



*A Toxic Legacy:*  
**The U.S. Military in the Philippines and Puerto Rico**

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## Introduction

*“Every week in Vieques I hear of yet another person who has developed cancer. I have seen the arid land, dry by the constant bombing. I have bathed in its beaches, where bombs and military scrap lie at the bottom. I have heard the sailors call us ‘stupid,’ ‘roaches,’ and ‘whores’...I have seen children drawing things that are not for children to draw. I have seen sadness in their eyes, some of them also suffering from cancer. And I have seen their mother’s suffering.”*

-Maria Reinat Pumarejo, Vieques resident

Wherever there is military occupation, people suffer displacement, economic dislocation, and degradation of their natural environment with attendant health consequences for the surrounding communities. There is also a history of popular resistance to military occupation, as people seek to reclaim their land, their resources and their livelihoods. This paper examines two case studies of U.S. military presence – in the Philippines and in Puerto Rico. It outlines the environmental health issues common to both, as well as the ways both communities have struggled against the military to reclaim their lands and build a sustainable future.

The U.S. military is responsible for the contamination of more than 29,000 sites worldwide, yet it has largely escaped responsibility for the damage it has caused to both the environment and the people living adjacent to these sites (Military Toxics Project, 2004). International and U.S. environmental legislation<sup>1</sup>, which intend to hold entities accountable for their pollution, do not necessarily require compliance by the U.S., especially in regards to the U.S. military. In fact, the U.S. Department of Defense (DoD) has violated and continues to violate the environmental rights of communities who neighbor DoD installations and facilities, in this country and abroad. Improper handling, storage, and disposal of hazardous materials; illegal toxic waste dumping; and standard military procedures such as the development, testing, and maintenance of ammunition, artillery, and heavy equipment make the DoD one of the largest polluters in its own country and in the entire world (Shulman, 1990). Extensive reports have discussed the probable causality of increased health problems suffered by communities surrounding military installations, nationally and globally (Shulman, 1990; Renner, 1991; Siegel &

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<sup>1</sup> U.S. federal legislation, such as the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, and the Toxic Substances Control Act, all contain language that require compliance of federal agencies. Executive Order (EO) 12088 furthers the goal of these environmental laws by extending them beyond the borders of the U.S. However, language within these allow for Presidential exemptions or waivers, usually in the name of “national security” (Shulman, 1992; 189-194).

Cohen, 1991; Shulman, 1992; Schettler, 1995; Bertell, 1998; Lindsay-Poland & Morgan, 1998; Alcid, 2002). Reported health risks linked to environmental toxic exposure from DoD installations include a wide range of reproductive, neurological, immune, and other organ dysfunctional disorders (Kirkpatrick et al., 2002). Other health risks not related to hazardous waste and chemicals are injury by unexploded ordnance (UXO), such as bombs, rockets, or ammunition (Shulman, 1990).

A 1998 EPA survey of phased-out military ranges concluded that contamination resulting from used or fired munitions including UXO is found on almost all ranges. Unexploded ordnance has been found on 85% of the former military ranges, and chemical or biological weapons are known or are suspected to exist at over 50% of the ranges. These ranges potentially pose significant risks to human health and safety because of their proximity to surrounding communities (Military Toxics Project, 2004).

## **Historical Context**

1898 was a high-water mark for U.S. imperial expansion, as the U.S. took possession of the Philippines, Cuba, Puerto Rico and Guam after its victory over Spain in the Spanish-American war (Ignacio et al., 2004). Because both Puerto Rico and the Philippines were strategic locales of interest for the U.S. government, they were subject to the direct economic, political, and military rule of colonialism. Even though there were differences between the two in the form of colonial domination, the toxic legacy of over 100 years of military presence is remarkably the same.

### *Philippines*

For over a century, the United States maintained more than 20 military installations in the Republic of the Philippines (RP) (Simbulan, 1983). The two largest operating U.S. military bases in the Philippines were Subic Bay Naval Facility and Clark Air Force Base in the provinces of Zambales and Pampanga, respectively. The Far East archipelago of the Philippines, which had formerly hosted one of the largest U.S. naval bases operating outside of the U.S., including many others, presently suffers from a major environmental crisis in which the health and human safety of communities nearby or adjacent to the former installations have been impacted (People's Task Force, 1999). A 1992 U.S. General Accounting Office (GAO) report affirmed the presence of contaminated sites at each of its

former installations in the Philippines, and admission that standard military procedures in the areas have not been in compliance with U.S. environmental laws.

### *Vieques*

Vieques is an island municipality off the eastern coast of Puerto Rico. Long known as the “Crown Jewel of the Caribbean,” it was historically one of the most productive fishing islands in the area. Sixty years ago the U.S. Navy took over 75% of the island and converted it into a bombing range, displacing the 9,000 residents and sandwiching them into the central portion of the island. This takeover by the Navy disrupted the economic life of a largely self-sufficient island and created economic dependency on the Navy. Constant naval bombardment destroyed the fishing, devastated the environment through contamination from munitions and unexploded ordnance, and created tremendous health risks to its residents (Berman-Santana, 1996).

## **Environmental Impacts of Military Occupation**

### *Philippines*

The 1992 U.S. General Accounting Office report revealed that the U.S. Department of Defense (DoD) practices at the former Philippines installations has resulted in major environmental contamination and degradation, in which “cleanup and restoration costs could approach Superfund<sup>2</sup> proportions.” The report lists various sources of contamination including environmental problems with underground storage tanks, fire-fighting training facilities, and sanitary sewer systems—all of which would fail U.S. environmental regulations (U.S. GAO, 1992). At former U.S. military installations in the Philippines, “the fuel and chemicals used in fire-fighting exercises seep directly into the soil and water table, and at the Navy facility, the overflow goes directly into Subic Bay” (GAO, 1992). The GAO report describes additional examples of hazardous waste “disposal” in this former colony:

- The Subic Bay Navy Facility does not have a complete sanitary sewer system and treatment facility. Instead, sewage and process waste waters from the naval base and air station industrial complexes are discharged directly into Subic Bay. Only 25 percent of the 5 million gallons of sewage generated daily is treated.

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<sup>2</sup> The Superfund is administered by the Environmental Protection Agency (EPA) to clean up the nation’s worst hazardous waste sites (EPA, 2004).

- Lead and other heavy metals from the ship repair facility's sandblasting site drain directly into the bay or are buried in the landfill. Neither procedure complies with U.S. standards, which require that lead and heavy metals be handled and disposed of as hazardous waste.
- The Subic Bay Navy Facility's power plant contains unknown amounts of polychlorinated biphenyl (PCB)<sup>3</sup> and emits untreated pollutants directly into the air. No testing has been performed to analyze the content of emissions, but officials stated that air emissions would not meet U.S. clean air standards.

A U.S.-based Filipino/American environmental group states that dozens of sites have been contaminated “with poisonous solvents, asbestos, mercury, lead, PCBs, unexploded bombs, and other harmful substances” (Filipino/American Coalition for Environmental Solutions [FACES], 2004). Government Accounting Office (1992) officials testify that at the former Clark Air Base and Subic Bay Naval Facility, there are “problems with underground storage tanks,” and that the tanks “lack leak detection equipment.” The contents of the tanks were not identified in the report, but speculation of its contents can be made from the types of activities conducted at the bases. For example, U.S. Congressional Hearings admitted that nuclear weapons were stored at Subic, and that Subic served “as a port of U.S. nuclear-capable ships and submarines, Clark for U.S. nuclear-capable planes” (Simbulan, 1983, 220-221; Schirmer, 1986). The U.S. GAO report (1992) affirms that DoD's operations have resulted in environmental damage at its former military installations in the Philippines; however, the effect on human health and safety in nearby communities was not addressed.

### *Vieques*

Sixty years of Naval bombing on Vieques have left heavy metals in the soil and toxics in the water supply. Between 1990-1992, the Navy dumped approximately 1,100 barrels of toxic waste in the coral reefs of Vieques (Berman-Santana & Lindsay-Poland, 2001). Additionally, Navy documents confirm the firing of Depleted Uranium (DU)—in blatant violation of international law. In 1999, the EPA announced that the Navy had violated the Clean Water Act 102 times by dumping toxic waste into the waters, citing discharges of lead, cadmium, arsenic, and cyanide (Berman-Santana & Lindsay-Poland, 2001).

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<sup>3</sup> Polychlorinated biphenyls (PCBs) are extremely toxic. Acute toxic effects in the environment include death of animals, birds, or fish, and death or low growth rate in plants. Chronic effects from PCBs may include shortened lifespan, reproductive problems, lower fertility, and changes in appearance or behavior (EPA Fact Sheet).

These same toxic metals have been found in the vegetation. A devastating 2001 report issued by Puerto Rican biologists revealed that:

vegetables and plants growing in the civilian areas of Vieques are highly contaminated with heavy lead, cadmium, copper and other metals ...edible crops had metals substantially above the maximum standard... this is consistent with the thesis that heavy metals are deposited in the civilian area through air dispersion by the easterly trade winds blowing directly from the bombing zones (Massol, 2001).

Squash leaves found on Vieques had a concentration of lead 6,000 times heavier than squash plants in the U.S. (Berman-Santana & Lindsay-Poland, 2001).

## **Impacts on Human Health**

### *Philippines*

A myriad of adverse health outcomes, including respiratory, nervous system, congenital, and female reproductive problems, as well as cancer and leukemia, have been reportedly linked to toxic exposure near former DoD installations in the Philippines (Bertell, 1998; Alcid, 2002). Unfortunately, there is a dearth of published research on this issue for several reasons. First, the communities most affected by toxic contamination are the most disenfranchised and suffer from extreme poverty. Second, the impacted communities constitute a small minority and scientific studies may not demonstrate any significant findings. Finally, a relentless debate continues over the causal relationship of illness and exposure to environmental threats. The majority of health reports rely on personal testimonies in the media.

Aimee Suzara, a Filipina-American friend and colleague, testifies of her personal experience when she visited the surrounding communities:

As early as 1991, reports of vomiting, diarrhea, respiratory problems and miscarriages began to rise from CABCOM.<sup>4</sup> 'Many children were sick,' laments former CABCOM resident Alberto Carlos; 'even the dogs were sick. Many people lost their hair, and [their] skin was damaged. Almario Escoto, who still suffers from lung problems, recalls, 'Many died; [for example] children died in the uterus.'

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<sup>4</sup> Clark Air Base Command (CABCOM) was a government evacuation center for people displaced by the explosion of Mt. Pinatubo. The site was located on a former motor pool of the air base (International Grassroots Summit on Military Base Cleanup, 1999).

The U.S. denies any legal responsibility or accountability for their toxic mess, and maintains that previous international agreements<sup>5</sup> assert this position (GAO, 1992). When pressured by local community groups asserting their right to a safe environment, Philippine government officials have stated that, “their hands are tied because [the United States] are not *legally* bound to take responsibility for the mess, even if morally, they are” (emphasis added) (People’s Task Force, 1999).

### *Vieques*

More than a third of the inhabitants of Vieques suffer from a range of serious diseases (Chapman, 2001). The 9,300 residents of Vieques have a cancer rate 27% higher than the rest of Puerto Rico, and those ill with cancer are dying at a rate 55% higher than the rest of Puerto Rico (Nazario, 2002). Cancers of the breast, cervix and uterus have increased by 300% over the last 20 years (Eglund, 2004). The risk of developing childhood cancer in Vieques is 3.5 times greater than in the rest of Puerto Rico (Nazario, 2002).

Islanders also suffer from high rates of birth defects, asthma, skin diseases and other respiratory ailments (Tamayo, 2004). Scientists have long understood what the Navy consistently denies – the link between toxic agents in the community and the health problems of those exposed to environmental contaminants. A research group from the University of Puerto Rico School of Public Health found cadmium, arsenic and lead in the surface dust in the homes in Vieques (Nazario, 2002). In one study of 49 Vieques residents, 45% of them had excessive levels of mercury in their hair or fingernails. Lead causes central nervous system, blood, liver and reproductive problems (Berman-Santana & Poland, 2001). Two independent studies of the cardiac effects of naval bombing showed that 48 out of 50 residents of Vieques suffer from vibroacoustic disease, a thickening of heart tissue commonly caused by exposure to low frequency noise—such as in the type of noise generated in bombing exercises. This condition causes a variety of cardiac disorders, ranging from arrhythmia to death. (Berman-Santana and Lindsay-Poland, 2001).

In February 2001, Viequenses brought a class action lawsuit against the U.S. Navy for more than \$100 million in damages, charging that the epidemic of cancers and other

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<sup>5</sup> The 1947 United States – Republic of the Philippines Military Bases Agreement relieves the U.S. of any environmental responsibility caused by its actions at DoD installations on Philippine soil.

serious disease has been caused by contamination from Naval ammunition, including Depleted Uranium (DU).

One of the plaintiffs on the island is father-of-two Rolando Garcia, who is only 32 but looks nearer 50. His test results show him to be contaminated with a bewildering range of heavy metal, the most worrying to him being uranium. . Every hair on his body has dropped off and he now walks in slow, shuffling steps, making a tremendous effort just to cross the living room (Chapman, 2001).

Professor Doug Rokke, former head of the Pentagon's Depleted Uranium Project denounced the U.S. Navy's use of Vieques as a test site because of the health risks posed by DU. He called for environmental remediation, medical care to Vieques' inhabitants who have suffered exposures, and a cessation of all Naval activities on Vieques "to protect our fragile environment and the health of all living things" (Rokke, 2004). In 2003, Vieques was designated a Superfund site and Congress recently appropriated \$1 million for the clean up (CRDV, 2004).

## **U.S. Military Response: Above the Law**

*"We're in the business of protecting the nation, not the environment."*

-U.S. Military Installation Commander<sup>6</sup>

The Department of Defense (DoD) is responsible for over 80% of all federal facilities on the Superfund's national priority list. Its operations have produced over 29,500 environmental restoration sites on 11,000 military properties, exposing neighboring populations to contaminated soil, air groundwater and drinking water (Military Toxics Project, 2004). Despite its history of massive environmental contamination, it won waivers for its training operations from the Endangered Species Act and the Marine Mammals Protection Act in 2003 by using Congress' wartime deference to the military. It is currently trying to go even further by having its training ranges exempted from laws governing air pollution, munitions disposal and toxic waste (Boston Globe, 2004). The Pentagon is currently seeking exemption from the Clean Air Act, the Resource Conservation and Recovery Act<sup>7</sup> (RCRA) and the Comprehensive Environmental Response, Compensation

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<sup>6</sup> Quoted in Shulman, 1992, pg.13.

<sup>7</sup> The Resource Conservation and Recovery Act (RCRA) regulates the handling of solid waste and hazardous waste, and outlines corrective actions for noncompliance, subjects all branches of federal government to comply (EPA, 2004).



and Liability Act<sup>8</sup> (CERCLA). This proposal would not only exempt conventional munitions and UXO from regulations, but would also place chemical weapons, depleted uranium, cluster munitions, propellants such as perchlorate, heavy metals such as lead and other toxics outside of all CERCLA and RCRA imminent and substantial endangerment provisions (Military Toxics Project, 2004). This attempt to move the military out of reach from environmental protection laws was defeated last spring, but the Pentagon is still lobbying to escape its responsibilities.

## **Communities Mobilized for Justice**

### *Vieques*

While the U.S. military continues to try to hold itself above the law by seeking exemption from environmental law in the name of national security, communities devastated by the DoD have organized in their communities to drive the military out and demand a clean up of the land. The people of Vieques have always resisted the occupation by the Navy, but the movement experienced a dramatic resurgence in 1999 when a naval bomber missed his target and killed civilian David Sanes. For many people on Vieques, this was the last straw. More than 1,000 Viequenses and supporters were arrested for civil disobedience—including the mayor, several priests, and congressional representatives—as people decided to use their bodies as human shields by entering the restricted zones during live bombing practices to force the Navy to stop the bombing. This broad-based, militant mobilization paid off, and the Viequenses won an historic victory on May 1, 2003, when the U.S. Navy was forced to close the bombing range and leave the island.

The Navy's departure, however, is only the first step towards sustainable development of the island. The people of Vieques continue to demand: 1) a genuine soil clean-up by the U.S. government, to levels necessary for future projects of housing, education and tourism; 2) genuine community participation in all matters related to land management and a removal of the Fish and Wildlife Department, the current federal agency controlling the

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<sup>8</sup> Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as the Superfund Act, authorizes the federal government to cleanup hazardous materials at brown fields, or closed sites where contamination has been identified. This act also states that the government can recover the cost of cleanup and damages by suing the liable party (EPA, 2004)

former military base from the island; and 3) recognition of the Viequenses rights over the land.

### *Philippines*

In the Philippines, Clark and Subic bases were closed in 1992 after decades of protest. Today, several community-based organizations in the Philippines are dedicating themselves to holding both the U.S. and Philippine governments accountable for its actions and pressing the military to clean up and restore the land to the communities who rightfully claim them.

### **Conclusion**

As a signatory of the 1982 United Nations World Charter for Nature, the United States has an international responsibility to abide by a set of moral and ethical environmental standards. Section III, Article 20 and 21 of the World Charter states that, “military activities damaging to nature shall be avoided,” and that:

states..public authorities, international organizations...shall...ensure that activities within their jurisdictions or control do not cause damage to the natural systems located with other States or in areas beyond the limits of national jurisdiction (1982).

With increased public awareness, coalition building, and extensive research, communities can pressure the governments of the Philippines, Puerto Rico, and the United States to follow this global code of ethics and take responsibility for the suffering linked to toxic contamination at former U.S. military sites.

In the words of one Viequense, “The struggle for peace in Vieques is a struggle for people everywhere who believe that life, liberty and the pursuit of happiness is worth fighting for, even against the most powerful military force of our times” (Rabin, 2004).

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