

Restoring Hazardous Landscapes Lessons from the US Department of Defense

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PLSC 215b/EVST 255b
Environmental Politics and Law*

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Vieques & Environmental Law

- National Environmental Policy Act (1969)
- Endangered Species Act
- Federal Water Pollution Control Act (Clean Water Act)
- Resource Conservation and Recovery Act (RCRA)
- Comprehensive Environmental Response, Compensation and Liability Act (Superfund)
- Federal Wilderness Act

CERCLA

Comprehensive Environmental Response, Compensation and Liability Act 1980. Amended by SARA in 1986.

- Polluter Pays Principle
- Designed to clean up hazardous waste sites and respond to hazardous spills.
- Mechanisms to clean up abandoned sites or sites owned by bankrupt parties.
- Government funding for cleanup derived from “responsible parties” or tax revenues from industrial sectors.
- “Joint and several liability”: any one responsible party can be held liable for the entire amount of cleanup. It is then the burden of that responsible party to track down and get contribution from other potentially responsible parties.

National Priorities List (NPL):

Most Hazardous Sites in Nation

- Hazard Ranking System: National Priorities
- 1223 on the list. 773 Sites restored.
- 3000 Potential NPL sites....EPA: 232 likely to be listed...
- 70% of Listed sites being restored by original polluters.
- Remaining 30% Account for 50% of federal funds.
- Government Expenditures: \$1-1.5 billion per year.
- Trust Fund: Tax Eliminated by Congress in 1995
- Shift from Trust Fund to general taxpayers.
- EPA Cost Recovery: \$100-400 million per year.

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2000 DOD facilities are seriously contaminated.

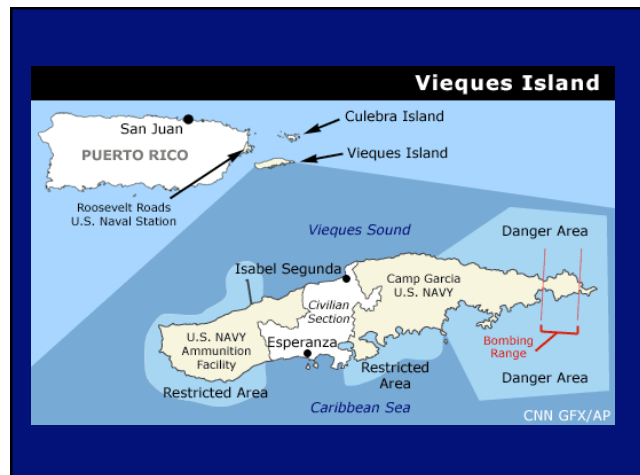
750 training ranges that contain unexploded ordnance or explosive on 15 million acres of land.

Clean Up Estimate: \$20 billion to permit their conversion to other land uses.

Restoration not expected for 70 years, constrained by funding rate, roughly \$200 million per year.

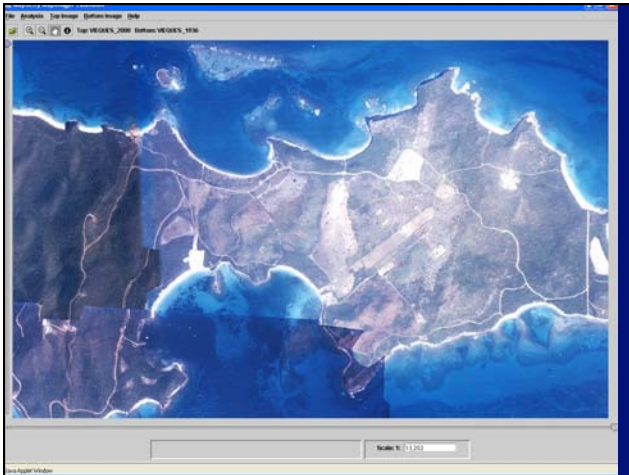
Problem of Historical Reconstruction

1. What Damage Has the Navy Caused?
2. How Certain is the Evidence? Standard of Proof?
3. Does it Justify Environmental Restoration?
4. Does it Justify Individual Compensation for Health Loss?
5. What is the Value of a Lost Home and Job?
6. What is the Value of Lost Health or Life?
7. Where Should the Burden of Proof of Causation Lie?
8. Who Should Own Knowledge of Hazards Found on Island?
9. What Level of Environmental Restoration Should be Required?
10. National Security vs. Environmental Quality & Health: Tradeoff




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NY Times
Mar 4, 1950

- 150 Ships Converge on Vieques
- 170 Planes
- 80,000 Servicemen



SEA AND AIR 'WAR' RAGES ON ATLANTIC

Invading Force Steams South in Largest U. S. Amphibious Maneuver of Peacetime

By HANSON W. BALDWIN
Special to The New York Times.

ABOARD THE TRANSPORT GENERAL BUTNER, EN ROUTE TO VIEQUES, March 3—A sprawling sea-air "war" raged over wide latitudes of the Atlantic today from the vicinity of Norfolk, Va., and Bermuda to Puerto Rico as Operation Portrex, the nation's largest peacetime amphibious maneuver, approached its climax.

The vanguard of more than 150 ships converging on the island of Vieques, near Puerto Rico, moved through Mona Passage today, while astern of the advance and support force, strung out over hundreds of miles of wind-whipped sea, were convoys and a striking and covering force of carriers.

1971

Navy to Yield Culebra Targets; 13-Year Island Struggle at End

By DANA ADAMS SCHMIDT
Special to The New York Times

WASHINGTON, April 1—The islanders of Culebra have won a 13-year-long struggle to prevent the United States Navy from using parts of their island as training targets. But it will take a few years for the Navy to leave the small Puerto Rican island.

Secretary of Defense Melvin R. Laird announced today that he would "make the final decision where to relocate the naval training target areas now on Culebra" by the end of next year.

A survey already carried out by the Defense Department between Maine and Mexico came up with several possible partial or complete alternatives to the Culebra range, including the following:

Outside the Puerto Rico area, the study suggested Marquesa Key, southwest of Key West, which, it said, met geographical and weather requirements but was a bit small. The key would have to be enlarged by building up adjoining reefs. This would cost \$40-million to

Culebra Bombing Curtailed: Apr. 2, 1971 NYT: p. 64.

Testing Ground




- Napalm
- Agent
- Orange
- Chaff
- Depleted Uranium
- White Phosphorus
- Dioxins
- Benzene
- Arsenic
- Copper
- Manganese
- Cobalt
- Iron
- Aluminum
- Phenols
- Sulfates

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1978

- 1518 Hrs. Air-Ground Bombing
- 107,206 Missiles Fired
- 1,017 Hrs Ship to Shore Bombing
- Total: 5 Million lbs Ordnance



Marine Amphibious Training

Endangered and Threatened Species:

- ❖ Manatees
- ❖ Pelicans
- ❖ Turtles



USS Killen
1958 Enewetak Atoll

Operation Hardtack

- ❖ Wahoo
- ❖ Umbrella



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NATO & Allied Participation

➤ US Leased Bombing Rights to NATO Countries and other Allies

(Canada, Germany, France, Britain, Chile, Argentina)

"ONE STOP SHOPPING"

Raytheon, General Electric, Lockheed Martin supplied and sold diverse weapons systems on Vieques.

This opportunity was advertised by the Atlantic Fleet Weapons Training Facility at Roosevelt Roads.

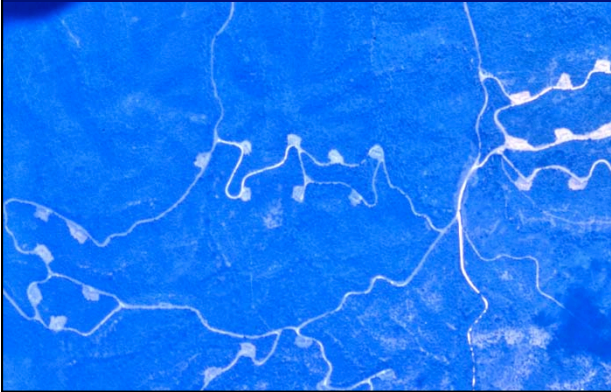
The site promoted their opportunity to try and purchase both conventional and unconventional weapons. The advertising including the following attractions:

- "Suitable coast for over-the-beach and aerial troop movement."
- "Live-fire capability for most non-conventional weapons."
- "Simultaneous conduct of gunnery, missile firing, ATG ordnance delivery...amphibious, small arms, mining, and underwater operations."
- "Missile firing options: air-to-air, air-to-surface, surface-to-air, surface-to-surface."
- By the middle of the 1990's the U.S. received nearly \$85 million per year from its allies in return for their right to use the island for weapons testing and training.

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Weapons Storage Bunkers: West End



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12 Foot Crater in Coral Reef: Dr. Porter Univ. of GA



National Environmental Policy Act 1969

- **Purpose (Sec. 2, 42 USC § 4321).**
- The purposes of this Act are:
 - To declare a national policy which will encourage productive and enjoyable harmony between man and his environment;
 - To promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man;
 - To enrich the understanding of the ecological systems and natural resources important to the Nation;
 - And to establish a Council on Environmental Quality.

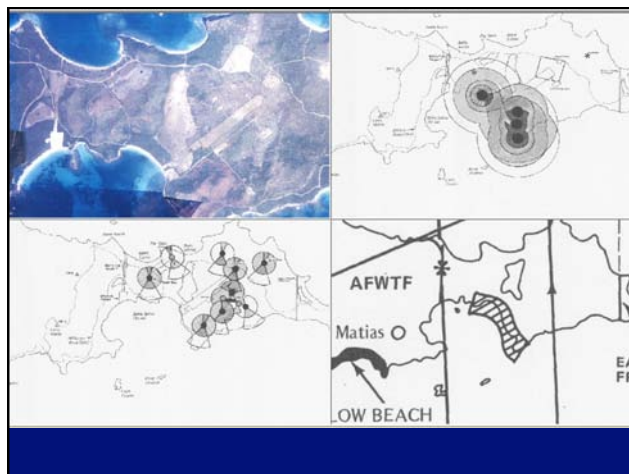
Declaration of National Environmental Policy

- (a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

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Declaration of National Environmental Policy

- Sec. 102 [42 USC § 4332].
- The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act, and (2) all agencies of the Federal Government shall --
- (A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;
- (B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by title II of this Act, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;



Centers for Disease Control
Agency for Toxic Substances & Disease Registry

**Inconclusive
by
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*Waste,
Fraud
and Abuse
in Federal
Environmental
Health
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ENVIRONMENTAL HEALTH NETWORK
NATIONAL TOXICS CAMPAIGN FUND

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Wilderness Act of 1964 Public Law 88-577

WILDERNESS SYSTEM ESTABLISHED STATEMENT OF POLICY

Sec. 2. (a) In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness.

For this purpose there is hereby established a **National Wilderness Preservation System** to be composed of federally owned areas designated by Congress as "wilderness areas", and these shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness; and no Federal lands shall be designated as "wilderness areas" except as provided for in this Act or by a subsequent Act.

DEFINITION OF WILDERNESS Section 2 c

(c) A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.

Wilderness...Further Definition....Section 2 Con't.

An area of wilderness is further defined to mean in this Act

An area of undeveloped Federal land retaining its primeval character and influence,

- without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which
 - (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable;
 - (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation;
 - (3) has at least 5000 acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and
 - (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.



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Endangered Species Act: SEC. 2.

The Congress finds and declares that-

- (1) various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation;
- (2) other species of fish, wildlife, and plants have been so depleted in numbers that they are in danger of or threatened with extinction;
- (3) these species of fish, wildlife, and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people;
- (4) the United States has pledged itself as a sovereign state in the international community to conserve to the extent practicable the various species of fish or wildlife and plants facing extinction, (b)

Endangered Species Act 1973

PURPOSES-

The purposes of this Act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species.

POLICY

It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act.

Section 9a Prohibited Acts:

It is unlawful for any person subject to the jurisdiction of the United States to-

- (A) import any such species into, or export any such species from the United States;
- (B) take any such species within the United States or the territorial sea of the United States;
- (C) take any such species upon the high seas;
- (D) possess, sell, deliver, carry, transport, or ship, by any means whatsoever, any such species ...
- (E) deliver, receive, carry, transport, or ship in interstate or foreign commerce, by any means whatsoever and in the course of a commercial activity, any such species;
- (F) sell or offer for sale in interstate or foreign commerce any such species;

Overview of Endangered Species Program

- 744 U.S. species of plants are listed.
- 516 U.S. species of animals are listed.
- 27 U.S. species of animals are currently proposed for listing.
- 4 U.S. species of plants are currently proposed for listing.
- 450 U.S. species have designated critical habitat.
- 117 species of animals are candidate species.
- 139 species of plants are candidate species.
- 437 habitat conservation plans have been approved.
- 1017 species have approved recovery plans.

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Threatened (T) and Endangered (E) Species on/near Vieques

T	Iguana, Mona ground (<i>Cyclura stejnegeri</i>)
E	Manatee, West Indian (<i>Trichechus manatus</i>)
E	Parrot, Puerto Rican (<i>Ama-ona vittata</i>)
E	Pelican, brown (<i>Pelecanus occidentalis</i>)
T	Sea turtle, green (except where endangered) (<i>Chelonia mydas</i>)
E	Sea turtle, hawksbill (<i>Eretmochelys imbricata</i>)
E	Sea turtle, leatherback (<i>Dermochelys coriacea</i>)
T	Sea turtle, loggerhead (<i>Caretta caretta</i>)
E	Seal, Caribbean monk (<i>Monachus tropicalis</i>)

ESA and Economics: Utilitarian Balancing

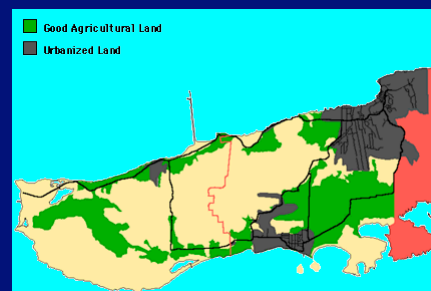
- Statute requires designation of critical habitat at time of species listing
- Only 1/3 of all species have designated critical habitat
- FWS may decline to designate based upon economic considerations following an economic analysis.

“Taking” Endangered Species

- Section 9 expressly prohibits taking an endangered species.
- Take: “to harass, harm, pursue, hunt, shoot, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”
- Also: To impair habitat that may indirectly cause death or injury by disrupting feeding, breeding, or other critical species functions.
- See www.earthjustice.com

The Vieques Land Transfer Act of 1995

Requires the Secretary of the Navy to return 8,000 acres of land to the municipality of Vieques. (Bill HR 2159)



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13 Groundwater Plumes...Since 1993:

- 3000 pounds of solvents removed
- 1000 pounds of fuels removed from groundwater
- 8 Plumes Undergoing Treatment and Remediation
- 3 Plumes will have Treatment Facilities Built
- 2 Plumes Under Investigation
- 3 “Areas of Concern” Under Long Term Monitoring

Vieques Lessons...

Knowledge is Power:

- Intellectual Property Rights: Classified Information
- Who Conducts Science
- How Does Knowledge Flow
- Interpretation Demands Expertise
- Science Normally Proves No Causal Relation
- New Evidence of Risky Behavior Generates Defensive Attitude in Government

Lessons Continued...

- Cold Warfare: Unanticipated Toxic Aftermath
- Costs of Cleanup Far Exceed Prevention Costs
- Decision Making Transparency Builds Public Trust
- Susceptibility: Income, Age, Exposure, Gender, Ethnicity, Location
- Security: Fear of Terrorism Has Trivialized Health & Environmental Concern of Government but Not the Public
- Security Has Many Forms: Physical, Economic, Health, and Freedom from Toxic Substances

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