



PROJECT AIR FORCE

CHILDREN AND FAMILIES
EDUCATION AND THE ARTS
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INFRASTRUCTURE AND
TRANSPORTATION
INTERNATIONAL AFFAIRS
LAW AND BUSINESS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
TERRORISM AND
HOMELAND SECURITY

The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis.

This electronic document was made available from www.rand.org as a public service of the RAND Corporation.

Skip all front matter: [Jump to Page 1](#) ▼

Support RAND

[Purchase this document](#)

[Browse Reports & Bookstore](#)

[Make a charitable contribution](#)

For More Information

Visit RAND at www.rand.org

Explore [RAND Project AIR FORCE](#)

View [document details](#)

Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Unauthorized posting of RAND electronic documents to a non-RAND website is prohibited. RAND electronic documents are protected under copyright law. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see [RAND Permissions](#).

This product is part of the RAND Corporation technical report series. Reports may include research findings on a specific topic that is limited in scope; present discussions of the methodology employed in research; provide literature reviews, survey instruments, modeling exercises, guidelines for practitioners and research professionals, and supporting documentation; or deliver preliminary findings. All RAND reports undergo rigorous peer review to ensure that they meet high standards for research quality and objectivity.

TECHNICAL REPORT

Working with Allies and Partners

A Cost-Based Analysis of U.S. Air Forces in Europe

Jennifer D. P. Moroney • Patrick Mills • David T. Orletsky • David E. Thaler

Prepared for the United States Air Force
Approved for public release; distribution unlimited



RAND

PROJECT AIR FORCE

The research described in this report was sponsored by the United States Air Force under Contract FA7014-06-C-0001. Further information may be obtained from the Strategic Planning Division, Directorate of Plans, Hq USAF.

Library of Congress Control Number: 2012950847

ISBN: 978-0-8330-7625-0

The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

RAND® is a registered trademark.

© Copyright 2012 RAND Corporation

Permission is given to duplicate this document for personal use only, as long as it is unaltered and complete. Copies may not be duplicated for commercial purposes. Unauthorized posting of RAND documents to a non-RAND website is prohibited. RAND documents are protected under copyright law. For information on reprint and linking permissions, please visit the RAND permissions page (<http://www.rand.org/publications/permissions.html>).

Published 2012 by the RAND Corporation
1776 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138
1200 South Hayes Street, Arlington, VA 22202-5050
4570 Fifth Avenue, Suite 600, Pittsburgh, PA 15213-2665
RAND URL: <http://www.rand.org>
To order RAND documents or to obtain additional information, contact
Distribution Services: Telephone: (310) 451-7002;
Fax: (310) 451-6915; Email: order@rand.org

Summary

U.S. European Command (EUCOM) views building partnerships (BP) as its highest theater priority. U.S. Air Forces in Europe (USAFE) seeks to build partnerships and partner capacity in the EUCOM area of responsibility (AOR) for several reasons. First, USAFE supports integration of the North Atlantic Treaty Organization (NATO) to help ensure that the United States meets its alliance responsibilities and obligations and maintains leadership in the organization. Second, partnerships help USAFE units maintain their operational readiness. Third, partnerships help the United States build interoperability and partner capacity support to out-of-area operations. Fourth, USAFE conducts engagements with the goal of helping ensure stability in the AOR and to encourage cooperation among partner countries. Fifth, USAFE seeks to attain, improve, and maintain access to countries in the AOR. In spite of the potential benefits of USAFE's BP activities, USAFE's posture and its BP activities do come with a cost. In today's austere fiscal environment, it is appropriate to assess how the United States and the U.S. Air Force can build partnerships most efficiently while ensuring that the requirements for maintaining key alliances and partnerships continue to be met. This raises several questions about the cost of USAFE's BP activities.

Study Purpose and Approach

This report explores several questions associated with using forward-based forces to build partner capacity. Are there cost savings realized when building partnerships with forward-based forces? What might be gained or lost from a cost perspective, by moving USAFE forces in the continental United States (CONUS)? What might those cost differentials imply about the relative trade-offs of BP from USAFE rather than CONUS? How can the answers to the first two questions inform a more strategic risk assessment of moving USAFE forces?

The approach to the research involves four tasks. Task 1 characterizes the current policy debate on security cooperation and force posture in Europe through a review of the literature and discussions with key policymakers and legislative officials in Washington. Specifically, the study team set out to gain a better understanding of the extent to which security cooperation enters the policy and resourcing debates regarding Air Force forward-based posture in Europe.

Task 2 develops a framework to describe the current BP approach and environment for USAFE, drawing on key U.S. Department of Defense (DoD) strategies and plans, such as the Guidance for Employment of the Force and combatant command (COCOM) theater campaign plans, as well as specific BP data. The three main sources of data for Air Force BP efforts in Europe are USAFE's Building Partnerships Scorecard data, wing- and squadron-

level interviews and data, and a survey RAND designed and distributed to collect information on the routine BP activities of airmen based in Europe. As a result of the findings from this data-collection and analysis task, the team was able to identify high-payoff BP activities. Task 3 defines several alternative postures for conducting BP activities using a building-block approach to cost out each high-payoff BP activity. Associated costs for each building block consider marginal changes as a result of specific BP activities. Task 4 recommends efficiencies to improve the Air Force's BP activities in Europe.

Table S.1 shows the number of BP events, by wing, recorded between September 2009 and August 2010 and the number of partners engaged. Of those partners, the table lists the ones that accounted for about 50 percent of reported events; these appear in order of most to fewest events.¹ The table gives examples of areas in which the wing focused its BP activities.

Table S.1
U.S. Air Forces in Europe Wing Activities for Building Partnerships, September 2009–August 2010

Wing	Number of BP Events	Number of Partners Engaged	Partners Totaling 50% of Events	Examples of BP Activity Focus
31 FW	26	9	Italy	F-16 operations and maintenance Firefighting Security forces Flying training deployments
48 FW	119	30	UK, Netherlands	Close air support and JTACs Flying exercises DACT Medical
52 FW	56	33	Germany, Belgium, Netherlands, Poland	DACT Flying exercises Munitions Maintenance
86 AW	46	27	Poland, Germany, Bulgaria, Belgium, France, Hungary	Airdrops Maintenance exchanges HAW support
100 ARW	44	22	UK, Germany, Belgium, Netherlands	Air refueling currency Transportation operations SERE training Security forces training Open Skies
435 AGOW	42	28	Poland, Germany, Bulgaria, Italy, Portugal, Romania	Cargo preparation Deployable engagement construction JTAC training

NOTE: FW = fighter wing. JTAC = joint terminal attack controller. DACT = dissimilar air combat training. AW = Airlift Wing. HAW = Heavy Airlift Wing. ARW = Aerial Refueling Wing. SERE = survival, evasion, resistance, and escape. AGOW = Air Ground Operations Wing.

¹ In some cases, multiple partners participated in a single event.

Observations About Building Partnerships in Europe

As Chapter Two discusses, USAFE's BP activities are varied and numerous and help build and sustain access, relationships, and partner capabilities. Yet these activities do not appear to enter the debate over posture in Washington, particularly in Congress. The wings and organizations assigned to the command work with foreign partners on a routine basis to help achieve U.S. national security and theater objectives in the AOR and to maximize training for personnel and units given their home stationing overseas. The study team's observations capture the strengths and weaknesses of the current BP approach.

The team identified eight observations from our analysis of the USAFE BP approach and the specific activities USAFE conducts. First, *forward basing facilitates important relationship- and capacity-building BP activities*. Several activities are done primarily because of forward basing, including nearly daily air refueling, frequent JTAC qualification and training, and some hosted events.

Second, a *significant portion of USAFE's BP activities is opportunity-driven, with BP as an ancillary benefit to U.S. training in and with partner countries*. Units can apply training funds for ancillary BP benefit; it is unlikely that this practice would be as common from CONUS. Moreover, USAFE serves as an informal "BP schoolhouse" for the Air Force.

Third, *BP-related strategy and objectives at the country and event levels are not clear to the personnel and units that execute BP activities*. Although not everyone who helps build partnerships needs to know the commander's intent (though it would certainly help), the development of specific objectives at the event level, and of plans at the country level, should be a high priority, as should definition and prioritization of BP events.

Fourth, *although many U.S. units and personnel derive training benefit from BP activities and presence in Europe, some get less benefit than others*. Most respondents to the RAND survey viewed BP-related activities as beneficial to their own training and readiness. Some events are not seen as productive in terms of maintaining U.S. readiness, and the need to alter tactics and narrow information-sharing does, at times, limit training value to U.S. personnel.

Fifth, *existing USAFE reporting processes capture only part of the BP level of effort in the command*. This is a DoD-wide shortfall, and USAFE has improved reporting in the past several years. Data on BP events are often derived from other reporting processes (e.g., after-action reports [AARs] on training events flowing from the unit to the USAFE operations staff). We supplemented these data through interviews with and surveys of wings and other USAFE organizations. Lack of a definition of *BP event* also hampers reporting and analysis.

Sixth, *there are some missed BP opportunities*. Many of these derive from events that could be better utilized to help build partnerships. These include hosting events and maintainer involvement in BP during off-station training events. In some instances, particularly in the 435 AGOW, respondents believed that they were being underutilized for BP activities.

Seventh, *the presence of forward-based forces facilitates coalition operations*. The development and sustainment of personal and unit relationships enables smoother integration during combat operations. Having forward-based U.S. forces that are geographically closer to partners enables repeat visits. Years of interaction with traditional and newer NATO allies have borne fruit for coalition building and capability.

Eighth, *the need to build relationships, capacity, and access in the EUCOM AOR for coalition operations will continue beyond Iraq and Afghanistan*. Cross-COCOM operations and emerging

operational requirements, such as ballistic missile defense (BMD), will place BP demands on forward-based forces in Europe.

Observations Related to Costs for Building Partnerships in Europe

Given that the Air Force currently has forces positioned in Europe, *USAFE's BP activities are relatively efficient*. Most of USAFE's BP costs go to event flying-hours, which are a sunk cost, because units positioned in USAFE regularly fly training missions. Further, many of USAFE's BP sorties are flown from home station and therefore do not incur additional costs for travel and deployment. In all, USAFE's BP activities add only a marginal cost to USAFE's overall annual operating costs (roughly 1.5 percent). We do not assess the relative value or impact of USAFE's BP activities, but USAFE wings accomplish many thousands of hours of BP activities with partner nations (PNs) for the additional costs that USAFE incurs.

Generating USAFE's current BP activities from CONUS could greatly increase the marginal cost of BP. If USAFE's current BP activities were replicated from CONUS, the marginal cost to provide BP could increase fourfold, from \$59 million per year to more than \$250 million per year.

If USAFE forces were moved to CONUS, some BP activities would need to be significantly curtailed to be cost neutral with regard to direct BP costs. We found that, even when replicating only about half of USAFE's status quo BP activities, both the marginal BP costs and the total operating costs would be more for CONUS than for USAFE's status quo level of activity.

Finally, although the marginal costs to provide BP in USAFE are very sensitive to whether forces are located in Europe versus in CONUS, these changes still have a small overall budget impact relative to total USAFE operating costs. The fact that these costs and savings are so small relative to the overall operation of USAFE forces ought to turn attention back to the benefits of having USAFE forces provide BP and from being positioned in Europe more generally and to determining what is risked by changing those things.

Cost-Analysis Summary

Aggregate Cost-Analysis Results

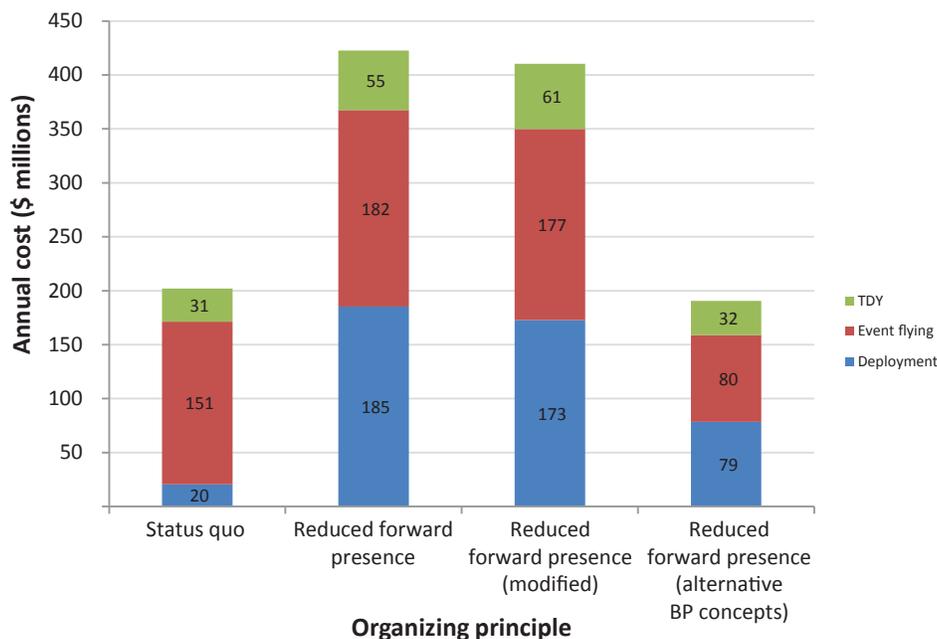
Figure S.1 shows the total costs of each organizing principle, broken out by cost category.

In Figure S.1, our organizing principles are shown on the x-axis. On the y-axis, the height of each column shows the total annual cost (in millions of dollars) to replicate all BP activities appropriate to that organizing principle.

On the left, "status quo" shows the costs we estimated for all USAFE-based BP activities for one year, essentially as they are performed today. Home-station sorties are, in fact, flown from home station; aircraft and team deployments occur for each wing on an annual basis. The costs reflected here make up the total cost to the Air Force but may not all be borne by USAFE directly (e.g., USAFE would typically transport personnel and equipment by means of its own organic airlift, thus not incurring the Air Mobility Command [AMC] costs to transport them).

Here, we can see that the event flying costs, at \$151 million per year, dominate the costs. One implication of this is that these BP activities, when conducted from USAFE, are relatively

Figure S.1
Costs of Organizing Principle, by Cost Category



NOTE: TDY = temporary duty.

RAND TR1241-S.1

efficient: Three-quarters of the costs go directly to training. Assuming that those flying-hours would normally be included in each wing's training program, the *marginal* cost of USAFE BP activities would be approximately \$51 million per year. Again, not all of these will be borne by USAFE. For example, some money is provided by EUCOM for Joint Chiefs of Staff (JCS) exercises and other activities, which would be applied to deployment and TDY costs.

As we move from left to right in the figure, we see that replicating all activities from CONUS incurs an enormous cost penalty, almost doubling the total costs. TDY costs approximately double, and deployment costs increase almost tenfold. The modified CONUS option saves a little because it repackages some of the deployments more efficiently and eliminates air shows and flybys. The rightmost option halves the remaining aircraft-related events, thus bringing the total costs more in line with the status quo. However, less than half of the \$186 million goes directly to training, a relatively inefficient use of resources.

Recommendations

We provide the following recommendations for U.S. Air Force consideration.

For the Headquarters (HQ) USAFE level, we offer the following recommendations:

- Ensure that BP and security cooperation are included in the force posture debate where it affects Air Force forces.
 - Broaden the understanding within the Air Force and among decisionmakers in DoD that the marginal cost of BP by USAFE forces is small and that the cost of replicating

- USAFE's current BP activities from CONUS could be substantially more expensive, even if BP activities were reduced.
- Make decisions on posture changes to forces in Europe based on an assessment of whether any savings are worth the risk to access, leadership, and other core U.S. interests.
 - Direct that BP be emphasized in Air Force discussions on force posture in Europe with key congressional staff, the Office of the Secretary of Defense, and Department of State officials.
 - Develop a BP strategy for engagement with European partners post–Operation NEW DAWN and Operation ENDURING FREEDOM.
 - Press efforts to develop air-related country plans in the AOR that enable linkages between theater objectives and USAFE BP events.
 - Seek increased engagement with partners in the eastern region of the AOR focused on meeting operational requirements of contingencies in the U.S. Central Command (CENTCOM) AOR. This includes maintaining or expanding access to bases, air-space, and ranges for both combat and support assets and working with potential coalition partners on related operations.
 - Develop options (with EUCOM) for continuing to build partner capacity in niche areas with new members of NATO and less advanced partners in the AOR for future coalition operations. Continue pursuing ongoing efforts to build medical, JTAC, cargo preparation, and other capabilities, as well as institutional capacity.
 - Continue close cooperation in training and exercises with advanced partners in the AOR for future coalition operations. Interoperability and relationship-building at the individual, unit, and command levels are invaluable and affect both the capability and willingness to work with the United States in the AOR and beyond.
 - Streamline processes for data collection and analysis.
 - Consider ways to aggregate BP data and express the Air Force's BP successes. Use this report as a first step in making explicit linkages between force posture and BP.
 - Adapt existing reporting regimes across the air staff to capture the BP data required to make informed resourcing and other decisions. USAFE should determine the types of BP activities it absolutely needs to track, and it should focus on those specific types of activities in detail. This may include activities that best support EUCOM's theater campaign plan objectives and activities that help to inform resourcing decisions.
 - Consider administering an annual survey, similar to the one used for this study, to supplement BP data already reported. Adapt the survey to answer questions that support USAFE and EUCOM decisionmaking requirements.
 - Define *BP event*, perhaps in accordance with the study team's proposed definition, and communicate this to the wings. Consider this definition: "A planned or unplanned activity that builds and sustains relationships with, capabilities of, and access to foreign partner militaries in accordance with the combatant commander's theater and country objectives." In addition, BP events should be prioritized on the basis of this definition.
 - Adopt RAND Project AIR FORCE (PAF) methodology for assessing and costing the BP level of effort to support resource and other decisions.

For the HQ USAFE level, in coordination with the wings, we offer the following recommendations:

- Take advantage of additional BP opportunities.
 - Develop concepts to expand and standardize hosting events and to take greater BP advantage of off-station events (especially maintainers).
 - At home station, consider increasing frequency of visits of partner countries to Air Force bases (especially maintainers, logisticians, security forces, and mobility planners). Ensure that the activities scheduled address specific BP objectives for those partner countries.
 - For combat deployments, consider including additional noncommissioned officer (NCO) experts (again, maintainers are ideal) in selected BP activities.