

RAND RESEARCH AREAS

THE ARTS
 CHILD POLICY
 CIVIL JUSTICE
 EDUCATION
 ENERGY AND ENVIRONMENT
 HEALTH AND HEALTH CARE
 INTERNATIONAL AFFAIRS
 NATIONAL SECURITY
 POPULATION AND AGING
 PUBLIC SAFETY
 SCIENCE AND TECHNOLOGY
 SUBSTANCE ABUSE
 TERRORISM AND
 HOMELAND SECURITY
 TRANSPORTATION AND
 INFRASTRUCTURE
 WORKFORCE AND WORKPLACE

This product is part of the
 RAND Corporation research
 brief series. RAND research
 briefs present policy-oriented
 summaries of published,
 peer-reviewed documents.

Corporate Headquarters
 1776 Main Street
 P.O. Box 2138
 Santa Monica, California
 90407-2138
 TEL 310.393.0411
 FAX 310.393.4818

© RAND 2007

The Thin Green Line

Buffering the Nation's Military Bases

When first established decades ago, many of the nation's military bases were in remote areas. No longer. Today, growing population and changing land-use patterns have pushed development up against installation boundaries. Development such as big residential tracts can limit an installation's ability to conduct operations. Complaints about noise, dust, and smoke caused by weapons and vehicles can curtail the type of training or limit when it can be done. Development can also destroy or displace native plants and animals, leaving military bases as their last refuge, further restricting training and other operations.

Recognizing the problem, Congress passed a law allowing the military to partner with state and local governments and nongovernmental organizations to establish buffers near training and testing. Buffering partners share the costs of acquiring property interests from sellers, including actual land purchases and easements (where the landowner keeps the land but sells the development rights to a buffering partner). The Department of Defense (DoD) created the Readiness and Environmental Protection Initiative (REPI) to implement the new law in 2003. It asked RAND's National Defense Research Institute (RAND NDRI) to assess the program's effectiveness to date. The results of NDRI's work appear in *The Thin Green Line: An Assessment of DoD's Readiness and Environmental Protection Initiative to Buffer Installation Encroachment*.

What the Research Showed

The RAND NDRI research team carried out its assessment largely by using a case-study methodology. Key findings of that assessment follow.

Encroachment Stems from Two Main Sources

Sprawl and loss of biodiversity are the fundamental causes of most encroachment. The former

Key findings:

- Most encroachment that hampers base operations stems from sprawl and loss of biodiversity.
- To date, the Readiness and Environmental Protection Initiative appears to have effective buffering efforts.
- The program is underfunded given land prices and development pressures.
- DoD needs to act soon before the opportunity to buffer is lost.

occurs as housing, retirement communities, and other developments are built near military bases, resulting in complaints and constraints on testing and training operations. Loss of biodiversity can also affect operations by causing species on military bases to become threatened or endangered, which can also limit testing or training.

REPI Appears to Be Effective So Far

Initial results suggest that REPI is having a positive effect. However, establishing partnerships and acquiring land can take several years, and the program has had only modest funding. Even so, REPI has the potential to help buffer military installations against encroachment. REPI-funded projects have begun at 24 installations, and they focus on such critical areas as precluding incompatible land use in air safety zones and near ground training. Installations have also had some success at preserving habitat (which helps preserve species) and providing other environmental benefits such as protecting watersheds. Projects also provide other benefits to communities, including preserving forests and farmlands, helping to maintain community quality of life, and providing parklands and

economic benefits. Although these initial results are promising, it is too early to tell if the installation buffering programs will be able to deal with significant amounts of encroachment.

Buffer Now

Time does not favor DoD's buffering efforts. Land prices are climbing and large tracts are being subdivided and sold, creating more landowners. These trends will make it more expensive, more complicated, or impossible to use such land for buffering. Therefore, it is in DoD's long-term interest to work with partners to protect land sooner rather than later, when land prices soar and the opportunity to buffer is lost.

Buffer Strategically

Typically, installations start by buffering adjacent land. But they need to look far beyond their borders to identify such features as air corridors or critical habitat that needs buffering. For example, low-level flight routes can extend many miles from an installation. Also, installations need to partner in more collaborative regional ecosystem approaches to prevent biodiversity loss and to address threatened and endangered species encroachment issues. Finally, DoD needs to examine activities of other federal land managers, especially the Bureau of Land Management and the Forest Service, because patterns of land use under their control can affect installations. If they protect biodiversity and habitat on their lands, then pressures on the DoD can be reduced.

REPI Is Underfunded

Although DoD needs to buffer soon and strategically, the REPI program does not receive adequate funds to do so. In fiscal year 2007, Congress provided only \$40 million. More funding is needed if the broad buffering goals are to be met. A single transaction can cost as much as \$10 million or \$15 million. An annual budget of \$150 million or more could easily be applied productively. However, more analysis is needed to determine exact budgetary needs. In the long run, increased funding now is likely to save DoD money.

Additional Policy Guidance Is Needed

REPI has developed some initial policy guidance, but it mostly focuses on the criteria for project proposals, not implementation. As the program has evolved, lessons have been learned showing that expanding existing guidance would be

beneficial. Although the Services need some flexibility to meet their different needs, lack of implementation guidance leads to inconsistencies across the Services and has caused some actions to be redone and slowed the process as different installation and Service staffs figure out how to implement the program. The guidance could include more information on successful ways to implement the program.

Implementation Needs to Be Streamlined and Hastened

It can take a long time to negotiate a land transfer or easement, but the military process to assess, approve, and fund a property agreement takes too long, especially when a competing commercial land developer has cash in hand and can close a sale in weeks. The process has taken up to a year at some installations. Processes need to be streamlined and flexibility needs to be built into the system to enable the military to respond quickly to real estate opportunities.

What DoD Should Do

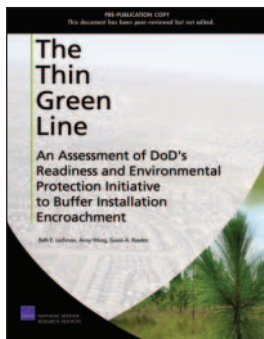
Invest More Resources Soon

Because of the common installation need to act swiftly or lose an opportunity to buffer, the Office of the Secretary of Defense (OSD) and the Services need to invest more resources in buffering now. Such resources include finances, manpower, policy guidance, and technical support.

Address Other Financial Issues

First, OSD, the Services, and Congress should continue to work with state and local governments to fund land conservation for installation buffering benefit. Second, REPI should assess opportunities for—and help support leveraging of—other military and federal agency funding, especially for land and ecosystem analysis and preservation. Third, OSD needs to make it clear that the program does not require that partners match military funds.

The sustained readiness and support of U.S. forces will require an effective program to buffer the installations where the training necessary to achieve that readiness and support takes place. REPI appears to be a good start to achieve that goal, but it will need additional funding and faster processes to succeed. Even though REPI may not be able to accomplish all the program's goals, many training and testing areas can be preserved. ■



This research describes work done for the RAND National Defense Research Institute documented in *The Thin Green Line: An Assessment of DoD's Readiness and Environmental Protection Initiative to Buffer Installation Encroachment*, by Beth E. Lachman, Anny Wong, and Susan Resetar, MG-612-OSD (available at <http://www.rand.org/pubs/monographs/MG612/>), 2007, ISBN: 978-0-8330-4172-2. The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. RAND® is a registered trademark.

RAND Offices

Santa Monica, CA • Washington, DC • Pittsburgh, PA • Jackson, MS • Cambridge, UK • Doha, QA



NATIONAL DEFENSE RESEARCH INSTITUTE

THE ARTS
CHILD POLICY
CIVIL JUSTICE
EDUCATION
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INTERNATIONAL AFFAIRS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
SUBSTANCE ABUSE
TERRORISM AND
HOMELAND SECURITY
TRANSPORTATION AND
INFRASTRUCTURE
WORKFORCE AND WORKPLACE

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

This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of individual published, peer-reviewed documents or of a body of published work.

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world.

Support RAND

[Browse Books & Publications](#)

[Make a charitable contribution](#)

For More Information

Visit RAND at www.rand.org

Explore [RAND National Defense Research Institute](#)

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. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use.