a series to address the Subcommittees request. The first two reports addressed DODs shortage of airlift and aerial refueling capability needed to meet the two-war requirement of the National Military Strategy. 1 This report addresses (1) whether en-route airfields have the capacity to meet the requirements of the National Military Strategy, (2) what are the causes of any shortfalls and DODs plans to correct them, and (3) whether DOD has the information and management structure needed to ensure that the operations of the En Route System can be carried out efficiently and effectively.	<b>Monitoring Agency Acronym</b>	
	<b>Monitoring Agency Report Number(s)</b>	

<b>Subject Terms</b>	
<b>Document Classification</b> unclassified	<b>Classification of SF298</b> unclassified
<b>Classification of Abstract</b> unclassified	<b>Limitation of Abstract</b> unlimited
<b>Number of Pages</b> 37	

---

# Contents

---

<b>Letter</b>		1
<b>Appendix I</b>	<b>Responsibility for the En Route System Is Fragmented Among Many Organizations</b>	27
<b>Appendix II</b>	<b>Scope and Methodology</b>	29
<b>Appendix III</b>	<b>Comments From the Department of Defense</b>	30
<b>Appendix IV</b>	<b>GAO Contacts and Staff Acknowledgments</b>	33
<hr/>		
<b>Tables</b>		
	Table 1: Planned U.S. Funding Sources for ERS Projects, Fiscal Years 1997 through 2006	14
<hr/>		
<b>Figures</b>		
	Figure 1: Location of En Route System Airfields	5
	Figure 2: Reductions in U.S. Overseas Troop Strength, Fiscal Years 1988-99	10
	Figure 3: Project Costs by Type	12
	Figure 4: Construction Costs for Pacific Bases, Fiscal Years 1997-2006	12
	Figure 5: Construction Costs for European Bases, Fiscal Years 1997-2006	13
	Figure 6: Funding Sources and Construction Costs by Region, Fiscal Years 1997-2006	14
	Figure 7: Percentage of Funding Spent on ERS Construction Projects and Project Status	16
	Figure 8: Organizations with Responsibility for the ERS	20

---

## Abbreviations

DOD Department of Defense  
ERS En Route System



United States General Accounting Office  
Washington, DC 20548

June 14, 2001

The Honorable Curt Weldon  
Chairman  
Subcommittee on Military Readiness  
Committee on Armed Services  
House of Representatives

Dear Mr. Chairman:

The National Military Strategy calls for the Department of Defense (DOD) to maintain the transportation capability to quickly move the large amounts of personnel and equipment needed to win two nearly simultaneous major theater wars anywhere in the world. To provide this mobility, DOD relies on a transportation system that includes an airlift fleet of cargo aircraft and a critical network of overseas airfields that provide logistical support to aircraft on their way to the war zones. DOD calls this network of bases the En Route System (ERS). Although the two-war requirement and other aspects of the National Military Strategy are currently under review by the new Administration, the ERS remains critically important as the primary means of quickly moving U.S. soldiers and equipment to areas of conflict around the world. Because of concerns about the adequacy of U.S. mobility capabilities, the former Chairman of the Subcommittee asked us to assess whether U.S. airlift capabilities and the supporting ERS infrastructure are up to the task of carrying out the National Military Strategy.

This report is the third in a series to address the Subcommittee's request. The first two reports addressed DOD's shortage of airlift and aerial refueling capability needed to meet the two-war requirement of the National Military Strategy.<sup>1</sup> This report addresses (1) whether en-route airfields have the capacity to meet the requirements of the National Military Strategy, (2) what are the causes of any shortfalls and DOD's plans to correct them, and (3) whether DOD has the information and management structure needed to ensure that the operations of the En Route System can be carried out efficiently and effectively.

---

<sup>1</sup> *Military Readiness: Air Transport Capability Falls Short of Requirements* (GAO/NSIAD-00-135, June 22, 2000) and *Military Readiness: Updated Readiness Status of U.S. Air Transport Capability* (GAO-01-495R, Mar. 16, 2001).

---

## Results in Brief

DOD predicts a significant shortfall in the capacity of the En Route System airfields to meet the delivery schedules required by the National Military Strategy.<sup>2</sup> The airfields do not currently have enough ramp space, fuel pumping capacity, and other infrastructure elements to move the large amounts of personnel and equipment needed to win two nearly simultaneous major theater wars. This means that required military forces and equipment would arrive in the war zones later than planned, increasing the risk that operations would not be executed as planned and casualties could increase. DOD believes that projected improvements to the En Route System will largely eliminate the shortfall by 2005. However, the assumptions and modeling approach used to analyze airfield capacity raise some uncertainty about the precise size of the shortfall. Some assumptions tend to underestimate the shortfall, while the modeling approach used could overestimate it. The net effect of these factors on estimates of system capacity is unclear.

DOD transportation officials attribute the shortfall to the shrinkage in U.S. overseas presence and increased reliance on the remaining 13 bases of the En Route System. Many of these bases are 60 year-old legacies of World War II, with inadequate parking space and/or antiquated, deteriorating fuel systems increasingly prone to breakdowns. During our review, DOD's cost estimates of the improvements in facilities and fuel systems that are needed increased from \$1.2 billion to about \$2 billion. Most of the costs (58 percent) are associated with bases in the Pacific region. DOD plans to have over half (55 percent) of these costs funded by host nations and allies, with the remainder to be paid for by a variety of U.S. fuel projects, military construction, and other funding programs. The large majority of the funding (86 percent) is associated with projects that had not yet begun construction as of October 2000. During the drawdown of U.S. overseas forces in the early 1990's, little concern was voiced about the shrinking En Route capacity. Calendar year 1997 was named the "Year of the En Route System" to draw attention to the problem and obtain increased funding priority. U.S.-funded En Route System projects in Europe face competition for funding from projects in the Pacific and from elsewhere in DOD, against a backdrop of concerns about significant underfunding of DOD's infrastructure. Host nation involvement can create additional uncertainties in construction timetables.

---

<sup>2</sup> The specific amount of the shortfall is classified. DOD's requirements are identified in the Mobility Requirements Study 2005, released in January 2001. The study is an extensive update of DOD's 1992 and 1995 analyses of air, sea, and land transportation requirements for the United States to mobilize for war.

---

Despite the En Route System's strategic importance, DOD does not have the basic information and coherent management structure needed to ensure that the system's operations can be carried out efficiently and effectively. These weaknesses raise questions about the system's plans and operations and subject it to unnecessary risk and inefficiencies. For example, despite growing estimates of the cost and other uncertainties over the system's construction projects, DOD has not developed an overall cost-benefit study to document the rationale for its decisions and demonstrate that its proposed projects represent the best solutions. Similarly, despite concerns about aging and deteriorating facilities and equipment, the En Route System has no centralized oversight system to provide data on airfield deterioration and failure rates. No one organization is responsible for managing and coordinating the En Route System: operation of the system is fragmented among a host of military commands, subcommands, and other organizations with differing interests and priorities. As a result, there is also no formal, system-wide strategic plan to identify long-term plans and guiding policies, operating priorities, and performance goals and strategies. Finally, DOD does not discuss how En Route System shortfalls affect overall strategic mobility performance in its annual performance plan and report, resulting in an incomplete picture of mobility capabilities.<sup>3</sup>

To increase management focus on the En Route System, we are recommending that the Secretary of Defense make one organization responsible for strategic management and coordination of overarching ERS issues, and develop a formal strategic plan and overall cost-benefit study of its plans for the ERS. We are also recommending that the Secretary include information on ERS limitations and how they affect strategic mobility in DOD's annual performance report. In written comments on a draft of this report, DOD agreed to consider making one organization responsible for certain ERS matters, and to try to improve the integration, presentation, and documentation of its plans for the ERS. However, it did not agree that the ERS lacks a coherent management structure requiring an overall cost-benefit study to document the rationales for plans to repair and improve the ERS, or the need to include

---

<sup>3</sup> The Government Performance and Results Act of 1993 required federal agencies, including DOD, to submit to Congress annual performance plans and reports. In essence, annual performance plans are to establish performance goals and measures covering a given fiscal year and provide direct linkage between an agency's longer-term goals and day-to-day activities. Annual reports are to subsequently identify the degree to which those performance goals were met.

---

information on ERS limitations in its annual performance report. It stated that the existing organization, coupled with the readiness reporting, planning and budgeting, and overall strategic mobility reviews amount to a robust management structure and strategic plan for the ERS, and provide adequate information on its cost-benefit rationales and the impact of ERS limitations on strategic mobility. The individual organizations and processes cited by DOD may provide some of the elements needed to effectively manage the ERS. However, we believe the implied management structure described by DOD cannot substitute for the strategic clarity, comprehensiveness, and organizational commitment provided by a formal, unified management structure. Because DOD is generally unwilling to take action, the Congress might consider directing the Secretary to implement our recommendations, and periodically report on DOD's progress to ensure that it implements prudent improvements to ERS management.

---

## Background

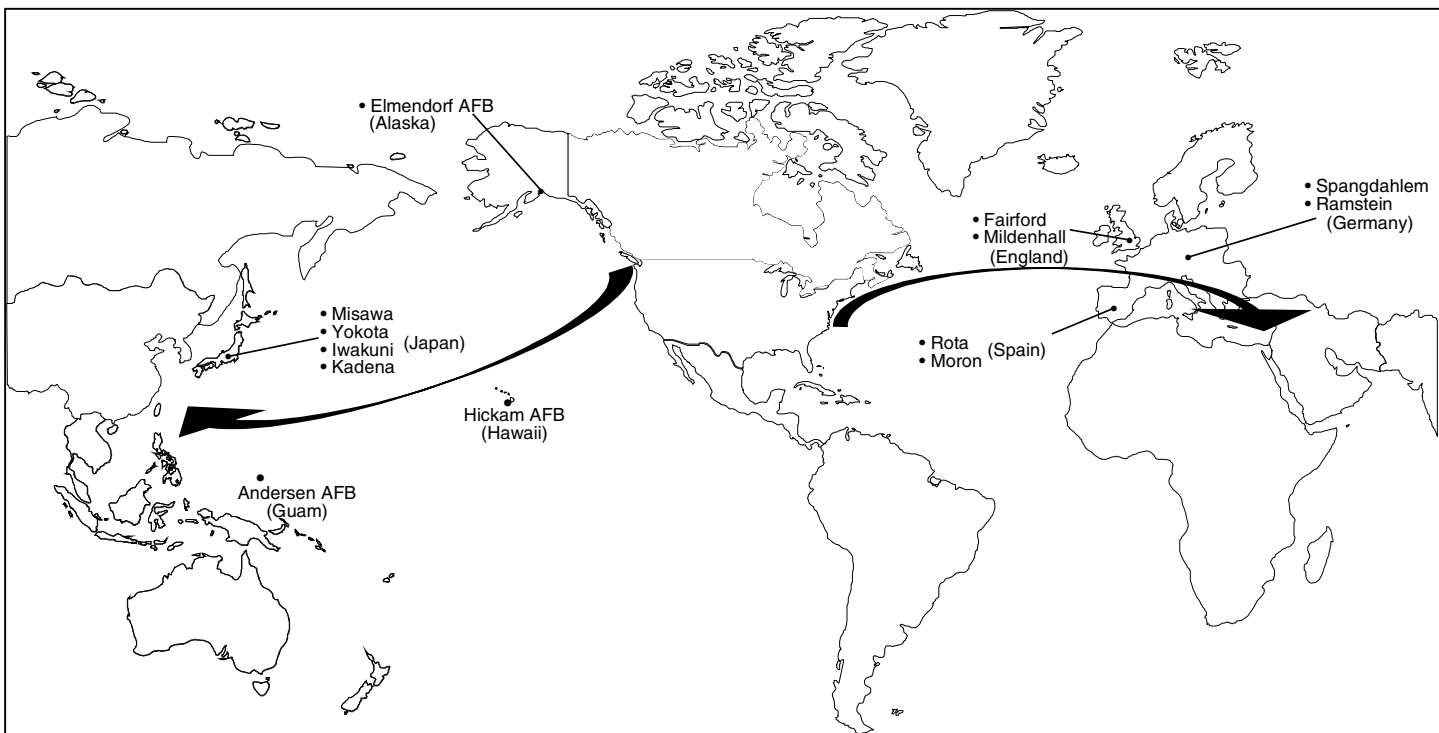
The ability to fight and win two nearly simultaneous major theater wars is the cornerstone of U.S. defense strategy. For planning purposes, the military assumes that the two most likely places where these wars would take place are Korea and Southwest Asia. Mobilization of U.S. forces for such conflicts requires a global system of integrated land, sea, and air resources, and supplies already stored overseas. The fleet of civilian and military passenger and cargo aircraft and the En Route System (ERS) airfields provide the critical air component. ERS airfields provide the primary "throughput" services for aircraft as they move from U.S. bases through ERS airfields and on to their eventual destinations at bases located in or near the war zones. As each aircraft lands at an ERS airfield, the base must have the ramp space to park the aircraft and perform required maintenance, the equipment to load and unload cargo if needed, and the equipment needed to quickly refuel the aircraft and speed it to its final destination. However, the ERS also provides the capabilities needed to handle ongoing peacetime operations and requirements associated with smaller-scale contingency operations. For example, ERS bases were used extensively during recent operations in Kosovo. We discussed issues related to the basing of combat aircraft in our recent report on Kosovo operations, but not ERS operations.<sup>4</sup>

---

<sup>4</sup> *Kosovo Air Operations: Combat Aircraft Basing Plans Are Needed in Advance of Future Conflicts* (GAO-01-461, May 29, 2001).

As shown in figure 1, the 13 ERS airfields are located mostly in Europe and throughout the Pacific.<sup>5</sup> DOD selected the 13 ERS bases according to their proximity to the anticipated war zones, the host nation's willingness to allow the use of its bases, and other factors such as climate. Each is planned to be within an area 3,500 nautical miles from the United States and from the war zones. This distance is based on the maximum efficient range of the C-17 cargo aircraft without refueling.

**Figure 1: Location of En Route System Airfields**



Source: DOD.

Operation of the ERS airfields is shared between the host nation, which owns the airfield, and a number of DOD organizations. Host nation responsibilities vary and are documented in the Status of Forces Agreement for each country. U.S. organizations with responsibility for the

<sup>5</sup> The figure omits Rhein Main air base in Frankfurt, Germany. Although the United States is currently using facilities there, it has agreed to withdraw by December 31, 2005, in exchange for German construction of additional facilities at Spangdahlem and Ramstein.

---

airfields include the Air Force, who provides day-to-day operations for all but two of the airfields, and the U.S. Transportation, Air Mobility, European, Central, and Pacific Commands, which have various functional or geographical responsibilities. According to U.S. Transportation Command officials, while space is sometimes shared between the host nation and the United States, many airfields are primarily for U.S. cargo and refueling operations. U.S. fighter aircraft are generally located at separate bases because of the specialized equipment needed. The airfields are normally staffed for the peacetime flow of aircraft. Additional personnel and equipment would be brought in to handle the increased flow of aircraft in the event of contingency operations or full-scale war.

---

## Shortfall in Capacity Predicted, Precise Amounts Unclear

According to DOD's January 2001 estimate, in the event of overlapping major theater wars in Korea and Southwest Asia, the 13 ERS airfields would not currently have enough capacity to move the required amounts of personnel and equipment to the war zones in the time required (the specific requirements and capacities are classified). DOD expects the shortfall to be largely eliminated by 2005. But the assumptions and modeling approach DOD uses in its calculations raise some uncertainty about the precise size of the shortfall. Some study assumptions tend to underestimate the shortfall, while the modeling approach used could overestimate it. The net effect of these factors on estimates of ERS capacity in 2005 is unclear.

---

## Precise Size of Shortfall Is Unclear

DOD officials believe their analyses of ERS requirements and capacity are accurate. The capacity requirements of the ERS are defined in the recent Mobility Requirements Study 2005, which estimated the mobility assets and supporting infrastructure needed to deploy for the two-war scenario and compared them to current capabilities and those planned for 2005. The study concluded that current capacity is significantly short of requirements but that improvements to the ERS would largely eliminate the shortfall by 2005. According to DOD officials, the effect of the shortfall would be that required military forces and equipment would arrive in the war zones later than planned, increasing the risk of operations not being executed as planned and of higher casualties. The study estimated the shortfall by simulating the movement of troops and equipment needed for each war with a series of models<sup>6</sup> and calculated capacity in terms of the

---

<sup>6</sup> We are currently reviewing the approach used by these models to estimate requirements.

---

amount of cargo weight that could move through ERS bases in the first 40 days of a conflict (the period of highest demand).

Some Assumptions  
Underestimate Shortfall

We found that some of the study's assumptions tend to underestimate the size of the shortfall. For example, despite concerns about their old age and deteriorating condition, DOD assumes that ERS airfields would operate without breaking down. In addition, because the construction projects are expected to run through 2006, the capacity of several airfields will still be short of requirements at the end of 2005. The study at least partially offsets these assumptions by calculating the capacity of ERS bases in Europe on the assumption that DOD would lose access to one of six bases during mobilization (the so-called "six-lose-one" strategy). A similar strategy is being considered for the Pacific, but it has not yet been approved. Additional study assumptions that tend to underestimate the shortfall are classified.

Capacity requirements for the ERS could be raised even higher if other ongoing missions (such as peacekeeping) were added, further increasing the shortfall. The Mobility Requirements Study 2005 analyzed the capacity of the mobility system to handle additional missions occurring concurrently with two wars and found that in general, the additional requirements could raise airlift capacity requirements by about 7 percent. The ability of the ERS to handle this extra requirement, however, is unclear. According to the study, DOD needs to reanalyze the ERS to determine whether there might be any extra capacity available to handle the additional missions or whether more capacity must be built. Officials were unsure when this issue would be tackled.

Model Used Could  
Overestimate Shortfall

In contrast to the assumptions that tend to underestimate the shortfall, the model DOD uses to simulate ERS operations—the Airlift Flow Model—could overestimate the size of the shortfall. Air Mobility Command officials acknowledge that the Airlift Flow Model, although designed to simulate or describe complex systems such as the ERS, does not necessarily identify the best or optimal solution to mobilization requirements. The model repeatedly simulates cargo movements until it reaches a solution to the identified mission, but the solution may or may not be the optimal one.

There are other types of models, called optimization models, that officials say are designed to seek the best or optimal solutions to mission

---

requirements by identifying the best allocations of cargo to aircraft, aircraft to routes, and ground resources to airfields.<sup>7</sup> For example, in analyzing the movement of cargo aircraft through the ERS the Airlift Flow Model would only be aware of what cargo is available for pickup at the moment, while an optimization model would be aware of all cargo available for pickup throughout the mission being modeled. As a result, in a situation where 10 tons of cargo are ready to be loaded right now and 40 more tons several hours in the future, the Airlift Flow Model would schedule an aircraft to pick up the 10-ton cargo immediately since it is focused on current conditions. It would then schedule another aircraft to pick up the remaining 40 tons later when another plane became available. However, an optimization model would likely wait a few hours until an aircraft was loaded with all 50 tons before sending it off.

In 1997 DOD sponsored an ERS capacity analysis that compared the results of an optimization model with those of the Airlift Flow Model.<sup>8</sup> The optimization analysis agreed with the basic Airlift Flow Model conclusion that there would be a capacity shortfall. However, the optimization analysis also concluded that a better distribution of ERS resources could significantly increase the flow of cargo compared with the flow predicted by the Airlift Flow Model. For example, the optimization model predicted that by redistributing the existing ramp space and fuel, DOD could boost cargo deliveries by an estimated 12 to 13 percent. A second DOD-sponsored study used an optimization model to analyze the impact of proposed construction projects designed to increase the fuel handling capacity at ERS bases.<sup>9</sup> The study concluded that the increase in throughput capacity provided by the projects would be small and that using existing resources more effectively may be the best way to increase fuel deliveries.

Although DOD officials believe that optimization models have promise, they also believe that they have drawbacks and did not use them to analyze the ERS in the Mobility Requirements Study 2005. They believe, for example, that optimization models can come to unrealistic conclusions

---

<sup>7</sup> One example of an optimization model is the Naval Postgraduate School/RAND Corporation Mobility Optimization Model.

<sup>8</sup> *Documented Briefing: Analyzing the Effects of Airfield Resources on Airlift Capacity*, RAND Corporation, 1999.

<sup>9</sup> Correspondence with the Office of the Secretary of Defense, *Summary of Research Findings: Fuels MILCON Impacts on Air Mobility*, RAND Corporation, 1998.

---

because they cannot simulate random events and may use information (such as longer-range plans for an entire mobilization) that may not be available to commanders early in the mobilization. Officials further state that loading data into optimization models can be very labor intensive, making the models relatively inflexible and slow, and that it is difficult to introduce variables into analyses because optimization models attempt to analyze all possible permutations. For their part, Air Mobility Command officials responsible for operating the Airlift Flow Model believe that by repeated analyses over time using their model, they were able to identify the best solutions for mobilization missions. Officials from the Office of the Secretary of Defense stated, however, that because optimization models show promise, DOD is continuing to sponsor projects to further develop their use.

We were unable to quantify the overall impact of all these factors on the size of the shortfall. As a result, their net effect on estimates of ERS capacity in 2005 is unclear.

---

## Repair Estimates Face Large Increases and Funding Uncertainties

DOD officials attribute the shortfall in ERS capacity to the shrinkage in the U.S. overseas presence since the end of the Cold War and to increased reliance on the 13 remaining old and deteriorating ERS bases. DOD's latest estimate of ERS construction to eliminate the shortfall consists of 516 projects and costs about \$2 billion. This revised figure is substantially higher than the estimated \$1.2 billion that DOD reported to us at the beginning of our review in July 2000. Most (58 percent) of the costs are associated with bases in the Pacific region. Host nations and U.S. allies are expected to fund about 55 percent of the total, and the United States is expected to fund the rest. But it is unclear whether all the projects will be completed as planned, as the projects must compete with each other and with other DOD projects for funding and face other uncertainties. Most of the costs (86 percent) are associated with projects that had not yet started construction as of October 2000.

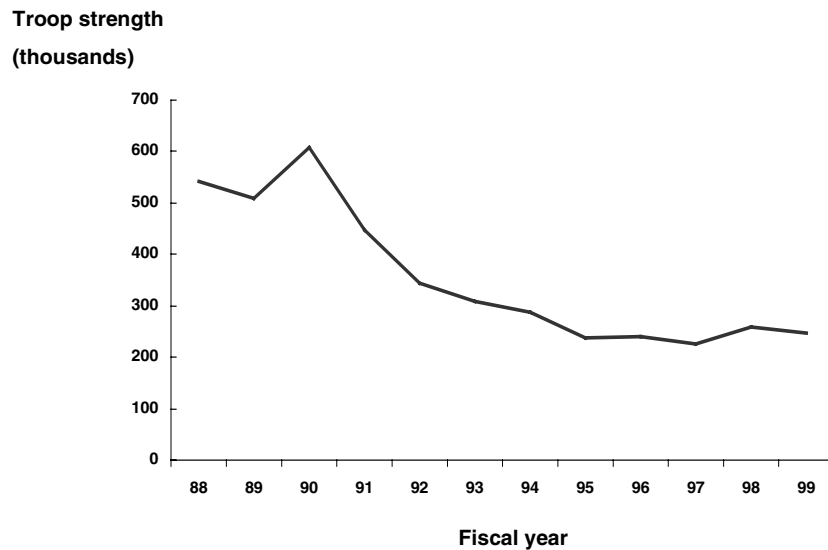
---

## Overseas Presence Reduced After Cold War

Since the end of the Cold War, many U.S. military locations overseas have been closed and their personnel relocated to bases in the continental United States. Transportation Command officials state that with this drawdown (see fig. 2) in the 1990s, the ERS lost many of its facilities and much of its flexibility. Today, the ERS has access to only 13 locations, compared with 45 in the early 1990s. As a result, the remaining bases have become much more important as the only airfield options available for en-route mobilization support.

---

**Figure 2: Reductions in U.S. Overseas Troop Strength, Fiscal Years 1988-99**



Source: DOD.

---

### Estimated Costs to Eliminate Shortfall Have Increased Substantially

In July 2000, DOD officials told us that the cost to eliminate the shortfall in ERS capacity was about \$1.2 billion for fiscal years 1997 through 2006. However, shortly after that the estimate was changed to \$2.0 billion. According to Transportation Command officials, no one is responsible for monitoring the overall cost to eliminate the shortfall. The \$1.2-billion estimate was simply carried forward from an estimate developed in the mid-1990s in conjunction with a major review of overall mobility requirements.<sup>10</sup> That estimate was based on a quick world tour by a team of engineers who covered what at the time were about 35 ERS bases, with sometimes only half a day spent at each base. Following our request for an updated estimate, the Air Mobility Command agreed to query all of the various commands involved in the ERS to determine the current cost to eliminate the shortfall and found that the estimated cost had grown to about \$2 billion. According to officials, the increase reflects changes in the bases making up the ERS since the mid-1990s, increases in the costs of repairing/improving system components due to aging, and a more in-depth and accurate analysis of costs.

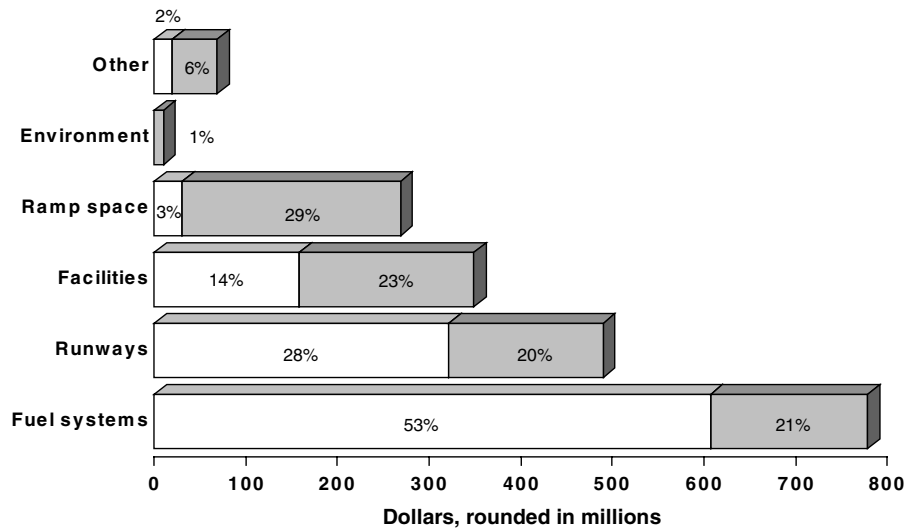
---

<sup>10</sup> Mobility Requirements Study Bottom Up Review Update, 1995.

---

Transportation Command officials told us that most ERS airfields were built during or immediately after World War II, and some components were built by host nations even earlier. The \$2 billion will fund repairs and improvements to fuel systems, runways, ramp space, and other base elements needed to bring system capacity up to requirements. As shown in figure 3, the largest construction cost category is associated with fuel system repair and improvement. According to Transportation and Air Mobility Command officials, the standard fuel systems at current ERS bases were designed and built during the early 1950s and had an estimated life span of 30 to 40 years. At some bases refueling must be carried out by trucks, rather than by more modern pipeline and hydrant systems. At other bases, hydrants are antiquated or have deteriorating lines that slow and sometimes interrupt fueling operations altogether. Bases in the Pacific are the worst off. As shown in figure 6, repairs and improvements at bases in the Pacific region total about \$1.14 billion (58 percent), compared to about \$825 million (42 percent) for the European bases.

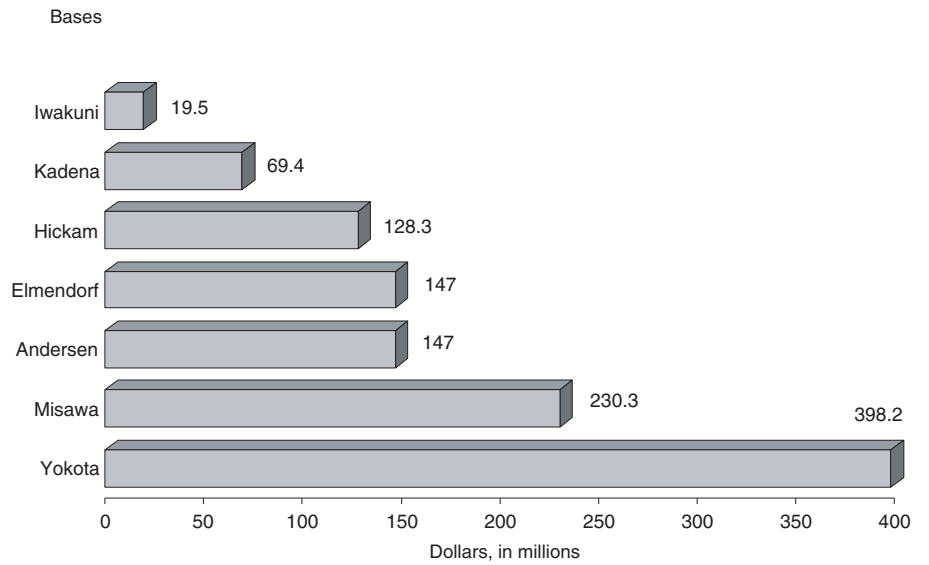
**Figure 3: Project Costs by Type**



□ Pacific, as a percentage of regional total    ■ Europe, as a percentage of regional total

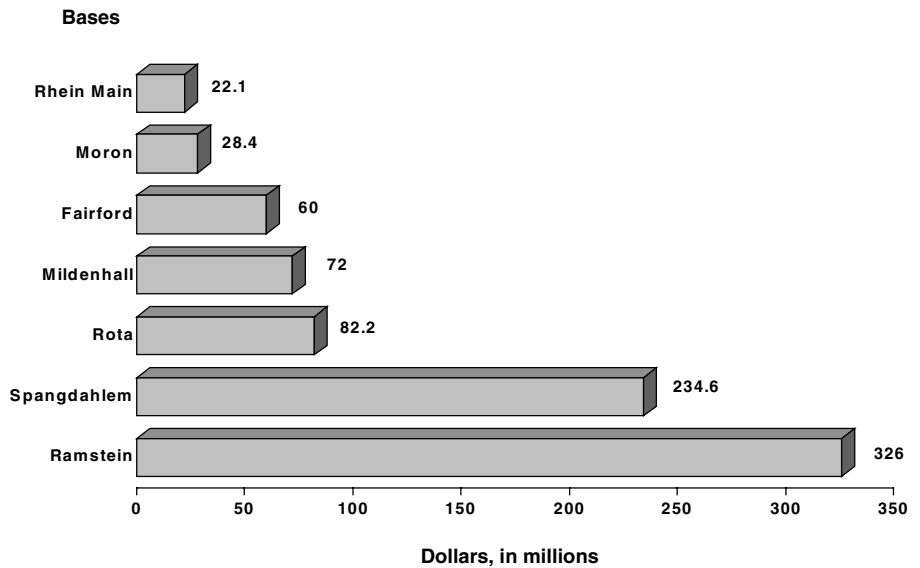
Source: Our analysis of DOD data.

**Figure 4: Construction Costs for Pacific Bases, Fiscal Years 1997-2006**



Source: DOD.

**Figure 5: Construction Costs for European Bases, Fiscal Years 1997-2006**



Note: Although the United States has agreed to withdraw from Rhein Main by 2005, the base is included here to show the costs to prepare it for return to German use.

Source: DOD.

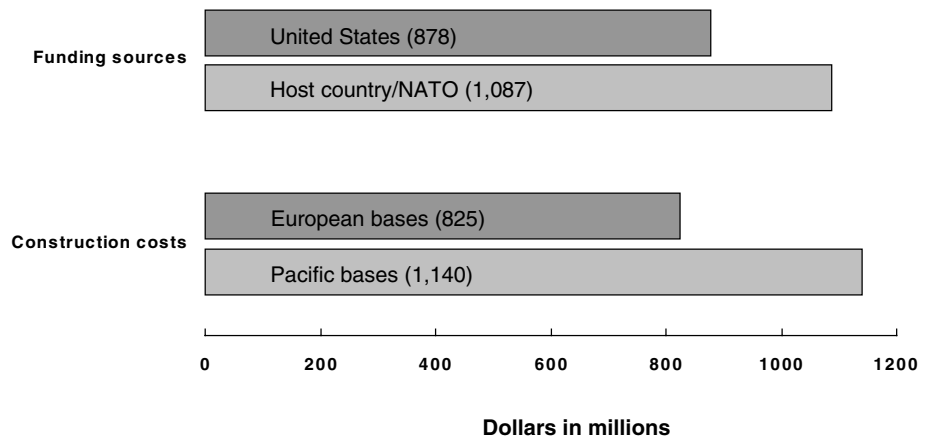
Officials emphasize that the proposed projects are intended largely to replace capability lost due to deterioration or base closures, not to increase overall capacity. In fact, only 25 of the 516 projects provide additional capacity. The remaining projects either upgrade existing capacity to current environmental, safety, or operational standards or replace/repair equipment due to obsolescence or failure.

## Host Nations and Allies Expected to Fund Over Half of Costs

DOD plans call for about 55 percent of the \$2 billion in ERS construction funding to come from the North Atlantic Treaty Organization (\$132.6 million) and host nations such as Germany (\$430.8 million) and Japan (\$523.9 million) (see fig. 6). According to officials from the U.S. Transportation, European, and Pacific Commands, funding commitments from the North Atlantic Treaty Organization and Germany are contained in formal agreements. Japanese funding is provided under the Japanese Facilities Improvement Program. Japan has provided some \$21 billion for projects under this program, which started in 1979 to ease the financial burden of stationing U.S. forces in Japan. However, funding for projects under this program is voluntary, and there are no written agreements associated with the ERS projects. Moreover, the level of funding has been

declining somewhat since the early 1990s, and is also constrained by prohibitions such as using the funds for projects viewed by the government of Japan as increasing war-fighting capacity.

**Figure 6: Funding Sources and Construction Costs by Region, Fiscal Years 1997-2006**



Source: Our analysis of DOD data.

The remaining 45 percent (\$878 million) is expected to come from a variety of U.S. programs (see table 1). The largest contributors are the Defense Logistics Agency and the Air Force Operation and Maintenance and Military Construction programs.

**Table 1: Planned U.S. Funding Sources for ERS Projects, Fiscal Years 1997 through 2006**

Dollars in millions	
Funding source	
Defense Logistics Agency	\$505.2
Military Construction	141.4
Operation and Maintenance	138.0
Transportation Working Capital Fund	70.7
Air Force Material Command Equipment	14.5
Mobility Enhancement Funds	5.1
Contingency Funds	2.9
<b>Total</b>	<b>\$877.8</b>

Source: Our analysis of DOD data.

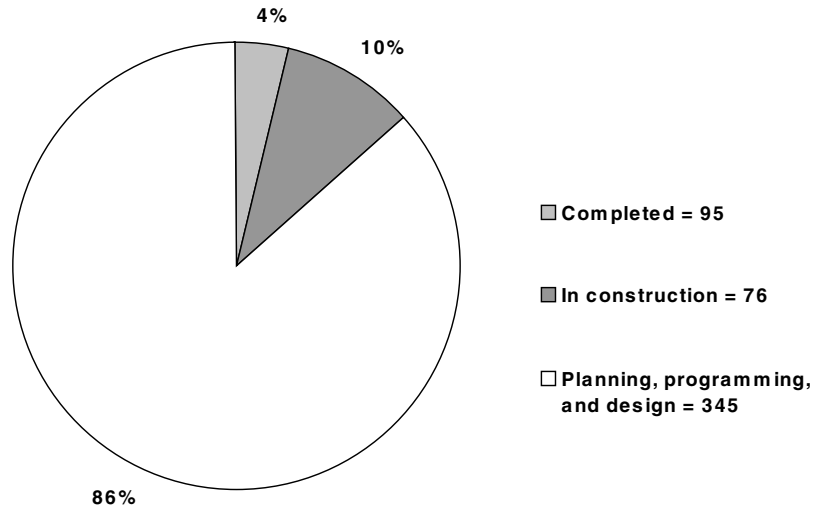
---

## Projects Face Funding Competition and Other Uncertainties

It is unclear whether all the construction projects will be completed as planned. According to Transportation Command officials, funding for the projects covered by U.S. programs has been formally requested through the DOD budget process, and they believe the projects will be funded within planned time frames. However, U.S.-funded ERS projects in Europe must compete for funding against Pacific projects and others within DOD in an environment of concern about a growing backlog of facilities maintenance and repair projects. According to these officials, DOD infrastructure is grossly under funded, with facilities currently funded for replacement every 250 years. (See p. 18 for a discussion of DOD problems in infrastructure management.) Projects planned in later years are more vulnerable to funding changes since they have not yet been spent and they must continue to compete against other projects in a highly competitive budget environment. Officials also note that host nation involvement in funding can create some uncertainty in construction timetables. For example, DOD had to reassign fiscal year 2002 funding for construction projects at one ERS airfield in Europe to other DOD projects because of a 2- to 3-year delay in host government approval of funding requirements. According to officials, the host government was concerned about sovereignty issues involved in its membership in the North Atlantic Treaty Organization. Formal approval has now been received for these projects, and funding has been shifted by about 1 year.

Most of the projects have not yet started construction. As shown in figure 7, as of October 2000, about 4 percent (\$75.0 million) of total funding had been spent on completed projects with another 10 percent (\$194.6 million) spent on projects in progress. The remaining 86 percent (\$1.7 billion) of funding was associated with projects in various stages of planning, programming of funds, and engineering design running out through 2006. Funding for such projects is subject to future budgetary constraints and uncertainties. Projects funded by U.S. programs have progressed somewhat faster than those funded by host nations and allies. About 19 percent of funding under U.S. programs was associated with projects that had either begun or completed work, compared to about 10 percent of host nation and allied funding.

**Figure 7: Percentage of Funding Spent on ERS Construction Projects and Project Status**



Source: DOD.

According to Transportation Command officials only recently has the ERS begun to receive high priority for funding. In the first few years after the end of the Cold War and during the military drawdown, little concern was voiced about shrinking ERS capacity. But as contingency operations began to place increasing demands on the remaining airfields, Air Mobility Command leaders realized how critical the airfields were and how they needed higher resource priority. To publicize the problem and obtain higher priority, the Air Mobility Command proclaimed 1997 the “Year of the En Route System” and funding began to increase. However, even with the increased priority, officials told us that it still takes many years to move projects through the budget process, obtain funding, and begin construction.

---

## Critical Information and Management Structure Lacking

Despite the strategic importance of the ERS, critical information on ERS plans and operations is not available, and the system is not managed as a coherent whole. For example, notwithstanding the increase in construction cost estimates, DOD has not carried out overall cost-benefit studies to document the rationale for its decisions and demonstrate that its proposed projects represent the best solutions. Similarly, despite concerns about aging and deteriorating facilities and equipment, the ERS has no centralized oversight system to provide data on deterioration and failure rates. It has no formal strategic plan to identify long-term plans and strategies, guiding policies, and operating priorities for the ERS. No single organization is responsible for managing and funding the ERS. These weaknesses raise questions about system plans and operations, and unnecessarily increase the risk of operational problems and inefficiencies. Moreover, DOD does not include information on ERS shortfalls in its reports on the performance of the overall strategic mobility system, resulting in an incomplete picture of mobility capabilities.

## Overall Cost-Benefit Studies Not Developed

Despite the increased cost estimates and other uncertainties surrounding ERS construction projects, DOD has not developed overall cost-benefit studies or other prudent assurances to demonstrate either the rationale for its decisions or to show that the planned \$2 billion in projects represent the best solutions for correcting the shortfall.

According to Transportation Command officials, the process DOD used to determine the en-route infrastructure was primarily focused on satisfying mission war-fighting requirements while attempting to minimize costs where possible. An overall cost-benefit analysis was not done, they said, because the ERS evolved over many years in response to changing military and political conditions and to hundreds of mobility and engineering analyses of capacity trade-offs under different combinations of bases. Officials stated that they attempted to make cost-effective decisions by, for example, choosing to repair or improve existing bases rather than building new ones. Because of the age of the facilities, many of the planned projects had already been identified and justified in the military construction budgeting process.

Moreover, despite concerns about aging and deteriorating facilities, Transportation Command officials also told us that they could not provide data on deterioration and failure rates. The ERS has no centralized oversight system to provide readily available, up-to-date data on the condition and readiness of the airfields, and officials said that they could not identify any worthwhile measures that they could accurately produce without an extended research effort.

---

## Basic Management Structure Lacking

Sound strategic planning that clearly lays out missions and goals, needed resources, priorities, strategies, measures of performance, and assigned responsibilities is crucial to achieving program success. According to officials from the Office of the Secretary of Defense, some strategic guidance for the ERS is expressed through the DOD budget process. However, these officials acknowledged that DOD has no formal strategic plan for the ERS. Without such a plan, DOD does not have the information—such as the elements discussed above—or management structure needed to ensure the success of the ERS. Over the years, we have noted similar gaps in DOD’s overall strategic planning processes that have led to difficulties in assessing performance in a variety of areas. As a result, we have classified DOD strategic planning as a major management challenge.<sup>11</sup>

We also classified DOD management of support infrastructure as a major management challenge because of DOD’s problems in this area. DOD has reduced force structure since the end of the Cold War, but it has not achieved similar reductions in infrastructure costs. At the same time, DOD acknowledges that it has not been spending enough money to offset the growing backlog of facilities maintenance and repair projects. We concluded that reducing unneeded infrastructure could free up the funding needed to ensure that critical assets such as the ERS airfields are adequately funded.

In accordance with the Government Performance and Results Act of 1993, DOD reports annually on its performance in managing strategic mobility capabilities by using three measures (airlift capacity, sealift capacity, and overseas prepositioning of equipment). However, it does not include data on ERS shortfalls in the report, despite the major effect such shortfalls have on airlift capacity. Officials from the Office of the Secretary of Defense said that they do not include ERS shortfalls because the report covers only the highest-level measures of performance. They acknowledged the importance of ERS airfield capacity but stated that it has not been considered a primary criterion for measuring performance in strategic mobility. According to the Air Mobility Command, the chief limiting factor on deployment operations is not usually the number of available aircraft but the capability of the en-route or destination infrastructure to accommodate the ground operations of the aircraft.

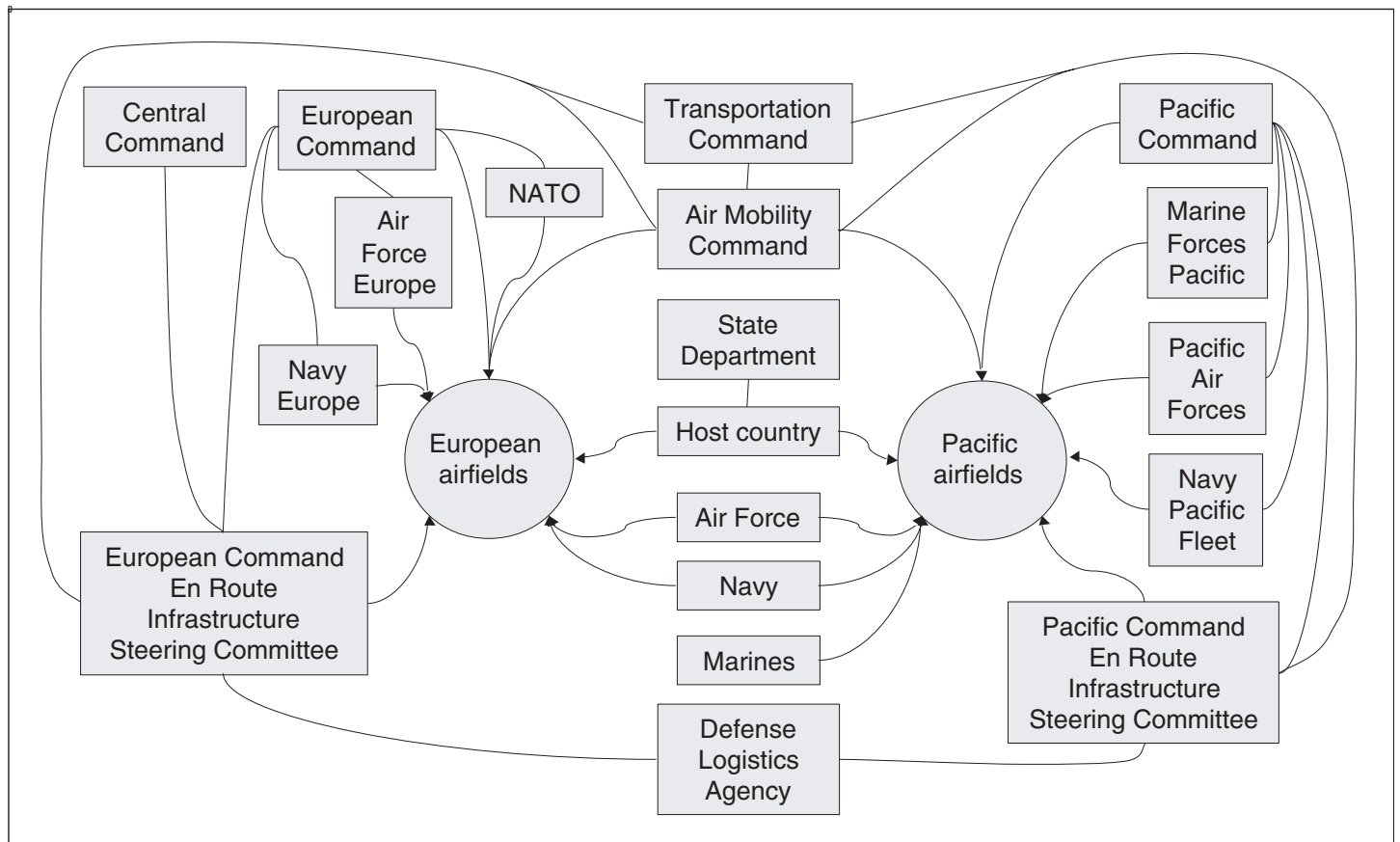
---

<sup>11</sup> *Performance and Accountability Series: Major Management Challenges and Program Risks: Department of Defense* (GAO-01-244, Jan. 2001).

---

According to Transportation Command officials, the absence of elements such as an overall strategic plan is the result of no single organization having overall responsibility for the ERS. Figure 8 illustrates the difficulty in managing and coordinating the ERS. Management of the ERS is fragmented among at least four unified commands and six subcommands, three services, host nations, and other organizations such as the Defense Logistics Agency—each with its own functional interests and priorities. (See app. I for more details on the various responsibilities of these organizations.)

**Figure 8: Organizations With Responsibility for the ERS**



Note: NATO refers to the North Atlantic Treaty Organization.

Source: Developed from DOD information.

Because of the absence of centralized responsibility for the ERS, the European and Pacific Commands established separate steering committees (the En Route Infrastructure Steering Committees) to provide a forum for coordination and resolution of ERS issues in each region. These two committees are not required by any DOD-level guidance but are a collaborative effort sanctioned by the geographical commands to solve ERS operating issues. The committees are composed of all the organizations in each region with responsibility for ERS airfields in the area (the European steering committee also includes the Central Command). The Transportation Command co-chairs both steering committees. While these committees perform an important function,

---

officials said that no organization is responsible for formally coordinating and overseeing overall ERS operations.

---

## Conclusions

The growth in importance of the En Route System has not been matched by a commensurate improvement in its information and management structures. Establishing the European and Pacific steering committees was an important first step in organizing regional operations, but does not go far enough. While the war-fighting responsibilities and authorities of the geographical commands must be respected, one overarching organization with responsibility for strategic operations and coordination of overall ERS operations during peacetime is needed. Without such structure ERS operations are prone to a higher risk of inefficiency in the form of confusing and overlapping lines of authority and accountability for key decisions, a lack of coordination and duplication of effort among responsible organizations, and wasteful competition for resources.

A formal, written strategic plan that lays out missions and goals, guiding principles and priorities, performance measures, and monitoring mechanisms is also needed. This plan would help ensure that ERS operations are governed by a coherent worldwide vision and not by limited regional or service notions and perspectives. Without the vision and order provided by a formal strategic plan, decisionmakers do not have the information they need to ensure that ERS resources and operations are focused on the right goals and outcomes. Without a system for ongoing monitoring of key aspects of ERS operations, decisionmakers do not have the real time, readily available information needed to quickly identify and correct problems, including the status of projects needed to ensure that strategic requirements are met and planned troop movements will not be delayed.

DOD also needs to develop an overall cost-benefit study of its construction plans for the ERS. Without this information, DOD cannot compare options and alternatives for improving the ERS, and document that the solutions it chooses are the best ones. Moreover, DOD needs to be able to ensure that the guiding principles and rationales at play in allocating scarce funding dollars are not lost in the many individual decisions made by different organizations to serve different interests and priorities. This study would also serve as a useful review of ERS construction plans and projects in light of the ongoing review of the National Military Strategy.

Finally, DOD needs to ensure that ERS problems and issues receive a visibility consistent with their critical strategic importance. Omitting data

---

on ERS limitations from DOD's plan and reports on strategic mobility presents an incomplete picture of DOD capability and tends to obscure ERS problems and the resources needed to resolve them. Efforts to reduce shortages of DOD cargo aircraft will have limited impact if those aircraft do not have adequate airfields to land on.

---

## Recommendations for Executive Action

To improve the visibility of the ERS and reduce the risk of management problems and inefficiencies, we recommend that the Secretary of Defense:

- make one organization responsible for strategic management and coordination of overall ERS operations during peacetime,
- develop a formal strategic plan and monitoring system for the ERS,
- develop an overall cost-benefit study to document the rationales for plans to repair and improve the ERS, and
- include information on ERS limitations and how they affect the Department's strategic mobility performance in DOD's performance plan and report.

---

## Matter for Congressional Consideration

Because DOD indicated in its written comments that it generally would not implement the recommendations made in this report, the Congress may wish to consider directing the Secretary of Defense to implement the recommendations, and periodically report on DOD's progress to ensure that these prudent improvements to ERS management are carried out.

---

## Agency Comments and Our Evaluation

In written comments on a draft of this report, DOD generally disagreed with our conclusions and recommendations. In particular, DOD did not agree with our view that the ERS lacks a coherent management structure, our description of the growth in costs of eliminating the shortfall in system capacity, or our description of the modeling approach used to analyze ERS capacity.

Regarding our first recommendation, DOD believes that the existing organization, in particular its ERS steering committees, readiness reporting processes,<sup>12</sup> planning and budgeting system, and reviews of strategic mobility already provide a "robust" management structure for the ERS. Nonetheless, it partially agreed with our recommendation to make one organization responsible for overarching strategic issues. It believes

---

<sup>12</sup> We reviewed these readiness reports and processes and considered them in our analyses.

---

that base-level management of ERS airfields is best performed by the responsible services but agreed to consider whether one organization should be designated as responsible for some matters.

We remain convinced that the ERS needs a better management structure. We agree that some elements of ERS operations are individually managed by various organizations and processes and that some elements, such as base level operations, fuels projects and readiness reporting, may be managed quite intensively. We in fact describe examples of many of these organizations and processes and their responsibilities for parts of ERS operations in our report. However, “robust” management in one or even several areas does not constitute a coherent and coordinated overall management structure. Our recommendation is intended to assign responsibility for overarching issues—such as development of an overall strategic plan, cost-benefit study, and monitoring system—to one organization to help provide a clear, coordinated, and comprehensive management structure for all ERS operations. It should be noted that during our review this recommendation received strong support from officials at organizations currently involved in ERS operations, including the Transportation and Central commands.

DOD partially agreed with our recommendation to develop an overall ERS strategic plan and monitoring system. It stated that the recent Mobility Requirements Study 2005 already includes a strategic plan for the ERS. DOD said it would nevertheless try to improve the integration, presentation, and documentation of the plan to help outside organizations understand its provisions.

We disagree that the January 2001 Mobility Requirements Study 2005 contains a strategic plan for the ERS. Moreover, there seems to be some confusion in DOD over this issue. During the course of our review we asked repeatedly for copies of any strategic plan and DOD officials repeatedly told us that no formal strategic plan for the ERS existed. In fact, during our formal closeout meeting in April 2001 officials told us that a formal strategic plan was being developed as a result of our review. The document cited by DOD in the January 2001 Mobility Requirements Study 2005 is identified as the ERS “Infrastructure Analysis,” not as a strategic plan. It is simply an analysis of current shortfalls in capacity and whether planned construction projects will remedy those shortfalls by 2005—if they are completed on schedule. The analysis does not include many of the elements needed for sound strategic plans, which need to lay out missions and goals, necessary resources, assigned responsibilities for accomplishing goals, priorities and strategies to be followed, and performance measures for gauging progress toward identified goals.

---

In addition, the analysis does not identify the expected cost to remedy the capacity shortfalls, or the organizational or procedural responsibilities for achieving ERS goals. Similarly, the analysis does not identify priorities between regions, bases, or projects to help identify strategies to be followed in case of funding or other problems. Finally, the analysis also does not identify any system of performance measures and monitoring mechanisms to help decisionmakers gauge progress and problems in carrying out strategic goals. For example, it simply assumes that projects will be completed on schedule without any measures of actual progress. In fact, during our review Transportation and Air Mobility Command officials could not tell us how many projects were behind their original schedule because there is no centralized monitoring system.

The Department also disagreed with our recommendation for an overall cost-benefit study to document the rationales for plans to repair and improve the ERS. DOD believes the guidance it provides through the planning and budgeting process is sufficient to optimize the list of construction projects to be funded. We disagree. We understand that developing a formal cost-benefit analysis of the overall ERS infrastructure is difficult because of the size of the ERS and the influence of diplomatic considerations versus strictly economic considerations. However, our experience has shown that relying exclusively on the budget process to document funding rationales often results only in inferences as to why decisions were made. This process lacks the benefit of clear information on the pros and cons of available choices or on the guiding principles used to make those decisions. DOD's annual requests for funds contain no evidence that projects are prioritized by importance or that progress toward an established goal, such as modernizing the ERS, is being made in an efficient and timely fashion.

DOD disagreed with our recommendation to include information on ERS limitations in its annual performance plan and report along with the other elements of strategic mobility: airlift, sealift, and prepositioned equipment. DOD stated that information on ERS performance is already included in other documents such as the mobility requirements studies, the annual budget justification documents, and quarterly readiness reports. We disagree that it is appropriate to exclude information on ERS performance from the annual report while including information on the other elements of strategic mobility. The ERS is an integral aspect of strategic mobility. In fact, Air Mobility Command reports cite ERS infrastructure as the top limiting factor in deployment operations. Omitting ERS information from the key annual performance report gives an incomplete and misleading view of strategic mobility capabilities.

---

DOD also disagreed with our description of the growth in estimated costs for improving the ERS. DOD stated that the different cost estimates we were provided are not directly comparable because they were produced several years apart and were premised on different sets of bases and analytical methodologies. Our report clearly lays out these differences. Moreover, DOD further claimed that we were using the comparison to point to “unexplained” cost growth. Whether DOD was aware of the reasons behind the increased estimate was not the primary point we were trying to make. Our primary point is that DOD did not know how much it would cost to bring ERS capacity up to requirements because it does not monitor overall costs. Air Mobility Command officials had to make a special query to all the commands to find out what the current costs were and whether they had changed over previous estimates. Similarly, when we requested an updated estimate late in our review, officials responded that obtaining such an update would be very labor intensive and time consuming. We believe that the lack of a strategy or system for monitoring progress and overall costs is symptomatic of the weaknesses in DOD’s management of the ERS.

Finally, DOD disagreed with our description of the modeling approach it used to analyze ERS capacity. DOD stated that our report asserted that the approach it used is “flawed” and overestimates the shortfalls. DOD further stated that any modeling provides only an approximation of real-world systems and that no analysis can provide solutions that are 100-percent accurate. DOD believes that it has applied the best tools available and that it will continue to refine its capabilities, as new modeling tools become available.

DOD appears to have misunderstood our point. Our report does not assert that the modeling approach was flawed or that it overstated the shortfall. We state that the assumptions and modeling approaches DOD used could underestimate or overestimate the size of the shortfall, but that we could not measure the precise effect of these factors on DOD’s estimate. Our report does not attempt to endorse one modeling approach over the other. We point out the uncertainties of both approaches—including DOD officials’ comments on the pros and cons of each—so that the reader can clearly understand the degree of precision in DOD’s estimate. It is important to fully consider all options in such analyses to ensure that, should an optimal solution be available, it is identified.

DOD’s comments are reprinted in appendix III. DOD also provided technical comments, which we incorporated as appropriate.

---

We are sending copies of this report to the appropriate congressional committees and the Honorable Donald H. Rumsfeld, Secretary of Defense. Copies will also be made available to others upon request.

Please contact me at (757) 552-8100 if you or your staff have any questions concerning this report. The major contributors to this report are listed in appendix IV.

Sincerely yours,

A handwritten signature in black ink that reads "Neal P. Curtin". The signature is written in a cursive style with a large initial 'N' and a distinct 'P'.

Neal P. Curtin  
Director  
Operations and Readiness  
Defense Capabilities and Management Team

---

# Appendix I: Responsibility for the En Route System Is Fragmented Among Many Organizations

---

According to Transportation and Air Mobility Command officials, all of the organizations with responsibility for the En Route System (see fig. 8) play some combination of three basic roles: owner/manager, funder, and/or advocate in support of various ERS needs. The Transportation Command has functional responsibility for managing the entire Defense Transportation System, with the airlift portion handled by its air component, the Air Force Air Mobility Command. The Transportation Command plans and coordinates movements through the overall transportation system. The Air Mobility Command uses the ERS airfields to help provide aerial refueling and airlift through its fleet of air tankers and cargo airplanes. Both commands may act as advocates for the resource needs of the ERS. However, even though the Transportation Command has functional responsibility for managing the entire Defense Transportation System, it is not in charge of the ERS airfields and can provide only limited funding for repair and improvement projects. The needs of the geographical commands (such as the European, Central, and Pacific commands) take precedence over those of the functional commands (such as the Transportation Command) because of the geographical commands' war-fighting responsibilities. The North Atlantic Treaty Organization may also use the bases to assist in carrying out its strategic operations. Conflicts can and do occur. For example, in the late 1980s, the European Command had planned to return U.S. facilities at two ERS airfields to the host nations, in part because of budget reductions. However, Transportation Command officials believed the airfields were needed for mobilizations to the Middle East and asked the Joint Chiefs of Staff to oppose the European Command's plans. The airfield facilities were ultimately retained.

Overall management of a particular ERS airfield is shared between the command with responsibility for that geographical area and the military service that operates the airfield on a daily basis. The Air Force operates 11 ERS airfields; the Navy operates the airfield in Rota, Spain; and the Marines operate the airfield in Iwakuni, Japan. The airfields are located on bases owned by the host country, under agreements for support negotiated by the State Department. Each military service must operate the airfield in accordance with its primary service mission but may act as advocate for the airfield's ERS-related needs.

However, each service must also manage the airfield in accordance with the policies set forth by the geographical command. These commands are responsible for supporting and achieving U.S. interests in their particular region and for planning and maintaining war-fighting capabilities in the event of an outbreak of hostilities. They include component commands

---

**Appendix I: Responsibility for the En Route System Is Fragmented Among Many Organizations**

---

drawn from each of the military services to manage the support associated with each. For example, U.S. Navy Europe and U.S. Air Forces Europe provide support for their naval and air bases in the region. The U.S. Navy's Pacific Fleet, Marine Forces Pacific, and Pacific Air Forces provide similar support in the Pacific. These commands may act as an advocate for ERS needs consistent with their contribution to the commands' mission of maintaining war-fighting capabilities. In Europe, both the European and Central commands may act as advocates for the ERS airfields. The airfields are in Europe, but their ERS purpose is to act as a conduit for aircraft headed to war zones in the Middle East, which is managed by the Central Command.

While the unified commands have some management responsibilities for the airfields, they have no funding programs for base operations and construction. The military services and the Defense Logistics Agency generally provide U.S. funding for these purposes. For example, the Air Force provides funds for the operation of its ERS airfield in Fairford, England. If the base command needs funds for a construction project, it requests them from its parent command in the region, U.S. Air Forces Europe, which is under the European Command. Air Forces Europe would validate the project and request funding through the various programs available. These would be primarily Air Force programs funding military construction, operations, and maintenance, or, in the case of fuels projects, the Defense Logistics Agency. The Defense Logistics Agency has responsibility for funding fuels projects across all services. In deciding whether to include a project in funding requests, the services and the Defense Logistics Agency assign their own priorities to the project in terms of its relative contribution to their own missions, as well as its contribution to the overall Department of Defense mission.

---

# Appendix II: Scope and Methodology

---

To determine whether the ERS airfields have the capacity needed to meet the requirements of the National Military Strategy, we obtained briefings, reviewed documents, and interviewed officials at the Office of the Secretary of Defense, the Office of the Joint Chiefs of Staff, the U.S. Transportation Command, the European Command, the Central Command, the Pacific Command, the Air Force Mobility Command, the RAND Corporation, and the Naval Postgraduate School. Much of our analysis was focused on reviewing the requirements and ERS capacity analyses set forth in the Mobility Requirements Study 2005 and in earlier similar studies. We did not independently verify DOD's estimate of system capacity.

To identify the causes of any shortfalls and DOD's plans to correct them, we reviewed the processes DOD used to identify deficiencies and corrective actions and discussed them with officials at the offices identified above, as well as at DOD's Office of the Inspector General. We reviewed deficiencies and corrective actions identified in DOD Joint Monthly Readiness Review Reports, Air Mobility Command reports, and reports and other documents produced by the European and Pacific Steering committees and the Inspector General. We obtained lists of construction projects at each ERS airfield and analyzed them from a number of different perspectives, including the total costs by base, by region, and systemwide; the purpose; and the expected source of funding and discussed them with DOD officials.

To determine whether the ERS has the information and organizational structure needed to ensure that its operations are carried out efficiently and effectively, we analyzed data and reports on a variety of basic management issues and discussed information gaps with DOD officials. We identified all organizations with responsibility for or management duties at ERS airfields and reviewed the scope of their individual responsibilities with DOD officials.

We conducted our review from July 2000 through April 2001 in accordance with generally accepted government auditing standards.

# Appendix III: Comments From the Department of Defense



PROGRAM ANALYSIS  
AND EVALUATION

OFFICE OF THE SECRETARY OF DEFENSE  
1800 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1800



May 18, 2001

Mr. Neal P. Curtin  
Associate Director  
National Security Preparedness Issues  
U.S. General Accounting Office  
Washington, DC 20548

Dear Mr. Curtin:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "MILITARY READINESS: Management Focus Needed on Airfields for Overseas Deployments," dated April 18, 2001 (GAO code 702039/OSD case 3073).

The Department generally nonconcur with the report. In particular, DoD does not agree with GAO's assertions that: (1) the En Route System (ERS) lacks a coherent management structure; (2) the ERS program has experienced unexplained cost growth in recent years; and (3) the modeling approach used to analyze airfield capacity is flawed.

DoD provides a robust management structure for the ERS. Key management mechanisms include Pacific and European ERS steering committees; DoD's readiness reporting processes; the Planning, Programming, and Budgeting System (PPBS); and major reviews that DoD conducts to establish strategic mobility requirements.

Although the GAO report acknowledges the critical roles played by DoD's ERS steering committees, it does not discuss the Department's readiness reporting processes, which focus management attention on joint readiness and capability shortfalls, including those associated with the ERS. For example, the Joint Monthly Readiness Review (JMRR) provides combatant commanders the ability to address critical ERS shortfalls and concerns. Indeed, airfield infrastructure issues are routinely highlighted in the JMRR, and these issues are elevated to the senior leadership level through forums such as the Senior Readiness Oversight Council. Joint Warfighting Capability Assessments (JWCAs) provide a complementary means of evaluating the ERS in terms of its impact on joint deployment, distribution, and theater logistics. JMRR and JWCA assessments of ERS warfighting readiness are used by the DoD leadership to develop guidance for ERS budgeting activities.

DoD also uses the PPBS and strategic mobility studies to manage the ERS. The 1996 Mobility Requirements Study Bottom-Up Review Update established initial requirements for the ERS. Subsequently, \$1.2 billion in specific improvements to the system were identified, including critical upgrades to the ERS fuels infrastructure. In the budgeting process that followed, \$400 million was reallocated to fund a comprehensive plan to improve ERS fuel systems. Similarly, DoD addressed a requirement for ERS bases in the Iberian Peninsula by



acquiring access to facilities there and budgeting for improvements to the bases' ERS capabilities. The Mobility Requirements Study-2005 (MRS-05), completed earlier this year, evaluated the adequacy of ERS strategies and improvement projects to support two major theater wars. MRS-05 validated the adequacy of DoD's ERS management activities and investments.

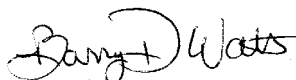
Since the mid-1990s, hundreds of vital ERS projects have been identified, budgeted for, and initiated or completed. For all ERS modernization projects budgeted between FY 1997 and FY 2006, DoD has been able to obtain 55 percent of the required funding from host nations and U.S. allies. Accordingly, the ERS is well on its way to providing the capability to meet all identified warfighting requirements by FY 2006.

DoD does not agree with GAO's assertion that comparisons with previous cost estimates point to unexplained growth in ERS costs. The GAO report cites DoD cost estimates for planned improvements ranging from \$1.2 billion to \$2 billion. Such estimates were produced several years apart and were premised on different overseas basing strategies and analytical methodologies. Accordingly, the estimates do not correlate on a base-by-base or project-for-project basis and are not directly comparable. (For example, more than half of the \$800 million increase cited by the GAO results from an FY 2000 decision to remove Rhein Main and add Spangdahlem to the ERS—a change that was requested by, and is being financed almost entirely by, the German government.)

DoD does not agree with GAO's assertion that the ERS modeling approach is flawed. The GAO report states that some assumptions tend to underestimate ERS shortfalls and that the modeling approach overestimates these shortfalls. Any analysis, regardless of its methodology, can provide only an approximation of real-world systems; no study can provide 100% accurate solutions. Over the last five years, DoD has applied the best tools available to evaluate ERS budgeting options. DoD continues to improve its capabilities for assessing the complexities of ERS operations, and will continue to refine ERS analyses as new modeling tools become available.

The Department appreciates the opportunity to comment on the draft GAO report. Detailed comments in response to the report's recommendations are enclosed. Technical comments were provided separately to the GAO staff.

Sincerely,



Barry D. Watts

Director

Program Analysis and Evaluation

Enclosure

GAO CODE 702039/OSD CASE 3073

“MILITARY READINESS: MANAGEMENT FOCUS NEEDED  
ON AIRFIELDS FOR OVERSEAS DEPLOYMENTS”

DEPARTMENT OF DEFENSE COMMENTS  
ON THE GAO RECOMMENDATIONS

**RECOMMENDATION 1:** The GAO recommended that the Secretary of Defense make one organization responsible for strategic management and coordination of overall En Route System (ERS) operations during peacetime.

**DOD RESPONSE:** DoD partially concurs. Many bases in the ERS perform a variety of operational functions that are best managed by the respective Services. Managing our ERS bases through one organization, with the effectiveness of ERS operations as the sole objective, would very likely reduce the effectiveness of these bases in accomplishing other important Service-related missions. However, the Department will consider whether one organization should be designated as a “single process owner” for those ERS matters for which assignment of responsibility is appropriate.

**RECOMMENDATION 2:** The GAO recommended that the Secretary of Defense develop a formal strategic plan and monitoring system for the ERS.

**DOD RESPONSE:** DoD partially concurs. A strategic plan for the ERS was formulated by the European and Pacific En Route Infrastructure Steering Committees, and subsequently incorporated and validated in the most recent Department-wide mobility study (MRS-05). Compliance with this plan will be monitored through the Department’s Planning, Programming, and Budgeting System (PPBS). However, DoD will endeavor to improve the integration, presentation, and documentation of the plan in an effort to enhance understanding of its provisions among organizations outside the Department.

**RECOMMENDATION 3:** The GAO recommended that the Secretary of Defense develop an overall cost-benefit study to document the rationales for plans to repair and improve the ERS.

**DOD RESPONSE:** DoD nonconcur. The Secretary provides guidance at an appropriate level for ERS resource managers to optimize the list of projects to be funded, subject to the constraints imposed by political agreements with host nations on basing and cost-sharing and other priorities that must be addressed within the funding available for this program. DoD will continue to use the PPBS to assess resource managers’ performance in implementing the Secretary’s guidance.

**RECOMMENDATION 4:** The GAO recommended that the Secretary of Defense include information on ERS limitations and how they affect the Department’s strategic mobility performance in DoD’s performance plan and report.

**DOD RESPONSE:** DoD nonconcur. Detailed information on ERS limitations and performance is already reported in DoD mobility requirements studies, annual DoD budget justification documents, and the *Quarterly Readiness Report to Congress*.

---

# Appendix IV: GAO Contacts and Staff Acknowledgments

---

## GAO Contacts

William C. Meredith (202) 512-4275  
John W. Nelson (404) 679-1949

---

## Staff Acknowledgments

In addition to those named above, Katherine Chenault, Lawrence E. Dixon, Richard G. Payne, Stefano Petrucci, and Gregory J. Symons, made key contributions to this report.



---

## Ordering Information

The first copy of each GAO report is free. Additional copies of reports are \$2 each. A check or money order should be made out to the Superintendent of Documents. VISA and MasterCard credit cards are also accepted.

Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

***Orders by mail:***

U.S. General Accounting Office  
P.O. Box 37050  
Washington, DC 20013

***Orders by visiting:***

Room 1100  
700 4<sup>th</sup> St., NW (corner of 4<sup>th</sup> and G Sts. NW)  
Washington, DC 20013

***Orders by phone:***

(202) 512-6000  
fax: (202) 512-6061  
TDD (202) 512-2537

Each day, GAO issues a list of newly available reports and testimony. To receive facsimile copies of the daily list or any list from the past 30 days, please call (202) 512-6000 using a touch-tone phone. A recorded menu will provide information on how to obtain these lists.

***Orders by Internet***

For information on how to access GAO reports on the Internet, send an e-mail message with "info" in the body to:

[Info@www.gao.gov](mailto:Info@www.gao.gov)

or visit GAO's World Wide Web home page at:

<http://www.gao.gov>

---

## To Report Fraud, Waste, and Abuse in Federal Programs

***Contact one:***

- Web site: <http://www.gao.gov/fraudnet/fraudnet.htm>
- E-mail: [fraudnet@gao.gov](mailto:fraudnet@gao.gov)
- 1-800-424-5454 (automated answering system)