Guam Environmental Disadvantage

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Uniqueness: Military's Environmental Preservation Programs in Guam Good Now

The United States military is currently stabilizing environmental issues in Guam.

"Northwest Field critical to training, ecosystem," Tech. Sgt. Mike **Andriacco**, 36th Wing Public Affairs, United States Air Force, April 14, **2010**

> "The limestone forest of Northwest Field and also the larger area of Andersen (AFB) is the last large expanse of limestone forest on Guam," said David Lotz, the 36th Civil Engineer Squadron natural resources planner. "This area is the habitat for several endangered species of birds and needs to be protected for the eventual reintroduction of those species."
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> Northwest Field is also home to areas of historic and current significance to the Air Force and the people of Guam. The Northern Aquifer, Guam's main source of fresh water, can be found 500 feet below the surface of the field. The airfield qualifies for the national historic registry because of its importance to air operations and their historical impact since its construction. And of archaeological significance, there's a site of ancient Chamorro artifacts Air Force officials go to great lengths to preserve.
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> Maintaining a second-to-none training area while protecting the native ecosystem and historical sites is a process involving close coordination with several agencies, dedication of resources and preventing conflicting uses.
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> "All training planned on Northwest Field is coordinated with many wing and outside agencies such as the environmental office in the 36th CES," Colonel Settergren said. "They conduct environmental impact analyses, employ an environmental assessment team, conduct a cross-tell of information and analyze whether or not the training event will adversely affect the environment."
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> Air Force officials have invested in a variety of measures to protect the habitat at Northwest Field. For example, barriers prevent foliage-destroying deer and pig populations from damaging native bird nesting areas, Mr. Lotz said. Andersen AFB is also actively engaged in the protection of endangered sea turtle nests that are found in increasing numbers every year because of the protection efforts of 36th CES Environmental Flight members.
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> "The balance between protecting the environment and protecting our nation is one that takes extreme dedication and perseverance," said Brig. Gen. Philip M. Ruhlman, the 36th Wing commander. "The 36th Wing at Andersen AFB is committed to doing both with excellence. As we demonstrated by passing last week's no-notice EPA inspection, we continue to excel in this regard. We, the U.S. Air Force, along with our partners the U.S. Navy, are appointed stewards of this land and promise to continue its preservation with exceptional standards."

Link: Troops to Guam → Environmental Destruction

By moving more troops to Guam, devastating environmental impacts occur.

"EPA Opposes U.S. Military's Plan to Move Marines to Guam," Audrey McAvoy, **Associated Press**, February 25, **2010**

> The EPA's letter, dated Feb. 17, was first reported by the Pacific Daily News on its Web site Thursday Guam time. Specifically, the EPA said the military's plan would lead to the following problems:
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> -- A shortfall in Guam's water supply, resulting in low water pressure that would expose people to water borne diseases from sewage.
> -- Increased sewage flows to wastewater plants already failing to comply with Clean Water Act regulations.
> -- More raw sewage spills that would contaminate the water supply and the ocean.
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> Regarding coral reefs, the EPA said the military underestimated the effect the aircraft carrier berth would have on a resource that currently provides essential habitats for fish and endangered sea turtles and that supports commercial and recreational fishing.

Internal Link: Troops to Guam → Water Shortages

More troops in Guam causes water shortages.

"Guam: Self-Determination, or More U.S. Troops?" Robert Naiman, Policy Director, Just Foreign Policy, **The Huffington Post**, June 16, **2010**

> Guam, in particular, is facing a major decision about its destiny, a decision made in Washington about which its indigenous population has not yet had any effective say. The United States is currently planning to relocate 8,000 Marines and 9,000 dependents to Guam by 2014. With an expected influx of foreign workers recruited for military construction projects, Guam's population is expected to increase by some 80,000 people by 2014, a 45% increase from its current estimated population of 180,000.
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> More than a quarter of the island is already owned by the U.S. military, the *Washington Post* noted in March, while a quarter of the island's population lives below the U.S. poverty level.
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> As the *Post* noted, Guam was not consulted in the decision to move 8,000 Marines to the island and has no legal means to block it. Yet an Environmental Protection Agency analysis said the U.S. military buildup could trigger island-wide water shortages.

Internal Link: Nuclear Aircraft Carrier → Coral Reef Destruction

Coral reefs in Guam will be destroyed by moving the US' nuclear aircraft carrier to Guam.

"Fortress Guam resists US military buildup," **Asia Times**, May 14, **2010**

> Another highly controversial proposal is the creation of a berth for a nuclear aircraft carrier, which will involve the detonation and removal of 70 acres of vibrant coral reef in Apra Harbor. Environmentalists and local communities oppose this on the grounds that coral provides habitat for a rich diversity of marine life and is endangered worldwide.
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> Environmentalists also question how the disposal of huge quantities of dredged material would affect ocean life and warn that such invasive dredging may spread contaminants that have been left undisturbed in deep-water areas of the harbor.

Internal Link: Firing Ranges → Deforestation

Moving the military to Guam causes deforestation.

"U.S. Military Eyes Guam as Staging Post to Counter Threats," **Kyodo News**, January 3, **2010**

> The U.S military is beefing up its presence in Guam after U.S. allies in the Pacific -- the Philippines, Thailand, Australia, South Korea and Singapore -- turned down U.S. requests for permanent basing of U.S. troops on their soil.
>
> Already concerns are being raised over plans to transform Guam into "a multi-service military base." "Some of the areas that they're planning to convert into firing ranges include pristine limestone forested areas that will require some clearing of native forest trees," Jeffrey Quitugua, a biologist, told Kyodo News.

Brink: Guam's Environment under Threat

"The economic value of Guam's coral reefs," Pieter van **Beukering** (editor) et al, University of Guam Marine Laboratory Technical Report No. 116, March **2007**

> Guam's coral reef ecosystems are under great pressure from various human activities. Specific threats include sedimentation, eutrophication, freshwater runoff from storms, overharvesting and tourist overuse. These threats differ widely in nature and magnitude, and also show great spatial variability. Typically, the most threatened reefs are also the most economically valuable. This is dictated by the rule of thumb that humans are the origin for economic importance but at the same time are the main cause of threats to the reefs.

Impact: Pacific Environment Key to Life

Hurting Guam's environment hurts the Pacific environment, which is key to life.

"Environment: Islands Biodiversity under Threat: Why we need to save and protect it," David **Sheppard**, director of SPREP, Islands Business, **2007**

> Biodiversity is the foundation of life and nowhere is this more evident than in our small islands where we rely on our natural systems for our very survival. In the Pacific, we recognise that our diverse biological resources are essential for the livelihoods of Pacific people. Biodiversity has helped shape our cultures and traditions, thus contributing to the identity and heritage of Pacific peoples.
> Biodiversity in the Pacific is globally significant. For example the Pacific is acknowledged to have the highest marine diversity in the world.
> Our cultural traditions have been determined by what is available in our environment, our traditional medicines have been derived from the natural resources around us and, for many in our region, our livelihoods are fashioned by the surroundings available to us.
> In celebrating the Year of Biodiversity, we thus acknowledge the value of our biodiversity to our way of life, our health, our wealth and our long-term sustainable development.
> Yet, this vital biodiversity is seriously threatened. While being of global significance, the biodiversity of the Pacific is also highly at risk. Extinction rates in the region, especially for birds and land snails, are among the highest in the world.
> There are many reasons why the Pacific has so many threatened species, including the vulnerability of small, isolated islands to impacts such as invasive species, loss of habitat and excessive resource exploitation. The threats in the Pacific mirror global trends.
> According to a 2009 IUCN (International Union for Conservation of Nature) update, 70% of plant species assessed are threatened. IUCN notes that 1 bird out of 8, 1 mammal out of 4, and 6 marine turtles out of 7 are all threatened with extinction. Seventy five percent of the world's fisheries are fully or over exploited and one-third of reef-building corals around the world are threatened with extinction. Climate change is also likely to have a significant impact—up to 70% of the world's known species risk extinction if the global temperatures rise by more than 3.5 degrees Celsius. Species loss is forever.
> Biodiversity is vital to Pacific life. It ensures clean air and water and provides the basic building blocks for sustainable development in the Pacific.
> Our oceans cover more than 70% of the Earth's surface. Fish provides up to 90 percent of animal protein intake in the rural areas of Pacific islands countries and territories. In the Pacific, most of the fish eaten by rural people comes from subsistence fishing and per capita consumption in rural areas often exceeds 50 kilogrammes of fish per year. We need to make a conscious effort to reduce the rate of biodiversity loss around the world so that we can continue to live as we do.

Terminal Impact: Biodiversity Loss Causes Extinction

We must protect biodiversity or face extinction.

"Rachel's Environment & Health News, The Four Horsemen – Part 2: Loss of Biodiversity," **Environmental Research Foundation**, December **1995**

> Extinctions are dangerous for humans, but it is not immediately clear just how dangerous. In their 1984 book, EXTINCTION, Paul and Anne Ehrlich compare our situation to an airplane held together by rivets. As time goes on, an occasional rivet will pop out. No single rivet is essential for maintaining flight, but eventually if we pop enough rivets, a crash seems certain to occur. So it is with humans and the other species with whom we share the planet. No single species is essential to our well being, yet it is certain that we need biological diversity in order to survive. Therefore each time we diminish diversity, we take another irreversible step toward the brink of a dark abyss. In the process, we desecrate the wondrous works of the creator.

Terminal Impact Extension: Biodiversity Loss Causes Extinction

Upholding biodiversity is absolutely critical to human life.

Patrick **Parenteau**, Director, Environmental Law Center, Vermont Law School. William and Mary Environmental Law and Policy Review Spring, 19**98** 22 Wm. & Mary Envtl. L. & Pol'y Rev. 227, p. 236-7

> The consequences of this loss of biodiversity are not always readily apparent, but they are real and serious. The consequences can be reckoned in at least two ways: from an anthropocentric perspective exclusively concerned with human desires; and from a biocentric perspective that considers the intrinsic worth of all life on earth. Either approach reveals the significant value of biodiversity, and the high opportunity costs that attend its demise. Humans derive both direct and indirect benefits from biological resources. Direct benefits include medicine, food, shelter, and clothing. For example, in the United States, forty percent of health care prescriptions come from natural organisms (plants, animals and microorganisms). Biodiversity supplies much of the protein and nutrition for humans, as well as the wild seeds used to hybridize crops in the race to stay one step ahead of chemical-resistant pests. Recreation and eco-tourism, often enhanced by the presence of "charismatic megafauna," such as the wolf, the eagle and the grizzly bear, also generate significant economic value. The indirect benefits of biodiversity are even more compelling. These include so-called ecosystem services such as air and water quality maintenance, climate regulation, nutrient cycling, waste treatment, soil formation, pollination, flood control, and water supply. For example, wetlands act as sponges and buffers, soaking up floods and dissipating storms; they also function as kidneys, filtering pollutants and helping to maintain water quality in rivers and lakes; and they are the nurseries that support the nation's commercial and recreational fisheries. The destruction of wetlands throughout the Mississippi River Basin was a major contributing factor to the devastating 1993 floods. Likewise, wetland loss in major estuaries such as the Chesapeake Bay reduces their assimilative capacity, accelerating eutrophication and causing other water quality problems. Pollination is another critical ecosystem service. Approximately ninety percent of the world's food supply depends on a little over 100 species of plants. An important question, therefore, is whether pollination is a limiting factor in the productivity of these species. In a landmark field experiment conducted in 1993, scientists found that forty-six percent of a representative sample of 186 species were "pollinator-limited," meaning that pollination was more important than all the other factors that affect plant growth, including weather and soil fertility. Assuming it accurately reflects natural conditions, the implications of this finding are profound; it means that almost half of the world's food supply may depend on wild pollinators, lending credence to Dr. Wilson's thesis that "little things" may indeed "run the world." Although putting a dollar value onthese natural services is difficult, economists have begun to try. In a path-breaking study in 1996, a team of scientists and ecological economists, headed by Robert Costanza of the University of Maryland, estimated the value of seventeen ecosystem services for sixteen biomes to be in the range of $ 16 to 54 trillion. At an average of $ 33 trillion per year, this represents almost twice the total gross national product of all the nations of the world combined. Further, according to the authors, these are conservative estimates that probably understate the true value. The authors also acknowledge that some ecosystem functions are irreplaceable, and some values are priceless.