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## Whose Line in the Sand: Can Environmental Protection and National Security Coexist, and Should the Government Be Held Liable for not Attaining This Goal?

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# **WHOSE LINE IN THE SAND: CAN ENVIRONMENTAL PROTECTION AND NATIONAL SECURITY COEXIST, AND SHOULD THE GOVERNMENT BE HELD LIABLE FOR NOT ATTAINING THIS GOAL?**

EKUNDAYO B. GEORGE, ESQ.

## **I. INTRODUCTION**

This Article seeks to find and synthesize relevant modern definitions for environmental protection and national security and to show that the two concepts are interrelated and compatible. Working from the premise that a state's two central roles are to provide for the military security and social welfare of its people, this Article will further show that an emphasis on one of these concepts to the detriment of the other is not acceptable.

Maintaining a proper balance between these two roles has become such a pressing national and international priority today, that the state should be held to the highest standards of accountability when it fails to reach or keep that balance in its provision of military security and social welfare.

Part II will explore the framework of the debate within which finding this proper balance has grown to be such a pressing national and international priority. Part III will explore evolving definitions of military and national security, showing how "security" today can no longer be viewed in strictly military terms. Part IV will explore some of the historical and theoretical links between social welfare and environmental protection, showing how they have come to be grouped under one heading. This Part will conclude with new, relevant, and modern definitions for environmental protection and national security, definitions that include both social welfare and military security.

Part V will explore some modern attempts to maintain the uneasy coexistence of national security and the environment in those activities conducted, and on those federal lands used, in "energy" or "national defense" capacities. Part VI will identify the challenges to be overcome before national security and environmental protection can fully coexist. The part will also give a number of recommendations as to how those challenges might be best addressed. In achieving this dual goal, Part VI will also consider the way in which the nation's courts have ruled on a number of

issues that are central to the enforcement of environmental laws and regulations, and liability for noncompliance therein. The part will explore regulatory imperatives, standards, guidelines and assorted issues of accountability.

The Article will conclude by showing how these and other factors can and do come together for the coexistence of national security and social welfare, ensuring that national security interests respect and comply with environmental laws and regulations.

## II. FRAMEWORK

### A. *The Pressing National and International Priority*

#### 1. A Shared Asset

We all share "the One Earth."<sup>1</sup> The land is our wealth, and it sustains us, as human beings having lived off the land from time immemorial. The great importance placed on property rights within many nations shows just how highly we value these lands. Even the shared property or "communal" rights of socialist nations and other community-based societies can be read as enforcing this "shared earth" maxim, and ensuring that all who may be touched by its mismanagement shall play some part in its use and management. This understanding is a central tenet of the World Wildlife Fund, which holds that federal lands "are the property of all citizens, and their management should be based on a land ethic, sound principles of sustainability, and a strong sense of duty to future generations."<sup>2</sup>

Land is so central to the human psyche that it has often spawned conflicts and wars. These have resulted from a pure desire for land,<sup>3</sup> a desire

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<sup>1</sup> Norman Myers, *Ultimate Security: The Environmental Basis of Political Stability* 31-34 (1993) (describing "the One Earth" perspective).

<sup>2</sup> WORLD WILDLIFE FUND, *CHOOSING A SUSTAINABLE FUTURE: THE REPORT OF THE NATIONAL COMMISSION ON THE ENVIRONMENT* 118 (1993) [hereinafter WWF].

<sup>3</sup> The conflict between the Israelis and the Palestinians in the occupied territories is a pure question of the land and who should have it. In an interminable war over some nine miles of land, a war that is often referred to as "Israel's Vietnam," casualties had, at the time of Kaplow's writing, included some 897 Israelis, 10,000 Lebanese civilians, and approximately 1,400 Hezbollah fighters. Larry Kaplow, *Israeli, Hezbollah Fighters in Lebanon a World Apart*, ATLANTA J. CONS., Feb. 28, 1999, at B1.

for something that came with the land,<sup>4</sup> or a desire to eject another party from the land.<sup>5</sup> What is or should be the proper role of a government in such a contentious and highly interconnected world? Should it focus exclusively on protecting the land and providing military security, or should it focus exclusively on managing the land and maximizing both its returns and longevity for the greater social welfare?

## 2. The State's Dual Mission

An increasingly popular view is that the state is responsible for providing its citizens with both military security and social welfare.<sup>6</sup> Comprehensive definitions for each of these terms have long proved elusive,<sup>7</sup> but we know that land is the factor linking these two state responsibilities. Land is becoming more important as time passes, for "the principal threat to security and peace stems from environmental breakdown, plus the need for access to natural resources that are increasingly scarce as more people make greater demands upon them."<sup>8</sup> We gain our wealth, security, and well being from the land, which makes it essential to our social welfare. Hence, social welfare must be expanded to include and encompass environmental protection, and environmental protection must likewise be expanded to include and encompass social welfare.

## 3. Security Versus Social Welfare: A Heated Debate

Despite their dual mission of providing military security and social welfare, governments have long focused on providing military security to the

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<sup>4</sup> INGO MÜLLER, *HITLER'S JUSTICE: THE COURTS OF THE THIRD REICH* 94 (Deborah Lucas Schneider trans., Harvard University Press 1991). Nazi Germany in the 1930s began its expansionist land grabs for the "Lebensraum" and "Grossraum" or living space that would come from this larger area that the National Socialist ("Nazi") Party saw as its "natural sphere of influence."

<sup>5</sup> The Balkan conflict of the 1990s has been seen by the International community as a Serbian effort at "ethnic cleansing", in ejecting non-Serbians from the land. R. Jeffrey Smith, *Refugees Scavenge for Shelter in Scorched Earth of Kosovo*, WASH. POST, Aug. 5, 1998, at A14.

<sup>6</sup> ETHAN BARNABY KAPSTEIN, *THE POLITICAL ECONOMY OF NATIONAL SECURITY: A GLOBAL PERSPECTIVE* 199 (1992).

<sup>7</sup> See generally *id.*

<sup>8</sup> MYERS, *supra* note 1, at 12.

detriment of social welfare.<sup>9</sup> As a result, there have already been severe health and environmental consequences and there may well be worse ones to come. The National Cancer Institute and the Centers for Disease Control ("CDC") recently conducted a study<sup>10</sup> on the link between cold war nuclear tests and the incidence of certain cancers in the United States.<sup>11</sup> Preliminary results released in a progress report dated August 2001 give estimates that as many as 15,000 cancer deaths and 20,000 nonfatal cancers in the United States may have been linked to the radioactive fallout resulting from the combined above-ground nuclear tests conducted by Britain, the Soviet Union, and the United States between 1951 and 1962.<sup>12</sup> The study also found that large amounts of radioactive fallout from these tests had been deposited across twelve western states within the Continental United States during the same time span.<sup>13</sup> One notable commentator opines that if governments continue to favor security concerns over and above social welfare or the environment, they will bring us all to ruin. He writes:

Security concerns can no longer be confined to traditional ideas of soldiers and tanks, bombs and missiles. Increasingly they include the environmental resources that underpin our material welfare. These resources include soil, water, forests, and climate, all prime components of a nation's environmental foundations. If these foundations are depleted, the nation's economy will eventually decline, its social fabric will deteriorate, and its political structure will become destabilized. The outcome is all too likely to be conflict,

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<sup>9</sup> KAPSTEIN, *supra* note 6, at 15.

<sup>10</sup> NAT'L CANCER INST. & CTRS. FOR DISEASE CONTROL, FEASIBILITY STUDY OF THE HEALTH CONSEQUENCES TO THE AMERICAN POPULATION FROM NUCLEAR WEAPONS TESTS CONDUCTED BY THE UNITED STATES AND OTHER NATIONS, *available at* <http://www.cdc.gov/nceh/radiation/fallout/falloutreport.pdf>. See Peter Eisler, *Fallout Likely Caused 15,000 Deaths: Study Links Nuclear Tests to Cancer Cases*, USA TODAY, Feb. 28, 2002, *reprinted at* Common Dreams Newscenter website, *at* <http://commondreams.org/headlines02/0228-06.htm>.

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> *Id.* Those twelve states were California, Colorado, Idaho, Iowa, Kansas, Missouri, Nebraska, Nevada, Oregon, Tennessee, Utah and Washington. *Id.*

whether in the form of disorder and insurrection within a nation or tensions and hostilities with other nations.<sup>14</sup>

This is a very bleak prognosis. In fact, scientists, environmental professionals, and other commentators are making increasingly bleak and dire predictions about the future of our environment, both global and domestic. For example, the Union of Concerned Scientists, wrote in 1992 of the inevitable calamity that would result from our then present course of action, if pursued to its logical conclusion.<sup>15</sup>

#### 4. The Growing Consensus

Fortunately, these predictions might not come to fruition just yet, as our growing interconnections have helped us realize that we have many common problems. Today, people and commodities are flowing freely, both within such modern trading blocs as NAFTA and the European Union, and between them. As one observer writes, this creates special challenges for the state in balancing military, economic, and environmental security.<sup>16</sup>

As a result of this heated debate, political leaders and academics around the world have come to a crucial realization. They now realize that in an era of true "Global Capitalism," no individual state, regardless of its military, technological, or economic prowess, can hope to fully isolate or

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<sup>14</sup> MYERS, *supra* note 1, at 20.

<sup>15</sup> See COMM. FOR THE NAT'L INST. FOR THE ENV'T, A PROPOSAL FOR A NATIONAL INSTITUTE FOR THE ENVIRONMENT 7 (1993) [hereinafter CNIE]. The Union of Concerned Scientists wrote:

If not checked, many of our current practices put at serious risk the future that we wish for human society and the plant and animal kingdoms, and may so alter the living world that it will be unable to sustain life in the manner that we know. Fundamental changes are urgent if we are to avoid the collision our present course will bring about.

*Id.*

<sup>16</sup> See KAPSTEIN, *supra* note 6, at 180. He writes:

[S]tates are responsible to their citizens for the provision of military security and social welfare. But in that same international environment, finance, commerce, culture, science, technology, and—increasingly—people are flowing freely. To be sure, the globalization of production provides opportunities for states that are seeking both growth and security.

*Id.*

protect itself against the environmental deeds and misdeeds of others.<sup>17</sup> While external threats are potential dangers,<sup>18</sup> the greatest dangers that we face often come from our own environmental misdeeds.<sup>19</sup> In repeating the call for a broader definition of security, many now stress the view that "[i]f we do not act quickly, there is a risk that environmental deterioration and social disintegration could begin to feed on each other."<sup>20</sup>

It is quite apparent from the debate that people agree that "something" should be done to assure our mutual survival and to make the two goals of military security and social welfare compatible. The will exists; all that remains is to find the best and the most acceptable way.<sup>21</sup>

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<sup>17</sup> MYERS, *supra* note 1, at 12.

<sup>18</sup> The burning of some 600 Kuwaiti oil wells by retreating Iraqi forces in 1991 may have begun as an external threat to Kuwait, but it turned out to be a gross misdeed against humanity. The smoke and black rain caused by those fires traveled for hundreds of miles, and the potential effects on people, flora, fauna, and weather patterns were essentially all ignored. Ken Wells, *Oil Well Smoke from Kuwait Spurs Health Concerns*, WALL ST. J., Feb. 28, 1991, at A8. L. Craig Johnson takes a similarly critical view of the United States' use of agent orange as a defoliant, during the Vietnam War. Studies showed that the majority of crops destroyed had actually been destined for use by civilians, not by the North Vietnamese Army. L. Craig Johnson, *Ecocide and the Geneva Protocol*, 49 FOREIGN AFF., July 1971, at 719.

<sup>19</sup> The Exxon Valdez oil spill of March 24, 1989, makes this point painfully clear. The 10.8 million gallons of oil that spilled killed an estimated 22 killer whales, 2,800 sea otters, 250 bald eagles, 300 harbor seals, and 250,000 sea birds. It also blackened some 1,500 miles of Alaskan coastline and wreaked havoc with the water-based livelihoods of local residents. Many feel the area will never fully recover. Sam Howe Verhovek, *Across 10 Years, Exxon Valdez Casts a Shadow*, N.Y. TIMES, Mar. 6, 1999, at A1, A8.

<sup>20</sup> MYERS, *supra* note 1, at 32 (quoting L.R. BROWN, *REDEFINING NATIONAL SECURITY* (1977)).

<sup>21</sup> See generally B. John Ovink, *Sustainable Development and the Use of Covenants in Environmental Legislation*, 4 U. MIAMI Y.B. INT'L L. 207, 208 (1995). This point is best summarized by B. John Ovink who writes,

[g]overnments, industry, ordinary citizens, and environmental organizations all recognize the existence of environmental problems. However, this realization has not led to practical results necessary to protect the environment. It is imperative that the nations of the world, individually and collectively, take measures to ensure that environmental world stability is maintained.

*Id.*

### III. FROM MILITARY TO NATIONAL SECURITY

#### A. *Traditional Military Security Interests*

##### 1. Broad Political Links

Military security is far more than a question of mere weapons and combat.<sup>22</sup> Political considerations such as maintaining “freedom of action” and protecting vital “national interests”<sup>23</sup> that include sovereignty, territorial integrity, and political self-determination, render obsolete any security strategy that has a purely military focus.<sup>24</sup>

##### 2. Military-Industrial Complex

There is strong academic support for the validity of this link between politics and military security in the notion of the “military-industrial complex.”<sup>25</sup> The commonly understood theory behind this notion “suggests that military decision makers, corporations which produce primarily for the defense sector, and political representatives of regions in which defense spending is concentrated exert pressure for levels of defense expenditure in excess of legitimate national needs.”<sup>26</sup> Who, though, is to determine how much is enough for those “legitimate national interests?” Who will determine what type of planning considerations or models will best meet these economic and political priorities?

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<sup>22</sup> MYERS, *supra* note 1, at 21.

<sup>23</sup> NATIONAL SECURITY AND THE U.S. CONSTITUTION: THE IMPACT OF THE POLITICAL SYSTEM, at 1 (George C. Edwards III & Wallace Earl Walker eds., 1988).

<sup>24</sup> MYERS, *supra* note 1, at 12. Near the close of the last century, the then and longtime Chairman of the Senate Armed Services Committee, Republican Senator John W. Warner, of Virginia, appeared to recognize this fact. He had reportedly “reorganized the armed services panel, creating a subcommittee to focus on terrorism, chemical and biological weapons, and cyber warfare.” Eric Schmitt, *Senate’s New Hand on the Military*, N.Y. TIMES, Mar. 10, 1999, at A17. Warner also favored a Pentagon proposal to appoint a “Terrorism Czar,” a military commander responsible for defending the Continental United States against terrorist attacks. *Id.*

<sup>25</sup> KAPSTEIN, *supra* note 6, at 92.

<sup>26</sup> *Id.* (quoting LEE OLVEY ET AL., THE ECONOMICS OF NATIONAL SECURITY (1984)).



## B. *Traditional Production Priorities*

### 1. Planning Ahead

Questions of how best to balance civilian (economic) and military (political) priorities through centralized control or a laissez-faire approach are integral to accessing, controlling and stockpiling natural resources and other critical raw materials.<sup>27</sup> The United States has a long history of trying a variety of approaches to its stockpiling program.<sup>28</sup> War and hostility constrict traditional trade routes,<sup>29</sup> so a state must plan ahead, stockpile, and effectively manage the inventories that it has on hand at the start of any actual conflict until alternative sources can be found or until the hostilities cease.

### 2. Defense-Industrial Base

A crucial aspect of this inventory management is "surge potential," or the capacity to expand production on very short notice, which is a legal prerequisite for most defense-related producers.<sup>30</sup> These entities have often been commonly classified as the "defense industrial base."<sup>31</sup> According to a 1989 publication of the Center for Strategic Studies, "defense industrial base is defined as the aggregate ability to provide the manufacturing, production, technology, research, development, and resources necessary to produce the materiel for the common defense. . . ."<sup>32</sup> A related definition from the White House, under George Bush, Senior, reads, "[t]he defense industrial base is a critical element of our national security. It is a complicated network of contracting, subcontracting, and vendor firms as well as Defense Department maintenance depots."<sup>33</sup>

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<sup>27</sup> RAYMOND F. MIKESSELL, STOCKPILING STRATEGIC MATERIALS: AN EVALUATION OF THE NATIONAL PROGRAM 2 (1986).

<sup>28</sup> *Id.* at 9-11.

<sup>29</sup> KAPSTEIN, *supra* note 6, at 33.

<sup>30</sup> *Id.* at 68.

<sup>31</sup> *Id.* at 92.

<sup>32</sup> *Id.* (quoting CTR. FOR STRATEGIC AND INT'L STUDIES, DETERRENCE IN DECAY: THE FUTURE OF THE U.S. DEFENSE INDUSTRIAL BASE 11 (1989)).

<sup>33</sup> PRESIDENT GEORGE BUSH, THE WHITE HOUSE: NATIONAL SECURITY STRATEGY OF THE UNITED STATES 15 (Jan. 1993).

Those definitions came from a relatively modern realization, as the United States had not always paid enough attention to the base.<sup>34</sup> For instance, the nation found itself painfully short of strategic materials on entering both World War I (1914-1917) and World War II (1939-1945), despite having ample advance warning of imminent or potential hostilities.<sup>35</sup> That experience drove home a valuable point, for at the height of the Gulf War (1990-1991) between United Nations coalition forces, (which included the United States) and Iraq, the U.S. Strategic Petroleum Reserve ("SPR") contained some 600 million barrels of oil.<sup>36</sup> The nation made a concerted effort never again to be caught as unprepared as in previous wars. In fact, many journalists, analysts, conspiracy theorists and other pundits the world over, have openly alleged that the West's secret desire to build a mammoth oil pipeline through a more stable, approachable, and "West-friendly" Afghanistan was the true impetus for the United States-led "Anti-Terrorism" military campaign initially commenced in that country.<sup>37</sup> According to the

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<sup>34</sup> MIKESELL, *supra* note 27, at 9.

<sup>35</sup> *Id.*

<sup>36</sup> KAPSTEIN, *supra* note 6, at 187.

<sup>37</sup> Seth Stevenson, *Pipe Dreams: The Origin of the "Bombing-Afghanistan-for-Oil-Pipelines" Theory*, SLATE, Feb. 6, 2003, available at <http://slate.msn.com/?id=2059487> (last visited Mar. 23, 2003). In his State of the Union Address of Tuesday, January 29, 2002, President George W. Bush publicly identified Iraq, Iran, and North Korea as terrorist states who, with "their terrorist allies, constitute an axis of evil, arming to threaten the peace of the world." Press Release, White House, President Delivers State of the Union Address (Jan. 29, 2002), available at <http://www.whitehouse.gov/news/releases/2002/02/20020129-11.html>. Many, including those Nation States identified, have disagreed with this characterization. See Charles V. Peña, *Axis of Evil: Threat or Chimera?*, The Cato Institute (Summer 2002) <http://www.cato.org/research/articles/pena-020905.html>. These views can be best summarized by one staunch critic, who states that "what we really face are three very isolated countries with significant problems and many constraints—hardly an 'axis of evil.'" Michael T. Klare, "Axis of Evil" Crumbles Under Scrutiny, Pacifica News Service, Jan. 31, 2002, available at <http://www.alternet.org/story.html?StoryID=12321>. Whatever the case may be, the United States has, with its main ally, the United Kingdom, gone against the advice of the United Nations and many of its member states to launch a preemptive military strike against Iraq on Wednesday, March 19, 2003, in an Iraq-centered, Second Gulf War (2003- ). Judy Keen & César G. Soriano, *U.S. Begins Second Gulf War with a Surprise Missile Strike at Iraq Leaders*, USA TODAY, Mar. 20, 2003, at 1A. Since that time, the United States has also identified Cuba, Libya, and Syria as additional Axis members. BBC NEWS, *US Expands "Axis of Evil"*, May 6, 2002, available at <http://news.bbc.co.uk/1/hi/world/americas/1971852.stm>. And, in what might be seen, by some, as a dire warning, the United States has sought to send a very public and somber message through this Iraq War. In the words of John R. Bolton, U.S. Undersecretary for arms control and international

current Bush administration, world leaders, and numerous observers, the Afghanistan campaign, specifically, was launched entirely in response to the horrific, airline attacks of September 11, 2001.<sup>38</sup> Those September attacks leveled the "Twin Towers" in New York, severely damaged the Pentagon in Washington, D.C., caused a plane crash in Pennsylvania and were initially thought to have killed an estimated 6,000 people overall, including citizens of the United States and some eighty other nations.<sup>39</sup> Those attacks have now caused a drastic reassessment and reorganization in the United States' defense posture, and its national security and emergency preparedness planning and organization in general.<sup>40</sup>

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security: "With respect to the issue of the proliferation of weapons of mass destruction in the post-conflict period, we are hopeful that a number of regimes will draw the appropriate lesson from Iraq that the pursuit of weapons of mass destruction is not in their national interest." Philip Pullella, *U.S. Tells Iran, Syria, N. Korea: Learn from Iraq*, REUTERS, Apr. 9, 2003, available at <http://www.alertnet.org/thenews/newsdesk/L09263558.htm>.

<sup>38</sup>Dan Ackman, *Bring Us Osama Bin Laden*, FORBES.COM, Sept. 21, 2001, at <http://www.forbes.com/charitable/2001/09/21topnews.html> (last visited Dec. 12, 2001).

<sup>39</sup>*Id.*; Stevenson, *supra* note 37; Karen Breslau, Newsweek Web Exclusive, *The Final Moments of United Flight 93*, NEWSWEEK, Sept. 22, 2001, at <http://www.msnbc.com/news/632626.asp> (last visited Sept. 25, 2001); Shelia Banter, *How The World Trade Center Fell*, BBC NEWS, Sept. 13, 2001, at [http://news.bbc.co.uk/hi/english/world/americas/newsid\\_1540000/1540044.stm](http://news.bbc.co.uk/hi/english/world/americas/newsid_1540000/1540044.stm) (last visited Mar. 24, 2003).

<sup>40</sup>See discussion *infra* Part III.D.2. One major result of these changes has been the USA Patriot Act ("Patriot Act"), created to aid in the investigation and prevention of, and the response to, terror and terrorism in the United States and elsewhere, around the world. The Patriot Act Bill was passed by a vote of 357:66 in the United States House and 98:1 in the United States Senate on October 25, 2001. U.S. Senate Roll Call Votes 107th Congress- 1st Session, [http://www.senate.gov/legislative/LIS/roll\\_call\\_lists/roll\\_call\\_vote\\_cfm.cfm?congress=107&session=1&vote=00313](http://www.senate.gov/legislative/LIS/roll_call_lists/roll_call_vote_cfm.cfm?congress=107&session=1&vote=00313) (last visited Apr. 14, 2003); Press Release, White House, President George W. Bush signs the Patriot Act, Anti-Terrorism Legislation, in the East Room Oct. 26, at <http://www.whitehouse.gov/news/releases/2001/10/images/20011026-5.html> (last visited Apr. 14, 2003). The final version of the Patriot Act greatly expanded the government's surveillance and investigative powers, but it had to include certain limiting, or "sunset" provisions in order to assuage the privacy and civil liberties concerns of certain lawmakers and their constituents, at that time. Since that time, however, there has been some impetus to make these expanded governmental powers a permanent feature and fixture of the new, greatly enhanced, Homeland Security landscape. See Eric Lichtblau, *Republicans Want Terror Law Made Permanent*, N.Y. TIMES, Apr. 8, 2003, available at <http://www.nytimes.com/2003/04/09/international/worldspecial/09TERR.html>.

### C. *Modern Production Priorities*

#### 1. Defense Technology Base

Energy is still an essential component of successful modern warfare,<sup>41</sup> but another post-World War II effect on the United States was a decreased emphasis on natural resources as raw materials and a greater focus on the uses of science and technology.<sup>42</sup> This was led by such institutions as “the Atomic Energy Commission, the National Science Foundation, the National Institutes of Health, the National Aeronautics and Space Administration, and the Defense Advanced Research Projects Agency.”<sup>43</sup> This grouping came to be known as the “defense technology base.”<sup>44</sup>

As defined by the Office of Technology Assessment, “[t]he defense technology base is that combination of people, institutions, information, and skills that provide the technology used to develop and manufacture weapons and defense systems.”<sup>45</sup>

#### 2. Control or Constriction

The Defense Technology Base had achieved such vital importance by 1990 that the Department of Defense identified twenty “Critical Technologies” in which it wished to foster and maintain secure homegrown research, development, and production capacities.<sup>46</sup> To this end, the state reserves the rights to impose “export controls” on sensitive products;<sup>47</sup> to question the sources, intentions and long-term results of “foreign direct

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<sup>41</sup> Judith G. Gardam, *Energy And The Law of Armed Conflict*, 15 J. ENERGY & NAT. RES. L. 87 (1997).

<sup>42</sup> KAPSTEIN, *supra* note 6, at 189.

<sup>43</sup> *Id.* at 189.

<sup>44</sup> *Id.* at 92.

<sup>45</sup> *Id.* at 92.

<sup>46</sup> *Id.* at 191. These twenty technologies are: semiconductor materials and microelectronic circuits; computer software; parallel computer architectures; machine intelligence and robotics; simulation and modeling; photonics; sensitive radars; passive sensors; signal processing; signature control; weapons system environment; data fusion; computational fluid dynamics; air-breathing propulsion; pulsed power; hypervelocity projectiles; high energy density materials; composite materials; superconductivity; biotechnology materials and processes. *Id.* at 191.

<sup>47</sup> KAPSTEIN, *supra* note 6, at 207.

investment;”<sup>48</sup> and to limit the “foreign sourcing of defense-related technology.”<sup>49</sup> The United States has serious national security interests at stake

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<sup>48</sup> *Id.* at 207, 196-97; The Committee on Foreign Investment in the United States (“CFIUS”) reviews such investments today. *See generally* United States Department of the Treasury, <http://www.ustreas.gov>. Fujitsu’s 1987 purchase offer for California’s floundering Fairchild Semiconductor was soundly vetoed on national security grounds. Fairchild was finally bought by United States-based National Semiconductor that same year for \$122 million. A decade later, National would sell Fairchild at a very tidy profit for \$550 million. Also, some ten years later, the acquisition of New York’s Rockefeller Center by Mitsubishi (Real) Estate was passed without much fanfare as entirely permissible. *Mitsubishi Estate Co.: Rest of Rockefeller Group is Acquired for \$151 Million*, WALL ST. J., Feb. 28, 1997, at A6; *Japanese Companies in the US*, JAPAN-U.S. BUS. REP., Apr. 1997, [http://www.jei.org/Archive/BR97/331x/331\\_JinUS\\_Construct.html](http://www.jei.org/Archive/BR97/331x/331_JinUS_Construct.html).

<sup>49</sup> KAPSTEIN, *supra* note 6 at 207. Section 232 of the Trade Expansion Act of 1962 empowers the President of the United States to restrict imports that would threaten national security. Pub. L. No. 87-794, 76 Stat. 872 (codified as amended at 19 U.S.C. § 1862 (2000)). It provides, in pertinent part,

(b)(1)(A) Upon request of the head of any department or agency, upon application of an interested party, or upon his own motion, the Secretary of Commerce (hereafter in this section referred to as the “Secretary”) shall immediately initiate an appropriate investigation to determine the effects on the national security of imports of the article which is the subject of such request, application, or motion.

(b)(1)(B) The Secretary shall immediately provide notice to the Secretary of Defense of any investigation initiated under this section. . . .

(b)(3)(A) By no later than the date that is 270 days after the date on which an investigation is initiated under paragraph (1) with respect to any article, the Secretary shall submit to the President a report on the findings of such investigation with respect to the effect of the importation of such article in such quantities or under such circumstances upon the national security and, based on such findings, the recommendations of the Secretary for action or inaction under this section. If the Secretary finds that such article is being imported into the United States in such quantities or under such circumstances as to threaten to impair the national security, the Secretary shall so advise the President in such report. . . .

(c)(1)(A) Within 90 days after receiving a report submitted under subsection (b)(3)(A) of this section in which the Secretary finds that an article is being imported into the United States in such quantities or under such circumstances as to threaten to impair national security, the President shall--

(i) determine whether the President concurs with the finding of the Secretary, and

(ii) if the President concurs, determine the nature and duration of the action that, in the judgement of the President, must be taken to adjust the

in the war against proliferation of critical technologies, and sensitive products currently at the center of concern include those used in the manufacture or deployment of nuclear,<sup>50</sup> biological, and chemical weapons,<sup>51</sup> and defense system computer Source Code technology.<sup>52</sup> Some battles are won and others are lost, but by reason of the particular and sensitive interests at stake, and because pure military security must now be defined as a broader and more inclusive "national security," a state is still well within its powers when it exercises these rights.<sup>53</sup>

Many of us learned at an early age that if you have a sand-box and you foul it up, fail to properly maintain it, or otherwise make it unattractive, then others will be unwilling to play there with you. This is as true for individuals as it is for nation states. "The importance of establishing a sound

imports of the article and its derivatives so that such imports will not threaten to impair the national security.

19 U.S.C. §§ 1862(b)(1)(A), (b)(1)(b), (b)(3)(A), (c)(1)(A) (2000).

<sup>50</sup> India and Pakistan demonstrated their acquisition of the nuclear option in May of 1998. See Ashok Pahalwan, *I Fell Down and Pretended to Be Dead: Indian Villagers Recall Horrors of Militant Gunmen's Attack*, WASH. POST, Aug. 5, 1998, at A16. More recently, China was accused of having engaged in the systematic theft of United States nuclear technology. This technology has reportedly allowed China to effectively modernize its nuclear forces, with smaller, lighter, and more portable warheads; multiple warhead delivery systems; and longer ranges for the overall payload. See James Risen and Jeff Gerth, *China Stole Nuclear Secrets for Bombs, U.S. Aides Say: Espionage Case at New Mexico Lab is Said to Be Minimized by the White House*, N.Y. TIMES, Mar. 6, 1999, at A1, A6.

<sup>51</sup> Even the modern "good guy" nation can be haunted by its less than exemplary past. Apartheid-Era South Africa ran a project called "Project Coast" that manufactured biological and chemical weapons, for both legitimate and questionable uses. Certain intelligence insiders fear that some of these deadly poisons and toxins have already leaked or are in danger of leaking into the wrong hands. See Lynne Duke, *Doubts Arise on Junking of Chemical Arms; S. African Panel Told Some Drugs, Formulas May Have Been Secretly Held Back*, WASH. POST, July 9, 1998, at A24.

<sup>52</sup> Two major American sales of F-16 fighter aircraft to the United Arab Emirates ("UAE"), and one of attack helicopters to Turkey, both staunch allies, were, at the time, in danger of collapse. The issue in contention was the source codes that control an aircraft's basic operations, weapons, and defenses. The allies wanted them included as part of any sale, but the United States was reluctant. Knowing how the codes work meant knowing how to counter them. Therein lay the problem, as the codes could fall into the wrong hands, or into unfriendly hands, and thereby become a threat to United States national security and to American lives, if used against forces in a combat zone. See Jonathan Broder, *Buyers Demanding U.S. Secrets Along with Pentagon Purchases*, MSNBC, Mar. 9, 1999 (on file with author).

<sup>53</sup> EDWARDS & WALKER, *supra* note 23, at 4.

macroeconomic environment for savings and investment cannot be understated . . . . In that investment is the source of innovation and economic growth, it is critical to national security."<sup>54</sup> The state walks a very fine line, however, when it does exercise such rights to control or constrict, for it must take care not to alienate wholly its trading partners or scare away those very immigrants and investors who would bring valuable skills, savings, and investments.<sup>55</sup>

Various elements of the Federal Government, such as the General Accounting Office ("GAO") have recently been assessing program guidelines, procedures, and vulnerabilities, and considering ways to rework the export control regime,<sup>56</sup> ostensibly in response to rising concerns about the threat of terrorism, both homegrown and foreign-borne.<sup>57</sup> Currently, for example, with certain limited exceptions, a United States company must apply to the Department of Commerce ("Commerce") for a "Deemed Export License" whenever it employs or sponsors a foreign national who might work with, or otherwise be exposed to, certain controlled dual use technologies while in the United States.<sup>58</sup> These licenses commonly last for a period of two years and account for a full ten percent of all export licenses approved by Commerce.<sup>59</sup> According to GAO, out of all the deemed export

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<sup>54</sup> KAPSTEIN, *supra* note 6, at 205; Ovink, *supra* note 21, at 211-12. Ovink writes that a nation needs to have tough environmental regulations if it hopes to attract and retain "hi-tech, high-value-added industries." Ovink, *supra* note 21, at 211-12 (quoting Robert Bott, *Don't Drop the Ball; There is Ample Evidence that Shows Sustainable Development Must be Incorporated Into Our Way of Doing Business*, OILWEEK, Feb. 15, 1993, at 38).

<sup>55</sup> For an excellent analysis of the issues and aspects involved in balancing free trade and foreign investment against environmental regulation, see M. Bruce Harper, *TRIPS Article 27.2: An Argument for Caution*, 21 WM. & MARY ENVTL. L. & POL'Y REV. 381 (1997).

<sup>56</sup> GAO, GAO-02-972, EXPORT CONTROLS: DEPARTMENT OF COMMERCE CONTROLS OVER TRANSFERS OF TECHNOLOGY TO FOREIGN NATIONALS NEED IMPROVEMENT (2002), at <http://www.gao.gov/cgi-bin/getrpt?GAO-02-972> [hereinafter GAO Report].

<sup>57</sup> The GAO initially grouped twelve "countries of concern" together: "China, Cuba, India, Iran, Iraq, Israel, Libya, North Korea, Pakistan, Russia, Sudan and Syria." *Id.* at 1, n.1. However Commerce, in its reply to the Draft Report was clear to point out that, among other things: (i) Russia was a United States partner on international export controls, "and an ally in the war on terrorism"; (ii) Eleven percent of 2001 deemed export licenses were for citizens of Russia, India, Israel and Pakistan, all countries with which the United States "maintains good relations"; and (iii) deemed export licenses for citizens of Iran, Iraq, and Libya accounted for only three percent of the 2001 total. *Id.* ¶ 3, app. II, at 23 (U.S. Department of Commerce comments).

<sup>58</sup> *Id.* at 2.

<sup>59</sup> *Id.*

license applications handled by Commerce in fiscal year 2001, 822 were approved, 98 were returned with no action, and 3 were denied.<sup>60</sup>

During its investigations, the GAO found that while Commerce screened new visa applicants from overseas in regard to their potential exposures to controlled technologies, it obtained no information from the Immigration and Naturalization Service (“INS”) on foreign nationals who were already in the United States, and who remained in the country while applying to the INS for a change in their immigration status.<sup>61</sup> The GAO also found that Commerce did little to monitor or ensure that companies complied with the terms and requirements of their respective, deemed export licenses.<sup>62</sup> The GAO concluded that flaws and gaps in the current procedures for granting and enforcing deemed export licenses were a national security risk, in their focus on the promotion of United States commercial interests.<sup>63</sup> It recommended, therefore, that Commerce work more closely with the INS to ensure that all relevant visas and visa applications were screened; and that the Secretary of Commerce work with the Secretaries of Defense, Energy, and State to devise realistic, enforceable monitoring programs for deemed export license compliance.<sup>64</sup> These procedural recommendations would help correct what the GAO felt to be a “unilateralist” emphasis by Commerce on strictly commercial interests, to focus instead on the more common, consensus emphasis on modern national security interests.<sup>65</sup>

#### D. *Modern National Security Interests*

##### 1. *Military and National Security Powers*

The term “military security” is ambiguous.<sup>66</sup> It has often been read interchangeably to mean either national defense, or national security,<sup>67</sup> with the latter having a purely constitutional focus.<sup>68</sup> The national security powers

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<sup>60</sup> *Id.* at 9.

<sup>61</sup> *Id.* at 12.

<sup>62</sup> GAO Report, *supra* note 56, at 16.

<sup>63</sup> *Id.* at 17.

<sup>64</sup> *Id.*

<sup>65</sup> MYERS, *supra* note 1, at 17.

<sup>66</sup> MIKESELL, *supra* note 27, at 2.

<sup>67</sup> *Id.* at 49.

<sup>68</sup> See generally, STEPHEN DYCUS, ET AL., NATIONAL SECURITY LAW (2d ed. 1997) (discussing the history, aspects, and interplay of the various national security powers that can



within the United States Constitution are divided among the three branches—executive, legislative and judiciary.<sup>69</sup> They include, *inter alia*, the power to make laws,<sup>70</sup> the power to raise and maintain an army or militia,<sup>71</sup> the power to command that army or militia,<sup>72</sup> the power to declare wars,<sup>73</sup> and a gloss of various other powers imputed as necessary.<sup>74</sup> During and after conflicts and hostile actions, however, it is Congress that has most expansively used its national security powers, bolstered by a variety of other powers imputed as necessary, to govern a very broad spectrum of economic and other activities.<sup>75</sup>

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be found either within, or imputed from the Constitution of the United States of America) [hereinafter SECURITY].

<sup>69</sup> *Id.* at 1.

<sup>70</sup> U.S. CONST. art. I, § 1 ("All legislative Powers herein granted shall be vested in a Congress of the United States, which shall consist of a Senate and House of Representatives.").

<sup>71</sup> U.S. CONST. art. I, § 8, cl. 12 ("To raise and support Armies, but no Appropriation of Money to that use shall be for a longer Term than two Years.").

<sup>72</sup> U.S. CONST. art II, § 2, cl. 1.

The President shall be Commander in Chief of the Army and Navy of the United States, and of the Militia of the several States, when called into the actual Service of the United States; he may require the Opinion, in writing, of the principal Officer in each of the executive Departments, upon any Subject relating to the Duties of their respective Offices, and he shall have Power to grant Reprieves and Pardons for Offences against the United States, except in Cases of Impeachment.

*Id.*

<sup>73</sup> U.S. CONST. art I, § 8, cl. 11 ("To declare War, grant Letters of Marque and Reprisal, and make Rules concerning Captures on Land and Water.").

<sup>74</sup> SECURITY, *supra* note 68.

<sup>75</sup> *Id.* at 109. Dycus quotes *Spaulding v. Douglas Aircraft Co.*, 154 F.2d 419, 422-423 (9th Cir. 1946), which explained that Congress had used these broad powers in order to:

[C]ontrol the price of every commodity bought and sold within the national boundaries; to fix the amount of rent to be charged for every room, home, or building and this even though to an individual landlord there may be less than a fair return; to construct extensive systems of public works; to operate railroads; to prohibit the sale of liquor; to restrict freedom of speech in a manner that would be unwarranted in time of peace; to ration and allocate the distribution of every commodity important to the war effort; to restrict the personal freedom of American citizens by curfew orders and the designation of areas of exclusion; and, finally, to demand of every citizen that he serve in the armed forces of the nation.

*Id.*

## 2. New Domestic and National Security Priorities

The events of September 11, 2001 made it quite clear that the United States must adapt its thinking, preparedness, and overall organizational structure in response to a changed national and global security environment.<sup>76</sup> In this new environment, where the monolithic Soviet military “threat” has been obliterated and its arms and materiel dispersed amongst many “friendlier” independent central Asian Republics, a large military is no longer as clear a danger as individual rogue States and small, well-organized terror or pressure groups.<sup>77</sup>

There has long been talk of creating the office of a Terrorism Czar, to deal with threats against the United States in an ever-changing and more dangerous world.<sup>78</sup> One strong, long time proponent of such an office has been the Republican Senator John W. Warner, of Virginia.<sup>79</sup> It now appears that his wish, and the wishes of other people who have agreed with him over the years on this very point, have now come to fruition, with the creation of a Northern Military Command, and the creation of a Department of Homeland Security.<sup>80</sup>

On Wednesday, April 17, 2002, the Defense Department announced the creation of a Northern Command, which would integrate a number of widely-dispersed, domestic protection functions such as guarding United States airspace and protecting maritime approaches, to hold overall military responsibility for homeland defense, and for supporting federal, state, and local civilian authorities and agencies in the event of a nuclear, biological, or chemical attack on the Continental United States.<sup>81</sup> Northern Command was also to coordinate its activities with the Homeland Security Council and the White House Office of Homeland Defense, which was then being managed by the President’s Homeland Security Advisor, former Pennsylvania Governor, Tom Ridge.<sup>82</sup>

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<sup>76</sup> See discussion *supra* Part III.B.2.

<sup>77</sup> *Id.*; see also *supra* notes 37-40 and accompanying text.

<sup>78</sup> See, e.g., *supra* note 24 and accompanying text.

<sup>79</sup> *Id.*

<sup>80</sup> New Command Will Protect U.S., WASH. TIMES, Apr. 17, 2002, <http://www.washingtontimes.com/upi-breaking/17042002-025410-2852r.htm>; see *infra* notes 83-85 and accompanying text for Homeland Security.

<sup>81</sup> *Id.*

<sup>82</sup> *Id.* In late January, 2003, Tom Ridge was confirmed by the United States Senate as the nation’s first Secretary of the newly-created Department of Homeland Security. A few days

As a corollary to this, President Bush announced, on Thursday, June 6, 2002, his proposal to form an actual Cabinet-level, 'Department' of Homeland Security.<sup>83</sup> This Department, created by Congress and signed into law by the President on Monday, November 25, 2002, shall be managed by the Secretary of Homeland Security, combines some 22 federal agencies, programs and research centers, and their 170,000 employees into a single entity, and will have an annual budget of \$37.5 billion.<sup>84</sup> This new Department will have four central nodes of responsibility: information analysis and infrastructure protection; border and transportation security; emergency preparedness response; and chemical, biological, radiological and nuclear countermeasures.<sup>85</sup>

### 3. Links to the Environment

While this all shows that the power of the state over those residing within its borders, citizens and noncitizens alike, during and after armed conflict is nearly absolute, there are still limits placed on a state and its scope during the actual prosecution of hostilities. There are international laws restricting attacks to military targets to avoid or minimize civilian, environmental, and other collateral damage.<sup>86</sup> The international law of war,

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later, on Friday January 25, 2003, he was officially sworn in to that office. Press Release, White House, Senate Confirms Ridge (Jan. 22, 2003), at <http://www.whitehouse.gov/news/releases/2003/01/20030122-2.html>; Press Release, White House, Ridge Sworn In Friday as Secretary of Homeland Security (Jan. 24, 2003), at <http://www.whitehouse.gov/newsreleases/2003/01/20030124-5.html>.

<sup>83</sup> Elizabeth Bumiller & David E. Sanger, *Bush, As Terror Inquiry Swirls, Seeks Cabinet Post on Security*, N.Y. TIMES, Politics, June 6, 2002 (on file with author); see also White House, *Homeland Security*, at <http://www.whitehouse.gov/homeland> (last visited Mar. 24, 2003).

<sup>84</sup> *Id.*; Thomas Bill Summary, at <http://thomas.loc.gov/cgi-bin/bdquery/z?d107:H.R. 5005> (last visited Apr. 11, 2003).

<sup>85</sup> Press Release, White House Office of the Press Secretary, *Message to the Congress of the United States* (June 18, 2002), at <http://www.whitehouse.gov/news/releases/2002/06/20020618-5.html> (last visited Jul. 13, 2002). See also *Homeland Security Agency a Reality: Bush Signs Bill Merging 22 Agencies into One; Picks Ridge as Its Leader*, MSNBC NEWS SERVICE, Nov. 25, 2002 (on file with author). The Homeland Security Act had earlier been passed by a vote of 299:121 in the House and 90:9 in the Senate.

<sup>86</sup> See generally Gardam, *supra* note 41, at 87 (discussing the impact of the law of armed conflict on energy and environmental concerns). It is interesting to note here that in Iraq, the second nation-state targeted thus far in the global war on terror, the two central actors, the United Kingdom and the United States, initially stood at divergent poles regarding their post-action responsibilities, in restoring and maintaining law and order, and generally, according

the Geneva Protocol, was also modified to include some protection for the environment during armed conflict. It reads:

Care should be taken in warfare to protect the natural environment against wide-spread, long-term and severe damage. This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such damage to the natural environment and thereby prejudice the health or survival of the population. Attacks against the natural environment by way of reprisals are prohibited.<sup>87</sup>

Through this linkage in the law of war, the international community has recognized the potential for harm that military activities pose for the environment during times of armed conflict and insurrection. As the above analysis shows, however, military security has always had a deeper and more basic environmental link,<sup>88</sup> for the very sinews of war—oil, iron and steel—have long been strategic commodities, “in the absence of which a nation was doomed”<sup>89</sup> to defeat.

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to the laws of war. Speaking in Sayliyah, regarding the chaotic situation in Basra, Iraq, British Group Captain Al Lockwood acknowledged that his nation's troops had “an obligation under international law to stop the looting.” *Baghdad Falls; Iraqis Celebrate: Saddam Whereabouts Unknown as U.S. Extends Grip on Capital*, NBC, MSNBC and News Services (Apr. 9, 2003), available at <http://www.msnbc.com/news/870749.asp?vts=040920030710>. Whereas, troops from the United States operating in Mosul, Iraq, and the recently fallen capital of Baghdad, appeared to have been directed to take a more laissez-faire approach to the “untidiness” and widespread chaos of looting, arson, and shootings. In the words of the United States Defense Secretary Donald Rumsfeld, “It’s untidy. And freedom’s untidy. And free people are free to make mistakes and commit crimes and do bad things.” *In Iraq, a New Battle with Chaos: Looting Spreads to Mosul; Aid Groups Say U.S. Must Restore Order*, NBC News and News Services (Apr. 12, 2003), available at <http://www.msnbc.com/news/898588.asp?vts=041120031750>.

<sup>87</sup> MARK F. IMBER, ENVIRONMENT, SECURITY AND U.N. REFORM 141 (1994); Major Merrit P. Drucker, *The Commander's Responsibility for the Environment*, 11 ENVTL. ETHICS 135, 145 (1989) (citing Art. 55 of Protocol I to the Geneva Convention).

<sup>88</sup> IMBER, *supra* note 87, at 8. Imber captures this quite succinctly:

There is clearly an environmental dimension to military security. If no more than a rewording of the literature concerning access to natural resources, the acquisition and defence [sic] of strategic resources have always been central to concepts of military security.

*Id.*

<sup>89</sup> KAPSTEIN, *supra* note 6, at 33.

These commodities, oil, iron, steel, and increasingly silicon, an asset which is vitally important to many industries today,<sup>90</sup> all come from the land and our environment. They have been harvested, refined, and used for wars over land and land rights, and for the actual sustenance of life on the land. Clearly, as our wealth and our fate lie in a land that can both sustain and destroy us with its bounty,<sup>91</sup> environmental protection is central to both our national security and our social welfare.

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<sup>90</sup> See 24 ENCYCLOPEDIA AMERICANA 814-15 (deluxe libr. ed., 1994). Silicon is a hard metallic element that is the second most common element on earth after oxygen. It does not occur in its natural state, but can be found in clays, sands, rocks, minerals and feldspars. When refined to a high purity, it is very important to the electronics industry. Silicones, as derivatives of silicon, "serve as oils, greases, coolants, defoamers, adhesives, rubbers, resins, enamels, paints, or waterproofing materials, among other uses." *Id.*; see also Denos C. Gazis, *Brief Time, Long March: The Forward Drive of Computer Technology*, in TECHNOLOGY 2001: THE FUTURE OF COMPUTING AND COMMUNICATIONS 57 (Derek Leebaert ed., 1991) (stressing that "[s]ilicon is here to stay as the dominant material for computer microcircuitry for many years to come, and for the entire range of computer hardware").

<sup>91</sup> To prevent the earth from destroying us and us from destroying it, the International Union for the Conservation of Nature's Commission on Environmental Law ("IUCN") provided an enlightened definition of the sustainable development for which we should strive:

Management of the human use, development, conservation, protection, maintenance and enhancement of natural, physical and cultural resources in a way or at a rate which enables people and communities to provide for their social, economic and cultural well-being and for their health and safety while:

- (a) sustaining the potential of natural and physical resources to meet the needs of future generations;
- (b) using, developing or protecting renewable natural and physical resources so that their ability to yield long-term benefits is not endangered;
- (c) using, developing or protecting non-renewable natural resources so as to lead to an orderly and practical transition to adequate substitutes including renewable resources;
- (d) safeguarding the life-supporting capacity of air, water, soil and ecosystems; and
- (e) avoiding, remedying or mitigating any adverse effects of developments on the environment.

Ovink, *supra* note 21, at 213-14 (citation omitted).

#### IV. SOCIAL WELFARE AND ENVIRONMENTAL PROTECTION

##### A. *Social Welfare*

##### 1. The Military and Industrial Legacy

The United States is "one of the wealthiest, most productive, and most advantaged nations in the world."<sup>92</sup> While generating this wealth, however, these very civilian activities, institutions, and industries have also caused a tremendous amount of pollution in environmental toxins and other burdens, albeit at times unintentional.<sup>93</sup>

Industrial examples span the entire industrial production process, from manufacturing to disposal.<sup>94</sup> Likewise, military activities, institutions, and industries have fared no better as they caused pollution while providing security. In fact, the military instances of pollution are worse, for they were often more knowingly committed. One especially critical commentator cites mere expediency as the reason for such laxity.<sup>95</sup>

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<sup>92</sup> Kathy Seward Northern, *Battery and Beyond: A Tort Law Response to Environmental Racism*, 21 WM. & MARY ENVTL. L. & POL'Y REV. 485, 489 (1997).

<sup>93</sup> *Id.* at 489.

<sup>94</sup> *Id.* at 494-95. Northern lists some prime examples of industrial pollution:

A hazardous waste disposal facility, an unregulated landfill, or an industrial complex can release hazardous material into the environment in several ways. Chemicals may be released into the atmosphere through smoke stacks, effluent pipes, or other emission devices. Landfills may leach their contents into the ground or ground water sources. Releases can occur when cargoes of waste are transported to, received by, and transferred for further treatment or handling within, the waste disposal site.

*Id.*

These dangers were further underscored by the recent nuclear accident at a Japanese fuel fabrication plant. There, an unplanned nuclear chain reaction spewed out a shower of radiation. At last count, there were seven operational, nuclear fuel fabrication plants in the United States: two in Lynchburg, Virginia, and one in each of Richland, Washington; Erwin, Tennessee; Columbia, South Carolina; Hematite, Missouri; and Wilmington, North Carolina. See John Noble Wilford & Matthew L. Wald, *Nuclear Accident in Japan: The Science; A Flash, and an Uncontrolled Chain Reaction*, N. Y. TIMES ON THE WEB, Oct. 1, 1999 (on file with author).

<sup>95</sup> STEPHEN DYCUS, NATIONAL DEFENSE AND THE ENVIRONMENT xiii (1996) [hereinafter DEFENSE]. Dycus writes:

Throughout almost half a century of Cold War we polluted the water and

## 2. The Nuclear Issue

That epitome of radiation creation, nuclear weapons production, has long been a mainstay of national security.<sup>96</sup> Near its peak at the time of the 1992 Soviet implosion, this industry employed over 100,000 people and had an annual budget of almost \$2 billion.<sup>97</sup>

### B. *Environmental Protection*

#### 1. Public Concern for the Environment

Social welfare will not be served, and little utility can be gained by acquiring all the wealth and by having all of the security in the world, if one's very surroundings are polluted beyond repair or otherwise unfit for human habitation. "[W]e must not destroy the very thing we would fight to protect."<sup>98</sup>

Though it simmered for quite some time beforehand, widespread concern for the environment as we know it only began in the 1960s.<sup>99</sup> As the public paid greater attention to environmental issues, federal and state legislators addressed the environment with greater scrutiny. As reported by

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air, made noise, defaced the landscape, and generated millions of tons of hazardous and radioactive wastes, all in the name of national security. Early on, we acted at least partly out of ignorance of the environmental risks. More recently, we simply disregarded those risks, assuming that it would be impossible to maintain a strong defense if we had to worry about protecting the environment.

*Id.*

<sup>96</sup> *The United States of America: Punishing Nuclear Whistleblowers*, in A DIV. OF HUMAN RIGHTS WATCH, *DEFENDING THE EARTH: ABUSES OF HUMAN RIGHTS AND THE ENVIRONMENT* 97 (1992) [hereinafter *RIGHTS*].

<sup>97</sup> *Id.* at 97.

<sup>98</sup> *DEFENSE*, *supra* note 95, at 10. See also Drucker, *supra* note 87, at 152. The point made by Dycus was earlier, and more expansively expressed by Drucker, when he wrote:

The depletion of the ozone layer, the global warming trend, acid and toxic rain, massive deforestation, soil erosion, loss of species, and pollution of every kind are all interlocking problems which are degrading the quality of our lives and may threaten the very survival of future generations. We are rapidly becoming a nonviable species.

*Id.*

<sup>99</sup> William D. Ruckelshaus, *Environmental Protection: A Brief History of the Environmental Movement in America and the Implications Abroad*, 15 ENVTL. L. 455 (1985).

one concerned group, “[h]umankind is only beginning to comprehend that its actions significantly affect biodiversity and that protection of biodiversity is a human responsibility. Left unchecked, human activities could eventually destroy the very habitats on which humankind depends.”<sup>100</sup> This led to the passage of more environmental laws,<sup>101</sup> the creation of the Environmental Protection Agency (“EPA”),<sup>102</sup> and the passage of the National Environmental Policy Act (“NEPA”).<sup>103</sup> Certain commentators strongly believe that the mass of legislation resulting leaves a lot to be desired in both its scope and content.<sup>104</sup> Others, however, blame a generally inadequate response to that legislation by professionals in the field and even by certain responsible institutions.<sup>105</sup> Regardless of which side one favors, there have

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<sup>100</sup> WWF, *supra* note 2, at 122.

<sup>101</sup> See Brigadier General John L. Fugh et al., *The Commander and Environmental Compliance*, 1990 ARMY LAW 3.

<sup>102</sup> See Ruckelshaus, *supra* note 99, at 457.

<sup>103</sup> See DEFENSE, *supra* note 95, at 11-12. NEPA sets out procedural rules and guidelines for “the federal government to plan ahead for the environmental consequences of its actions.” *Id.* at 11. NEPA achieves this by three prongs:

(1) Mandating that every federal agency do its utmost best to promote and perpetuate the coexistence of man and nature. This goal is further reaffirmed as a generation-to-generation nature stewardship, of sorts;

(2) Mandating that every federal agency prepare and produce an Environmental Impact Statement (“EIS”) before conducting any activities that might have any major impact on the environment. There is no need to predict the unpredictable. However, the EIS must contain enough scientific support to show “reasonably foreseeable significant adverse impacts,” even if of a low probability; and

(3) Establishing the Council on Environmental Quality (“CEQ”) to gauge and monitor NEPA’s application and the state of the environment; and to make recommendations for any changes that would better serve the agency’s broader goals. *Id.* at 12.

<sup>104</sup> Ruckelshaus, *supra* note 99, at 463. Ruckelshaus makes this claim when he writes, “[i]t is unfortunately true that this spiral of unachievable standards, missed deadlines, resulting citizen suits and, in turn, even more prescriptive legislation by Congress continues. The statutes are generating more prescriptions, tighter deadlines, stricter standards, and more lawsuits than in the past.” *Id.*

<sup>105</sup> See Bruce Ledewitz & Robert D. Taylor, *Law and The Coming Environmental Catastrophe*, 21 WM. & MARY ENVTL. L. & POL’Y REV. 599, 599-600 (1997). The authors make this assertion when they write:

Law’s response to the threat of environmental catastrophe has been mild—almost no response at all. The nation’s law schools have not turned serious attention to the crisis, and law has not responded substantively either. Environmental law has no sense of urgency about the environment. In addition, constitutional law, which has never evolved an environmental



still been great strides in the general scheme of environmental protection, as "[w]e now have in place an incredibly complicated mix of environmental laws at the national level which control toxic substances from the cradle to the grave."<sup>106</sup> After all, the lawsuit is just another way to negotiate rights and compliance.

## 2. Striving for Coexistence

Two things must happen if we ever hope to achieve a balance between national security and environmental protection. The United States government and public needs to have a more integrated, "life cycle" approach to production, consumption and refuse disposal.<sup>107</sup> In order to do this, federal lands should be managed as a public trust.<sup>108</sup>

A variety of recent environmental initiatives show that such a life cycle approach is taking a hold on the national and the international psyche. California's "clean fuel" mandate,<sup>109</sup> combined with the recycling

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ethic, either stands mute in the face of looming crisis, or serves as a minor impediment to coping with the crisis. Fundamentally, we lawyers, law teachers, and law students go on about our business as if all were well.

*Id.*

<sup>106</sup> Ruckelshaus, *supra* note 99, at 457.

<sup>107</sup> CNIE, *supra* note 15, at 65. This suggestion comes directly from the CNIE, which writes that, "[t]o achieve sustainable development, we need an integrated approach that considers each step in production, use, and disposal of goods." *Id.*

<sup>108</sup> WWF, *supra* note 2, at 118.

<sup>109</sup> Having generally found that the state had many vehicles, which were highly dependent on foreign oil and causing too much pollution, the state resolved as follows in CAL. PUB. RES. CODE § 25,618 (West 1998):

(a) The commission shall facilitate development and commercialization of ultra low- and zero- emission electric vehicles and advanced battery technologies, as well as development of an infrastructure to support maintenance and fueling of those vehicles in California. Facilitating commercialization of ultra low- and zero-emission electric vehicles in California shall include, but not be limited to, the following:

(1) The commission may, in cooperation with county, regional, and city governments, the state's public and private utilities, and the private business sector, develop plans for accelerating the introduction and use of ultra low- and zero-emission electric vehicles throughout California's air quality non[-]attainment areas, and for accelerating the development and implementation of the necessary infrastructure to support the planned use of those vehicles in California. These plans shall be consistent with, but

movement's mantra of "reduce, reuse, recycle" and booming use of boldly-labeled "post-consumer" and "recyclable" materials<sup>110</sup> are just two examples of this trend. Reflecting this widening trend, one observer comments that "both industry and governments are beginning to realize that better natural resource planning will, over time, allow us to produce more with less, conserving sufficient resources to allow humans to enjoy a healthy and productive life within nature."<sup>111</sup>

Unfortunately, that trend has focused on private lands, barely reaching federal lands. The management of federal lands has never been problem-free, especially involving those lands used for national defense or energy.<sup>112</sup> One commentator writes that the majority of sites owned or used by both the Department of Energy ("DOE") and the Department of Defense ("DOD") are now so badly contaminated that they might never be cleansed.<sup>113</sup> Similarly, attempts to ameliorate past environmental wrongs have often been met with skepticism, apathy, and outright resistance.<sup>114</sup> The

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not limited to, the criteria for similar efforts contained in federal loan, grant, or matching fund projects.

(2) In coordination with other state agencies, the commission shall seek to maximize the state's use of federal programs, loans, and matching funds available to states for ultra low- and zero-emission electric vehicle development and demonstration programs, and infrastructure development projects.

(b) Priority for implementing demonstration projects under this section shall be directed toward those areas of the state currently in a non[-]attainment status with federal and state air quality regulations.

*Id.*

<sup>110</sup> CNIE, *supra* note 15, at 66. The recycling movement also reflects suggestions of the CNIE, highlighted in the following excerpt:

Specific steps in developing an industrial society based on this "life cycle" approach include maximizing the use of recycled materials in new production, optimizing the use of raw materials and energy, minimizing waste generation, especially of substances that are known to damage human health and the environment, and developing processes that use "wastes" as inputs.

*Id.*

<sup>111</sup> Ovink, *supra* note 21, at 246.

<sup>112</sup> See generally Nelson D. Cary, Note, *A Primer on Federal Facility Compliance with Environmental Laws: Where Do We Go From Here?*, 50 WASH. & LEE L. REV. 801 (1993)(exploring capability of regulators to enforce environmental laws).

<sup>113</sup> *Id.* at 805; see also discussion *infra* Part V.

<sup>114</sup> See generally Ovink, *supra* note 91, pt. iv (examining how the United States attempts to balance environmental agreements, government rules, and current problems).

next part begins to analyze some common examples of the uneasy coexistence of national security and environmental protection both on state lands and in related state actions.

V. AN UNEASY HISTORY COEXISTENCE OF NATIONAL SECURITY AND ENVIRONMENTAL PROTECTION

A. *Future Use Considerations*

1. A History of Securing Environmental Destruction

The primary problem is, and has long been, the nuclear genie.<sup>115</sup> In the dismal years when the nuclear genie first got out of the bottle for energy and weapons production, the government gave little thought to management and amelioration of the problems that came with it.<sup>116</sup> Decision makers were far more concerned with the immediate benefits of nuclear technology than they were with the immediate environmental burdens or future uses of the lands and facilities involved.<sup>117</sup> They left this lack of forethought as a legacy for future generations,<sup>118</sup> and the future is now. The current generation and many future generations now have to deal with and right past wrongs. It has not been, and will not be, an easy task.<sup>119</sup>

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<sup>115</sup> See *supra* note 96 and accompanying text.

<sup>116</sup> See *supra* note 95 and accompanying text. See also RIGHTS, *supra* note 96, at 105. The authors capture the essence of those dismal years stating that "[f]or years the United States Government justified withholding information on its nuclear weapons facilities on national security grounds. DOE has abused this rationale to hide dangerous environmental and health hazards." *Id.*

<sup>117</sup> *Radwaste: Vermont Governor Says No to Waste Site*, GREENWIRE, Oct. 28, 1998, available at LEXIS, Greenwire News File. Having decided that its Vermont Yankee nuclear power plant was too close to wetlands, on ground too moist, and in too rainy an area to justify aboveground local storage of its radioactive waste, Vermont sought to establish a storage facility in Texas. The request was promptly denied. This is a classic example of intentionally "shunting-off" the problems, duties, and responsibilities that come with nuclear power generation.

<sup>118</sup> Dr. Kristin Shrader-Frechette, *Environmental Justice and Native Americans: The Mescalero Apache and Monitored Retrievable Storage*, 36 NAT. RESOURCES J. 943, 949-50 (1996). Shrader-Frechette cites estimates for cleaning-up DOE's "nuclear related sites" range from a low of \$300 billion, to a high of \$100 trillion. *Id.* at 949. This is quite a legacy to foist on the unwary, unsuspecting, and obviously too trusting future generations.

<sup>119</sup> Susan Thomas et al., *Toxic Contamination at Giant U.S. Nuclear Complex Worse Than*

In the last few years environmentalists began to refer to contaminated lands as "brownfields" as opposed to "greenfields."<sup>120</sup> Though there is clearly a willingness to redeem these lands,<sup>121</sup> "barriers to redevelopment, such as the probability of legal liability, uncertainty regarding cleanup standards, and lenders' unwillingness to finance contaminated property, can make redevelopment extremely risky and difficult."<sup>122</sup>

The United States has been paring down its military might since the end of the Cold War, closing and realigning installations at home and abroad.<sup>123</sup> However, during this scale-back the DOD found that over two

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*Suspected*, GANNETT NEWS SERVICE, Aug. 17, 1997, LEXIS. At Oak Ridge, underground tanks store radioactive sludge, and radioactive material routinely flows into the nearby Clinch River. *Id.* Certain Oak Ridge buildings are in constant danger of "spontaneous nuclear reaction" due to the large amounts of leftover nuclear fuels and nuclear byproducts that they hold. *Id.* This is just one site, among many like it.

<sup>120</sup> E. Lynn Grayson & Stephen A.K. Palmer, *The Brownfields Phenomenon: An Analysis of Environmental, Economic, and Community Concerns*, 25 *Envtl. L. Rep.* (Envtl. L. Inst.) 10,337 (July 1995).

<sup>121</sup> See, e.g., Ovink, *supra* note 21, at 207; see also *supra* note 21 and accompanying text.

<sup>122</sup> Grayson, *supra* note 119.

<sup>123</sup> Richard A. Wegman & Harold G. Bailey, Jr., *The Challenge of Cleaning Up Military Wastes When U.S. Bases Are Closed*, 21 *ECOLOGICAL L.Q.* 865, 866-67 (1994). See also Base Closure and Realignment Act ("BCRA"), 10 U.S.C.A. § 2687 (1998). This Act provides, in pertinent part:

(a) Notwithstanding any other provision of the law, no action may be taken to effect or implement—

(1) the closure of any military installation at which at least 300 civilian personnel are authorized to be employed;

(2) any realignment with respect to any military installation referred to in paragraph (1) involving a reduction by more than 1,000, or by more than 50 percent, in the number of civilian personnel authorized to be employed at such military installation at the time the Secretary of Defense or the Secretary of the military department concerned notifies the Congress under subsection (b) of the Secretary's plan to close or realign such installation; or

(3) any construction, conversion, or rehabilitation at any military facility other than a military installation referred to in clause (1) or (2) which will or may be required as a result of the relocation of civilian personnel to such facility by reason of any closure or realignment to which clause (1) or (2) applies, unless and until the provisions of subsection (b) are complied with. . . .

(c) This section shall not apply to the closure of a military installation, or a realignment with respect to a military installation, if the President certifies to the Congress that such closure or realignment must be

dozen of those domestic military installations slated for closure or already closed were contaminated enough to be put on the National Priorities List.<sup>124</sup> This is a national list of those sites posing the greatest risks to humans and environmental well-being, and that consequently demand special EPA consideration.<sup>125</sup>

At home, Congress has tried to divide the larger problem into smaller, more manageable chunks. By one initiative,<sup>126</sup> Congress moved to

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implemented for reasons of national security or a military emergency. . .

(e) (3) The term "realignment" includes any action which both reduces and relocates functions and civilian personnel positions, but does not include a reduction in force resulting from workload adjustments, reduced personnel or funding levels, skill imbalances, or other similar causes.

*Id.*

<sup>124</sup> See Wegman & Bailey, *supra* note 123, at 868.

<sup>125</sup> *Id.*

<sup>126</sup> *Id.* at 911-13; see also Community Environmental Response Facilitation Act, 42 U.S.C.A. § 9620 (1998) [hereinafter CERFA]. This Act provides in pertinent part:

(h) Property transferred by Federal agencies

(1) Notice

After the last day of the 6-month period beginning on the effective date of regulations under paragraph (2) of this subsection, whenever any department, agency, or instrumentality of the United States enters into any contract for the sale or other transfer of real property which is owned by the United States and on which any hazardous substance was stored for one year or more, known to have been released, or disposed of, the head of such department, agency, or instrumentality shall include in such contract notice of the type and quantity of such hazardous substance and notice of the time at which such storage, release, or disposal took place, to the extent such information is available on the basis of a complete search of agency files.

(2) Form of notice; regulations

Notice under this subsection shall be provided in such form and manner as may be provided in regulations promulgated by the Administrator. As promptly as practicable after October 17, 1986, but not later than 18 months after October 17, 1986, and after consultation with the Administrator of the general Services Administration, the Administrator shall promulgate regulations regarding the notice required to be provided under this subsection.

(3) Contents of certain deeds . . .

(A)(ii) a covenant warranting that—

(I) all remedial action necessary to protect human health and the environment with respect to any such substance remaining on the property has been taken before the date of such transfer, and

“parcelize” federal facilities into uncontaminated segments and contaminated segments, with the former being available for immediate local use by lease, transfer, or sale at below fair market rates.<sup>127</sup> Congress knew that base

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(II) any additional remedial action found to be necessary after the date of such transfer shall be conducted by the United States; and

(iii) a clause granting the United States access to the property in any case in which remedial action or corrective action is found to be necessary after the date of such transfer.

(B) Covenant requirements

For purposes of subparagraphs (A)(ii)(I) and (C)(iii), all remedial action described in such subparagraph has been taken if the construction and installation of an approved remedial design has been completed, and the remedy has been demonstrated to the Administrator to be operating properly and successfully. The carrying out of long-term pumping and treating, or operation and maintenance, after the remedy has been demonstrated to the Administrator to be operating properly and successfully does not preclude the transfer of the property.

The requirements of subparagraph (A)(ii) shall not apply in any case in which the person or entity to whom the real property is transferred is a potentially responsible party with respect to such property. The requirements of subparagraph (A)(ii) shall not apply in any case in which the transfer of the property occurs or has occurred by means of a lease, without regard to whether the lessee has agreed to purchase the property or whether the duration of the lease is longer than 55 years. In the case of a lease entered into after September 30, 1995, with respect to real property located at an installation approved for closure or realignment under a base closure law, the agency leasing the property, in consultation with the Administrator, shall determine before leasing the property that the property is suitable for lease, that the uses contemplated for the lease are consistent with protection of human health and the environment, and that there are adequate assurances that the United States will take all remedial action referred to in subparagraph (A)(ii) that has not been taken on the date of the lease.

(C) Deferral

(iii) Warranty

When all response action necessary to protect human health and the environment with respect to any substance remaining on the property on the date of the transfer has been taken, the United States shall execute and deliver to the transferee an appropriate document containing a warranty that all such response action has been taken, and the making of the warranty shall be considered to satisfy the requirement of subparagraph (A)(ii)(I).

*Id.*

<sup>127</sup> Wegman & Bailey, *supra* note 123, at 911.

closures cost local jobs,<sup>128</sup> and it therefore determined that the earliest use of sea ports, airports, warehouses, homes, or offices would provide affected "communities their 'best prospect for future economic development.'"<sup>129</sup> This was later enhanced and expanded by an amendment.<sup>130</sup>

Cleanup and closure efforts at United States installations abroad have often been stymied by conflicts over which standards to follow and over who will pay.<sup>131</sup> The operation of, and the activities taking place on, United States installations abroad are generally governed by a Status of Forces Agreement ("SOFA") between the United States and its host nation.<sup>132</sup> Such agreements generally cover how to apportion costs of operations, the methods for pursuing grievances against the United States, and the extent or terms of United States liability for various harms.<sup>133</sup> The SOFA with South Korea specifically denies any duty on the part of the United States to remediate or compensate for environmental damage on these installations;<sup>134</sup> and the SOFA with Germany specifically limits the United States' liability to environmental damage for harms occurring "outside" the installations.<sup>135</sup>

Such deals have allowed the DOD to terminate operations and close bases with no legal obligation. In 1991, the GAO studied ten facilities in six nations where the United States had conducted cleanup efforts.<sup>136</sup> In its damaging findings, the GAO concluded that the United States had consistently failed to meet both its own stringent, domestic environmental enforcement standards, and the more relaxed standards of its host countries.<sup>137</sup> Any apparent remediation efforts, on moral grounds, were nothing but a sham.<sup>138</sup> In what the DOD itself calls "paralysis by analysis," most of the funds, time, and effort, both at home and abroad have been spent on studies, estimations, and all manner of investigations, as opposed to

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<sup>128</sup> *Id.* at 879.

<sup>129</sup> *Id.* at 912 (quoting H.R. REP. NO. 102-814, at 8 (1992)).

<sup>130</sup> *Id.* at 921-23.

<sup>131</sup> *Id.* at 869.

<sup>132</sup> *Id.*, *supra* note 123, at 928.

<sup>133</sup> Wegman & Bailey, *supra* note 123, at 928.

<sup>134</sup> *Id.* at 929.

<sup>135</sup> *Id.* at 928.

<sup>136</sup> *Id.* at 927. These six nations were Germany, Italy, Japan, South Korea, the Philippines, and the United Kingdom. *Id.*

<sup>137</sup> *Id.* at 927.

<sup>138</sup> *See id.*

actually addressing the problem.<sup>139</sup> Despite this initial shaky foundation, DOD has since made some progress in creating new environmental compliance guidelines for those installations still operating abroad, and for cleanups where closure is involved.<sup>140</sup>

B. *Attempts at Compromise*

1. Incineration, Reduction, and Reclamation

Another daunting legacy of military preparation is chemical weapons. The United States has an estimated thirty thousand metric tons of chemical agent, and its onetime nemesis, the former Soviet States, have a combined total of some forty thousand metric tons.<sup>141</sup> Unlike the procedures for cleaning closed installations, the United States is treaty-bound to destroy its stockpile within a given timeframe.<sup>142</sup> After years of burying them in landfills, dumping them at sea, and burning them in the open air,<sup>143</sup> the DOD thought that it had found a workable proposal for disposing of its chemical arsenal by controlled and contained incineration.<sup>144</sup>

In 1988, the Army built the initial Johnson Atoll Chemical Agent Disposal System ("JACADS"), in the South Pacific, at a cost of \$240 million.<sup>145</sup> Following a succession of tests and trials, the army concluded that it had found a viable way to "demilitarize various types of chemical agents

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<sup>139</sup> Wegman & Bailey, *supra* note 123, at 875. See also David A. Koplow, *How Do We Get Rid of These Things?: Dismantling Excess Weapons While Protecting the Environment*, 89 NW. U. L. REV. 445, 448 (1995). Koplow echoes this paralytic theme when he writes:

[E]nvironmentalism and arms control, two crucial sectors of American and international public life that have long existed in segregated "parallel universes," are now starting to intersect. Each of these areas contains its own hard choices, irreconcilable alternatives, and political controversies; when the two sets collide, the uncertainties and the barriers can become paralyzing.

*Id.*

<sup>140</sup> Wegman & Bailey, *supra* note 123, at 936, 939-41.

<sup>141</sup> Koplow, *supra* note 139, at 447.

<sup>142</sup> *Id.* at 447 n.1 (referencing the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, *opened for signature* Jan. 13, 1993, 32 I.L.M. 800).

<sup>143</sup> *Id.* at 515.

<sup>144</sup> *Id.* at 517.

<sup>145</sup> *Id.* at 517-18.



and munitions,” and planned to build eight JACADS facilities in the continental United States.<sup>146</sup> Those plans were soon put on an indefinite hold.<sup>147</sup>

At the Oak Ridge compound, in Tennessee, there were also attempts to burn nuclear byproducts at a nearby Volume Reduction Facility (“VRF”).<sup>148</sup> At this VRF, the Scientific Ecology Group (“SEG”) melts, shreds, compacts, and incinerates assorted nuclear wastes deemed as “low-level.” These come from medical and research laboratories, and nuclear facilities.<sup>149</sup> Metal containers are either compacted into super-dense “pucks” for burial in nuclear waste landfills, or melted and molded into super-dense “ingots.”<sup>150</sup> The ingots are then sent either to nuclear landfills and buried or to nuclear facilities, where they will be used as “shielding blocks.”<sup>151</sup> The main problem that the SEG workers face is not the radiation, but the minute particles of cadmium, lead, and the like that could reach very high concentrations in their bodies over the standard twelve-hour shifts that they work.<sup>152</sup> As a result, SEG has established a comprehensive system of respirator technologies and other safety procedures to maintain the productivity and health of its workers.<sup>153</sup>

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<sup>146</sup> *Id.* at 473, 518, 527 n.453, 528 n.461.

<sup>147</sup> Koplow, *supra* note 139, at 518, 524-28, 526 n.453, 528 n.461. These sites included Newport, Indiana; Lexington, Kentucky; Aberdeen, Maryland; Tooele, Utah; and locations in Alabama and Colorado. Due to the safety and efficiency concerns of members of the scientific community and environmentalists, and to footdragging by the affected communities, Congress essentially froze funding for all but two of the sites in 1993. Construction continued at the Utah site, which was near completion, and at the Colorado site, which was researching alternative technologies. *Id.* at 526-28.

<sup>148</sup> *Nuclear Waste Facility Puts Respiratory Protection to the Test: The Scientific Ecology Group, Inc.*, 59 OCCUPATIONAL HAZARDS, 60 (July 1997) [hereinafter *Nuclear Waste Facility*].

<sup>149</sup> *Id.*

<sup>150</sup> *Id.*

<sup>151</sup> *Nuclear Waste Facility*, *supra* note 148, at 60.

<sup>152</sup> *Id.*

<sup>153</sup> *Id.* But see Joby Warrick, *Bomb Part Storage at Ky. Plant Disclosed; Nuclear Agency is Told of Hazards in Secret Program*, WASH. POST, Feb. 11, 2000, at A1. Raymond G. Carroll, the senior manager of health and safety programs at a DOE uranium processing facility in Kentucky, recently contacted the Nuclear Regulatory Commission and blew the whistle on a longstanding tradition of lax and questionable operating procedures. These included previously undisclosed, intentional experimental exposures of human volunteers to uranium. Over 1,600 tons of weapons components, including neptunium, tritium, plutonium and highly-enriched uranium had been shipped to the plant since the 1950s, unlabeled for security

The Savannah River plant in California has also developed innovative ways to “reduce, reuse and recycle” nuclear waste products.<sup>154</sup> These include removing, shredding, incinerating, and compacting contaminated soils and vegetation; recycling small tools and protective devices; and having low-level radioactive metals recast offsite for use as landscaping implements or as containers to hold other radioactive materials.<sup>155</sup>

## 2. Aggressive Redeployment

As military and civilian efforts to “reduce, reuse and recycle” continue, the United States and other nations have also found a new role for their nuclear waste materials: armor and armor-piercing munitions wrought from Depleted Uranium (“D.U.”).<sup>156</sup> D.U. is the waste product generated from enriching Uranium for civilian or military purposes.<sup>157</sup> It is very heavy, still quite radioactive, and approximately 1.7 times as dense as lead.<sup>158</sup> Though primarily valued in the United States for its ability to pierce the skins of armored vehicles, “[t]he high density of D.U. [has also made] it useful as a counter-balance for large commercial aircraft, including the Boeing 747, and in yacht keels;”<sup>159</sup> as well as in prefabricated tubes, for the export market.<sup>160</sup> During the Gulf War of 1990-1991, the combined usage of D.U. in their armor and munitions has long been credited with giving the Allied Coalition forces an unparalleled advantage.<sup>161</sup> During that conflict, alone, many have estimated that about 350 metric tons of D.U. ammunition were expended in attacks on Iraqi armor alone.<sup>162</sup>

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reasons and therefore stored and handled in totally inappropriate ways. As Carroll wrote, “[a] decision had apparently been made that national security would take precedence over personnel radiological safety. . . . I find this situation to be unconscionable.” *Id.*

<sup>154</sup> *Savannah River SRS Develops New, Innovative Waste Reduction Techniques*, NUCLEAR WASTE NEWS, July 2, 1998, available at LEXIS, News Group File.

<sup>155</sup> *Id.*

<sup>156</sup> *The Military Uses of DU*, BBC News, Jan. 9, 2001, at <http://news.bbc.co.uk/2/hi/europe/1108058.stm> (last visited Mar. 24, 2003).

<sup>157</sup> *Kosovo Uranium ‘Poses Little Risk’*, BBC News, Mar. 13, 2001 at [http://news.bbc.co.uk/hi/english/sci/tech/newsid\\_1217000/1217816.stm](http://news.bbc.co.uk/hi/english/sci/tech/newsid_1217000/1217816.stm) (last visited Dec. 12, 2001).

<sup>158</sup> *The Military Uses of DU*, *supra* note 156.

<sup>159</sup> *Id.*

<sup>160</sup> Frank Munger, *Oak Ridge facility Signs on to Provide Uranium Tubes to UK*, KNOXVILLE NEWS-SENTINEL, Oct. 27, 2001, available at LEXIS, News Group File.

<sup>161</sup> *The Military Uses of DU*, *supra* note 156.

<sup>162</sup> Paul Brown, *Iraq Seeks Gulf War Uranium Check*, GUARDIAN, Apr. 30, 2001, at

D.U. is a radioactive substance, and this aggressive redeployment in exposing it to the troops and the stresses of warfare has brought out some of its most unique characteristics. "Scientists point out that D.U. becomes much more dangerous when it burns. When fired, it combusts on impact. As much as 70 percent of the material is released as a radioactive and highly toxic dust that can be inhaled or ingested and then trapped in the lungs or kidneys."<sup>163</sup>

Despite these unique characteristics and the implicit dangers that the use of depleted uranium (hereinafter D.U.) poses to the environment, and to both enemy and friendly forces alike, a growing number of countries now employ D.U. armor or munitions.<sup>164</sup> As recently as 1999, the United States Air Force fired an estimated 31,000 rounds of D.U. ammunition during their operations with allies in the Balkans.<sup>165</sup>

During the Gulf War, Allied troops were initially exposed to D.U. while riding in their own armored vehicles, when rescuing fellow soldiers after friendly fire incidents, and by dust and shrapnel from ammunition explosions.<sup>166</sup> They, along with local children, would later be exposed to D.U. when rummaging over Iraqi equipment that had been destroyed by D.U. fire, as well as when collecting expended D.U. rounds and fragments as souvenirs or trinkets.<sup>167</sup> A number of commentators have suggested that tungsten is a viable D.U. alternative, and "almost as effective."<sup>168</sup> As one of these commentators has written, however, the fact remains that as far as the United States is concerned:

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<http://www.guardian.co.uk/international/story/0,3604,480439,00.html> (last visited Mar. 24, 2003).

<sup>163</sup> Bill Mesler, *The Pentagon's Radioactive Bullet*, NATION, Oct. 21, 1996, available at 1996 WL 9220714.

<sup>164</sup> *The Military Uses of DU*, *supra* note 156. These nations include: China, Greece, France, Israel, Pakistan, Russia, Saudi Arabia, Turkey, Ukraine, the United Kingdom, and the United States. *Id.*

<sup>165</sup> *Id.*

<sup>166</sup> See generally Mesler, *supra* note 163 (describing exposure of Allied troops to D.U. during the Gulf War).

<sup>167</sup> *Id.*

<sup>168</sup> These commentators include Matt Kagan, formerly a *Jane's Defence Weekly* munitions analyst, and Bill Arkin, who has consulted on D.U. for Human Rights Watch and Greenpeace, and who has also been a columnist for *The Bulletin of the Atomic Scientists*. *Id.*

[T]ungsten is more expensive and must be imported, while the United States has more than 500,000 tons of depleted uranium, waste left behind by the production of nuclear weapons and by nuclear generators. Scientists have long looked for a way to re-use what otherwise must be stored at great expense in remote sites.<sup>169</sup>

Regardless of the exact amount of D.U. in the United States, it appears that United States military forces have offered an alternative to storing nuclear waste materials, which is to turn it into armor or munitions for operational use—often quite far from where it was originally created.<sup>170</sup> As a result, experts will continue to debate the links between D.U. ammunition and a host of ailments including Gulf War Syndrome, a sharp rise in leukemia and other cancers, birth defects, and other lingering, unexplained diseases among those who have been exposed.<sup>171</sup> With no end in sight to this aggressive and cost-effective redeployment of D.U., a similar debate will persist over what the future holds. Having effective munitions, and armor that protects them, are indisputably important elements of any National Security Policy. However, there should also be some consideration of the costs that they might impose on the social and physical environments whenever and wherever they are created or deployed.<sup>172</sup>

For lack of any such public and detailed considerations at the outset, scientists and policy makers must now struggle to anticipate the environmental effects of D.U. groundwater contamination; effects on descendants of those who have been exposed; and the geographic, cultural, and political effects that will result if mass relocations from D.U. contaminated areas become necessary in the future.<sup>173</sup> There are, of course, a number of other options for disposing of this D.U. waste, including a continuation of the long used storage and burial practices.

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<sup>169</sup> Mesler, *supra* note 163.

<sup>170</sup> Another estimate concurs that quite recently, the actual amount of D.U. waste in the United States was 1.1 billion pounds (500,000 tons). Sierra Club, Nuclear Waste, Radioactive Waste: What are radioactive wastes? *available at* <http://www.sierraclub.org/nuclearwaste/nucm.asp> (last visited Apr. 16, 2003).

<sup>171</sup> See generally Mesler, *supra* note 163.

<sup>172</sup> See *supra* notes 94-97 and accompanying text.

<sup>173</sup> See generally discussion *supra* at Part V.B.ii.

### 3. Storage and Burial Defined

Storage and burial are very closely related. The word storage tends to denote something temporary; burial, however, sounds very much like a final solution. Confusion and debate persist over the precise meaning of each term, especially when applied in the context of hazardous materials. One commentator described American waste policy as "characterized by secrecy, deception, and flagrant violation of environmental laws," and as "jeopardizing future generations—by dumping unmonitored, nonretrievable, lethal waste into the ground and forgetting about it."<sup>174</sup>

Confusion persists because both members of the public and insiders with knowledge in the environmental field appear to view the two definitions as highly interchangeable. One expert, Robert Busby ("Busby") writes, "[e]ven if the United States adopts a long-term storage solution, it must also decide how to store high-level nuclear waste until a permanent storage solution becomes available."<sup>175</sup> Given such a convoluted statement, it is little wonder that resistance to both options remains high.

The case of the Mescalero Apache Indians shows just how these definitional boundaries can be blurred, and how what begins as a temporary, stopgap measure may eventually become a permanent solution.<sup>176</sup> This tribe in South-Central New Mexico tried for five years to attract a Monitored Retrievable Storage Facility ("MRS") to its lands.<sup>177</sup> The aboveground facility would have held in excess of 20,000 metric tons of spent nuclear fuel for up to 40 years.<sup>178</sup> Negotiations between the tribe and the consortium of nuclear utilities broke down in April 1996.<sup>179</sup> Reasons for this breakdown were concerns over repercussions from extending the forty year life-span, and the potential for accidents, both in-transit and on location.<sup>180</sup> The facility

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<sup>174</sup> Shrader-Frechette, *supra* note 118, at 949, 950.

<sup>175</sup> Robert Busby, *The United States's Failure to Establish a High-Level Nuclear Storage Facility is Threatening its Ability to Effectively Support Nuclear Nonproliferation*, 30 GEO. WASH. J. INT'L L. & ECON. 449, 451 (1996-1997).

<sup>176</sup> Noah Sachs, *The Mescalero Apache Indians and Monitored Retrievable Storage of Spent Nuclear Fuel: A Study in Environmental Ethics*, 36 NAT. RESOURCES J. 881, 881-91 (1996).

<sup>177</sup> *Id.*

<sup>178</sup> *Id.*

<sup>179</sup> *Id.*

<sup>180</sup> *Id.*

would have accepted shipments of over fifty percent of all the spent nuclear fuel in the country.<sup>181</sup>

The current method of storing spent nuclear fuels in cooling ponds on-site is fast reaching capacity as a long-term measure even though it was intended to be temporary.<sup>182</sup> Busby argues that the United States has a duty to develop a lasting solution to its nuclear waste problem,<sup>183</sup> both as a signatory to the non-proliferation treaty,<sup>184</sup> and as a nation where nuclear energy use is in decline.

#### 4. Lessons from Abroad

The recent resurgence in the popularity of existing domestic reactors may well put a part of Busby's thesis into doubt.<sup>185</sup> While the United States *does* have a duty to develop a lasting solution for *its own* nuclear energy problems, it was European nations like Britain through its then Foreign Secretary, Robin Cook, that reached out to help other nations like Russia, deal with theirs.<sup>186</sup> In Murmansk, the home port of Russia's Northern Fleet, vast numbers of reactors that had already been removed from nuclear-powered vessels, and rusting, sea-based vessels with reactors yet to be

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<sup>181</sup> *Id.*

<sup>182</sup> Busby, *supra* note 175, at 457-58.

<sup>183</sup> *Id.* at 452.

<sup>184</sup> For an excellent treatment of the global national security implications of nuclear proliferation, see Robert Chesney, *National Insecurity: Nuclear Material Availability and the Threat of Nuclear Terrorism*, 20 LOY. L.A. INT'L & COMP. L.J. 29 (1997).

<sup>185</sup> Matthew L. Wald, *Reactors Healthy But Dying*, N.Y. TIMES, Mar. 7, 1999, at A16; Agis Salpukas, *The Nuclear Power Elite: A Small, Circle of Companies Seeks Control of Reactors*, N.Y. TIMES, Mar. 6, 1999, at B1. The United States only produced twenty percent of its 1997 energy needs through nuclear power generation. This compares to seventy-eight percent in France, sixty percent in Belgium, and forty-six percent in Sweden for the same period. However, in July 1998, Amergen, a joint British-American utility venture, bought the remainder of Pennsylvania's Three Mile Island ("TMI") nuclear power plant. That facility had suffered a meltdown in March 1979. In March 1999, Entergy Corporation of New Orleans, bought the Pilgrim nuclear power plant in Plymouth, Massachusetts. The companies made their purchases despite the fact that both the Plymouth and TMI plants were known "problem plants", and Amergen was reputedly in further negotiations to acquire parts of the Nine Mile Point nuclear power plant, in Scriba, New York. Wald, *supra*, at A16; Salpukas, *supra*, at B1.

<sup>186</sup> Jon Boyle, *Britain Ready To Help Russia With Nuclear Waste Headache*, AGENCE FRANCE PRESSE, Mar. 3, 1999, LEXIS, International News.

removed, were originally stockpiled as a temporary measure.<sup>187</sup> That situation was rapidly becoming yet another permanent "storage" issue and a major environmental hazard.<sup>188</sup>

Russia and the other former Soviet States know they need help in dealing with their nuclear problems, as their limited financial resources must be spent on basic necessities.<sup>189</sup> In this respect, they are similar to Americans, for "[w]hile Americans do tend to be very aware of environmental problems, the fact is that, as with other problems, such as poverty, lack of adequate housing, education, and work, environmental problems often are pushed aside in favor of more pressing day-to-day concerns."<sup>190</sup> In Belarus, for example, a quarter of the state budget was once earmarked for essentials—essentials that ironically harkened back to the nuclear problem.<sup>191</sup> Pensions, medical expenses, and programs to monitor, treat or destroy foods contaminated by the state's Chernobyl nuclear accident are still an enduring legacy.<sup>192</sup>

## 5. Resistance

Britain itself is not immune to the nuclear problem. Proposals for long-term geological disposal below-ground have been fought to a standstill.<sup>193</sup> In this respect, it is not alone. Similar proposals and plans have stalled in Canada,<sup>194</sup> and temporarily stalled in the United States.<sup>195</sup> Such strong opposition is quite understandable considering the fact that both low-level and high-level radioactive wastes remain dangerous and deadly to

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<sup>187</sup> *Id.*

<sup>188</sup> *Id.*

<sup>189</sup> Vladimir Solntsev, *Chernobyl Clean-Up Eats up About Quarter of Belarus Budget*, ITAR-TASS NEWS AGENCY, Mar. 3, 1999.

<sup>190</sup> Lydia B. Hoover, *The Commerce Clause, Federalism, and Environmentalism: At Odds After Olin?* 21 WM. & MARY ENVTL. L. & POL'Y REV. 735, 777 (1997).

<sup>191</sup> Solntsev, *supra* note 189.

<sup>192</sup> *Id.*

<sup>193</sup> Simon Rippon, *The Least Good Solution for Waste Disposal*, NUCLEAR NEWS, May 1997, at 48, available at LEXIS, Nuclear News File.

<sup>194</sup> Brian McAndrew, *Atomic Waste Plan Rejected; Agency Cites Public Unease*, TORONTO STAR, Mar. 16, 1998, at A2.

<sup>195</sup> Jim Wilson, *Plutonium Peril; Nuclear Waste Storage at Yucca Mountain*, POPULAR MECHANICS, Jan. 1999, at 70.

humans for over twenty thousand years.<sup>196</sup> Nevertheless, another storage and burial initiative in New Mexico appeared promising, at first.

The planned underground burial of nuclear waste in New Mexico's salt beds, at a Waste Isolation Pilot Plant ("WIPP"), had the backing of both the EPA and DOE, and seemed destined for reality.<sup>197</sup> That apparently inevitable result soon became quite uncertain.<sup>198</sup> Radioactive waste is a federal matter, and hazardous waste is a state matter, requiring additional state permits. Problems arose when New Mexico insisted on advance knowledge of the contents of all shipments, in order to issue these necessary state permits.<sup>199</sup>

## 6. Storage and Burial Refined

Both the House<sup>200</sup> and the Senate<sup>201</sup> have approved the temporarily stalled, yet still highly controversial, Yucca Mountain nuclear waste storage plan. Under the plan, some 70,000 tons of highly radioactive, used reactor fuel generated by the nation's 103 power plants, would be shipped from roughly 100, temporary storage sites around the country to a permanent storage site at Yucca Mountain, Nevada.<sup>202</sup> The actual site lies on federal land approximately 90 miles northwest of Las Vegas, between Nellis Air Force Base and the Nevada Test Site.<sup>203</sup>

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<sup>196</sup> *Id.*; see also Busby, *supra* note 175, at 454.

<sup>197</sup> Stevenson Swanson, *EPA Approves Site For Nuclear Waste; Underground Location Is In New Mexico Salt Bed*, CHI. TRIB., May 14, 1998, at 3, available at NEXIS, News Group File.

<sup>198</sup> *Id.*

<sup>199</sup> *Id.*; WIPP: NM Says DOE Plan For Waste Drums Is Inadequate, GREENWIRE, Aug. 27, 1998, available at LEXIS, News Group File.

<sup>200</sup> The House approved the plan by a vote of 306 to 117 on Wednesday, May 8, 2002. H. Josef Hebert, *House OKs Nevada Nuke Waste Site*, MSNBC NEWS, May 8, 2002, at <http://www.msnbc.com/local/kvbc/ml180698.asp> (last visited Apr. 16, 2003).

<sup>201</sup> The Senate approved the plan by a vote of 60 to 39 on Tuesday, July 10, 2002. MSNBC Staff and Wire Reports, *Yucca Project Still Faces Big Hurdles: Foes to Fight On After Senate OKs Plan to Bury Nuclear Waste in Nevada vault*, MSNBC NEWS, July 10, 2002 (on file with author).

<sup>202</sup> *Id.* Miguel Llanos, *Nuclear Waste: No Way Out?* MSNBC NEWS, Jun. 6, 2002, at <http://www.msnbc.com/news/755772.asp> (last visited Apr. 16, 2003).

<sup>203</sup> *Id.*



In an effort to bolster their case and allay safety concerns, supporters of the Yucca Repository plan have long argued that over 2,700 shipments of spent nuclear fuel have already been moved 1.6 million miles in the United States over the past 20 years, without a single incidence of radiation leakage.<sup>204</sup> Tom Daschle (D-S.D.) cautioned that “by shipping nuclear waste on trucks and barges, we may very well be creating hundreds, even thousands, of rolling dirty bombs. What sense does that make?”<sup>205</sup>

The repository is expected to be ready to receive its first shipments of spent nuclear fuel no earlier than 2010 and continue receiving them for a total of 24 years.<sup>206</sup> Yucca has a projected capacity of 77,000 tons, with an estimated total cost of \$58 billion for site construction, fuel shipments, and the first 100 years of operation.<sup>207</sup> This does not include \$7 billion in twenty years of Yucca feasibility and site studies already spent, or the costs that will be incurred to settle the site’s 293 “technical issues” that still remain unresolved.<sup>208</sup>

## 7. Back to the Sea

There is no consensus on what constitutes the best long-term solution to the problem of nuclear waste. Simon Rippon suggested in 1997 that we go back to the sea, not with wanton dumping, but with a planned and concerted effort to deposit the waste below the seabed.<sup>209</sup> Another commentator, writing in 1998, echoed his advocacy of, and, indeed, his high praise for sea-based disposal.<sup>210</sup> Rippon wrote:

It is well established from various international scientific studies that the best long-term isolation of radioactive waste could be achieved by disposal in deep ocean sediments. This ultimately is where almost everything will finish up, as mountains and other land formations are slowly eroded away

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<sup>204</sup> Miguel Llanos, *The Perils of Nuclear Transport*, MSNBC NEWS, Jun. 6, 2002, at <http://www.msnbc.com/news/743451.asp> (last visited Apr. 16, 2003) [hereinafter *Perils*].

<sup>205</sup> Senate Oks Yucca Mountain Nuclear Site, CNN, Jul. 10, 2002, <http://www.cnn.com/2002/ALLPOLITICS/07/10/yucca.mountain/>.

<sup>206</sup> Hebert, *supra* note 200.

<sup>207</sup> *Id.*

<sup>208</sup> *Id.*

<sup>209</sup> Rippon, *supra* note 193.

<sup>210</sup> Leonard Le Blanc, *Abyssal Disposal of Nuclear Materials*, OFFSHORE, Mar. 1998, at 34.

and washed down into the deepest ocean trenches. How elegant to short circuit this multibillion-year natural waste disposal route by shooting vertical torpedoes of concentrated nuclear waste into these infinitely stable resting places.<sup>211</sup>

Alas, both parties overstate the case for sea-based disposal for a number of reasons. If it is such a safe, reliable, and obvious solution, then it should have been unanimously embraced by now. Most of the earth is water, and life itself, as we know it, depends on water. Had these commentators seen the work of an earlier observer, who plainly reminded us that any excessive destabilization of the aquatic landscape could harm us all, whether directly or indirectly,<sup>212</sup> they might not have been such strong advocates of sea-based disposal. In discussing the potential nature and effects of coming "environmental quality issues,"<sup>213</sup> that observer had written, "[t]he most salient of these is that climate—change, desertification and even very modest sea-level effects in territories such as Egypt and Bangladesh may create mass-refugee migrations and land competition."<sup>214</sup>

The furthest depths of the ocean have hardly begun to be explored. Any accident that irradiated a large part of the ocean; that heated ocean waters, killing marine life and causing polar ice caps to melt; or that opened up a mammoth abyss and caused sea levels to actually drop, would have disastrous and lasting consequences. Then, the essence of that 1997 proposal to "short-circuit" our "multibillion-year natural waste disposal route" would really have come true. Although such eventualities may seem improbable today, they must be considered possible when planning for a worst case scenario. Such a planning phase is an indispensable prerequisite to the evaluation of these and other similarly critical and contentious policy options.

The fact remains that, despite all the efforts at remediation and short-term management, there are still no lasting solutions to this global nuclear problem. As Barney writes, "[t]he problem of avoiding geological and social

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<sup>211</sup> Rippon, *supra* note 184.

<sup>212</sup> See generally IMBER, *supra* note 87. (discussing the fragility of our ecosystem and our pressing need to protect it, biodiversity generally, and aquatic life especially).

<sup>213</sup> *Id.* at 140.

<sup>214</sup> *Id.* at 141.

contingencies in waste storage remains unsolved and is not now known to be solvable."<sup>215</sup>

## VI. CHALLENGES AND RECOMMENDATIONS

Attempts to find some sort of compromise in providing for both national security and social welfare have failed.<sup>216</sup> As a result of this failure, there is no common consensus on how exactly to find lasting and widely-acceptable solutions to some of the most pressing environmental problems that have resulted from a focus on energy and defense.<sup>217</sup> If we are to have a chance at resolving these complex issues, or even take a step in that direction, four basic challenges and recommendations for change must be addressed.

### A. *Redefine National Security to Include Social Welfare*

First, a new and comprehensive redefinition of national security must be found.<sup>218</sup> We need a more inclusive framework that goes well beyond the basics of guarding against and being prepared for traditional, conventional, and nuclear warfare,<sup>219</sup> or even terrorist attacks.<sup>220</sup> The creation of a Department of Homeland Security is most certainly a step in the right direction.<sup>221</sup> As we set new standards and priorities,<sup>222</sup> care must now be taken lest we ignore past lessons and compound problems by ignoring long-term micro-level consequences—or even long and short-term micro-level priorities and needs—to favor more visible, politically useful, short-term, macro-level goals.<sup>223</sup>

Perhaps for this very reason, some observers insist that security concerns should be more focused at the individual or micro-level, as opposed

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<sup>215</sup> THE UNFINISHED AGENDA: THE CITIZEN'S POLICY GUIDE TO ENVIRONMENTAL ISSUES 54 (Gerald O. Barney ed., 1977).

<sup>216</sup> See discussion *supra* Part V.B.

<sup>217</sup> See discussion *supra* Part V.A.

<sup>218</sup> MYERS, *supra* note 1, at 32.

<sup>219</sup> COMM'N ON GLOBAL GOVERNANCE, OUR GLOBAL NEIGHBORHOOD 80 [hereinafter COMMISSION].

<sup>220</sup> See, e.g., *supra* notes 37-40 and accompanying text.

<sup>221</sup> See, e.g., discussion *supra* Part III.D.2.

<sup>222</sup> See discussion *infra* Part VI.B.

<sup>223</sup> See, e.g., discussion *supra* Part II.A.3.

to the traditional national, or macro-level.<sup>224</sup> No nation can hope to be self-sufficient in all its labor, investment, and natural resource needs.<sup>225</sup> Nations must trade with one another and encourage the free flow of people, goods, and technologies for their common wealth and collective security.<sup>226</sup> As a result of this, other observers insist that national security has undergone another transformation, and that it has become a new animal. They insist that national security is now *global* security, and must therefore be considered on an international or macro-level.<sup>227</sup>

Following this most recent transformation of national security, one concerned group writes that the current emphasis is on how best to “maintain the integrity of the planet’s life-support systems by eliminating the economic, social, environmental, political, and military conditions that generate *threats to the security of the people and the planet*, and by anticipating and managing crises before they escalate into armed conflicts.”<sup>228</sup> It is through this redefinition that we realize that both camps are essentially right. Real security must be understood as a multi-faceted concept. It is both a micro-level issue of concern to the individual and a macro-level issue of concern to nation states. While the individual is most concerned with her or his immediate well-being, continued basic sustenance, and general social welfare, the state and its instruments, for their part, are most concerned with the state’s long-term well-being, its continuity as a viable and vibrant entity, and national security.

A state needs people both to validate its existence and to run its various bureaucracies and branches, including the military. Similarly, people generally<sup>229</sup> need the monolithic, democratic state to help provide for their

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<sup>224</sup> MYERS, *supra* note 1, at 31-32. Myers encapsulates this proposition by stating:

In essence, and little though this is generally recognized by governments, security applies most at the level of the individual citizen. It amounts to human wellbeing: not only protection from harm and injury but access to water, food, shelter, health, employment, and other basic requisites that are the due of every person on Earth. It is the collectivity of these citizen needs—overall safety and quality of life—that should figure prominently in the nation’s view of security.

*Id.*

<sup>225</sup> KAPSTEIN, *supra* note 6, at 211.

<sup>226</sup> MYERS, *supra* note 1, at 24.

<sup>227</sup> See generally KAPSTEIN, *supra* note 6.

<sup>228</sup> COMMISSION, *supra* note 219, at 84-85 (emphasis added).

<sup>229</sup> I use the word “generally” here because there are many different types of societal and

collective self-defense and to maintain some semblance of order and good governance. The state and its people may easily disagree on the extent to which each needs the other, and they often do, but they must both agree that they each need the environment in order to survive. The environment has the power and the means to both sustain and destroy. It is essential to the very survival of both the individual and the state.<sup>230</sup>

Herein lies the beauty and workability of the above redefinition of global security. Implicit inclusion of the three essential elements, environment, national security, and social welfare, in the single clause "threats to the security of the people and the planet,"<sup>231</sup> affirms the fact that the views of both the micro- and macro-schools are valid. Indeed, a careful reading by the members of both schools of thought would reveal their common sentiment, clarify their common need, and go a long way toward making conscious and conscientious environmental protection a common reality.

#### B. *Set Priorities and Standards Accordingly*

Secondly, the state must lower its emphasis on maximizing the finite utility of our common environment for the exclusive benefit of national security interests<sup>232</sup> and focus more on integrating military security and social welfare into a workable, viable, long-term system.<sup>233</sup> One way of working toward this integration is to minimize the real or potential harms that might result from the prioritization of national security interests.<sup>234</sup>

The "as low as is reasonably achievable" concept ("ALARA") was one particularly groundbreaking attempt to formulate a workable standard for any release of radiation that resulted from the use and prioritization of

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communal grouping that do not operate with what one would call the traditional, democratic style of government, as understood in the Western sense. These encompass dictatorship, varieties of socialism and communalism, matriarchy, patriarchy, kin and familial groups, oligopolies and tribal or traditional councils. There are even groupings that would appear to be totally anarchical to the uninitiated, outside observer. In reality, such units may actually be highly organized and cohesive. Unfortunately, a more in-depth treatment of this issue is beyond the scope of this Article, and must be left to the Anthropologists.

<sup>230</sup> See discussion *supra* Part II.A.2.

<sup>231</sup> See COMMISSION, *supra* note 219 at 84-85.

<sup>232</sup> See Northern, *supra* note 92, at 488; See also MYERS, *supra* note 1 at 12.

<sup>233</sup> See discussion *supra* Part VI.A.

<sup>234</sup> See discussion *supra* Part IV.B.

nuclear materials in an energy or security context. ALARA was defined and dismissed in the case of *Silkwood v. Kerr-McGee Corporation*.<sup>235</sup>

Karen Silkwood, who routinely worked with highly radioactive substances in her job, grinding and preparing plutonium fuel pins, had been exposed to particularly high levels of radiation.<sup>236</sup> After the contamination was discovered, but before its source or full extent could be found, Karen Silkwood died in a car accident.<sup>237</sup> Acting as administrator of her estate, Karen Silkwood's father Bill Silkwood, filed a tort suit against the employer, Kerr-McGee.<sup>238</sup> At the trial, there was strong evidence that the employer had not followed a federal requirement that nuclear facilities "make every reasonable effort to maintain radiation exposures, and releases of radioactive materials in effluents to unrestricted areas, as low as is reasonably achievable."<sup>239</sup>

Some years later, in the determination of a suit resulting from the accident at Three Mile Island,<sup>240</sup> the Third Circuit ruled that the ALARA concept was too vague, and was therefore merely intended as a guideline in formulating and reaching design objectives.<sup>241</sup> Federal maximum exposure limits would govern actual liability for personal injury, not ALARA *per se*.<sup>242</sup> ALARA may have been gutted as a hard standard, but though "vague," it can still provide us with significant guidance in other settings. The crucial area, is what one might call the "dicta" of ALARA.

In seeking these low discharges of and exposures to radiation, parties are specifically directed to consider "the state of technology, and the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations."<sup>243</sup> It would seem that ALARA still has much work to do in areas outside the nuclear field. The principle contains a clear invitation to experiment, to debate, to consider costs (but not make them an exclusive focal point), and to consider a host of other factors and constituencies.

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<sup>235</sup> *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238 (1984).

<sup>236</sup> *Id.* at 241.

<sup>237</sup> *Id.* at 242.

<sup>238</sup> *Id.* at 243.

<sup>239</sup> *Id.* at 243 n.6 (quoting 10 C.F.R. § 20.1(c) (1983)).

<sup>240</sup> See generally *supra* note 185 and accompanying text.

<sup>241</sup> See *In re TMI*, 67 F.3d 1103, 1114-15 (3rd Cir. 1995).

<sup>242</sup> *Id.* at 1113-14.

<sup>243</sup> *Id.* at 1115 (quoting 10 C.F.R. §§ 20.1(c), 50.34a(a)).

With such a broad grant encapsulated in these few words, ALARA may well be vague, but it is a license to take the first step, and at least to "try" to ameliorate environmental harms. The recycling movement in general<sup>244</sup> and California's clean fuel initiative<sup>245</sup> are two prime examples of taking that first step in trying to limit the environmental harm to levels as low as is reasonably achievable, considering this ALARA dicta. These are examples that should be lauded for their audacity and that must be followed, for the benefit of us all. Any who would insist that ALARA is vague, may well be right. However, any party or parties that would insist that ALARA is useless or outdated, should look more deeply to and see its woefully untapped potential.

Demonstrably, then, ALARA can be used by analogy in other, non-nuclear areas of environmental protection. It can serve either as a guiding principle, or even as an actual standard where established standards are lacking. Thanks to the beauty, promise, and malleability of its vagueness, or dicta, one would surmise that any ALARA-based, temporary or stopgap measure would not, if it became permanent, raise the level of hue and cry heard when temporary nuclear storage measures become permanent.<sup>246</sup> ALARA provides a kind of permanence that leaves formulae for modification in the future, due to its inherent flexibility, rather than the kind of permanence that ignores the problem, hoping it will resolve itself some day.

### C. *Provide for Military Leadership by Example*

A third challenge or recommendation is for the military to lead by example. This includes all of its varied aspects, attributes, and forms in the military-industrial complex,<sup>247</sup> the defense industrial base,<sup>248</sup> the defense technology base,<sup>249</sup> and any others that currently exist or that might come into existence at some time in the future.

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<sup>244</sup> See *supra* note 107 and accompanying text.

<sup>245</sup> See *supra* note 109-111 and accompanying text.

<sup>246</sup> See discussion *supra* Part V.B.

<sup>247</sup> See discussion *supra* Part III.A.

<sup>248</sup> See discussion *supra* Part III.B.

<sup>249</sup> See discussion *supra* Part III.C.

## 1. A Failure to Lead

While serving as Defense Secretary under President George Bush, Dick Cheney laid down a rule that the military must comply with environmental regulations.<sup>250</sup> The military has yet to reach full compliance. Although it is certainly true that great strides have been taken and some progress made, and that DOD has a multibillion dollar environmental budget,<sup>251</sup> there is still substantial work to be done. The most forthright military leader would likely echo the Fugh article that states, “[u]ntil we fully comply, we are vulnerable. Critical mission activities will suffer and may even be halted. Civil and criminal sanctions against us are real possibilities.”<sup>252</sup> In fact, these disruptions and sanctions are more than mere possibilities; they are a painful reality as shown by the case law,<sup>253</sup> the Environmental Impact Statement requirement,<sup>254</sup> and the field citation program.<sup>255</sup>

Faced with so many potential pitfalls, the commander has a heightened duty to be vigilant during a very broad range of activities for which she or he may be held directly accountable. Encapsulating this awareness, Fugh

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<sup>250</sup> DEFENSE, *supra* note 95, at 2-3; Fugh et al., *supra* note 101, at 3. Fugh writes, “[t]hat ethic is expressed in three words—*compliance* with the law, *responsibility* as careful stewards of vast natural resources, and *cooperation* with federal, state, and local regulators.” *Id.*

<sup>251</sup> Gary Vest, *Protection of The Environment During Armed Conflict*, 69 INT’L L. STUD. 383, 384 (1996).

<sup>252</sup> Fugh et al., *supra* note 101, at 6.

<sup>253</sup> See generally *United States v. Curtis*, 988 F.2d 946 (9th Cir. 1993); *United States v. Dee*, 912 F.2d 741 (4th Cir. 1990); *United States v. Carr*, 880 F.2d 1550 (2nd Cir. 1989).

<sup>254</sup> See *supra* note 103 and accompanying text. See also *Envtl. Def. Fund v. Massey*, 986 F.2d 528, 536 (D.C. Cir. 1993) (finding no extraterritorial effect of Environmental Impact Statement required for incineration of food wastes in Antarctica, as occurring in a territory without a sovereign, but over which the United States has “substantial interest and authority”). *Contra Greenpeace USA v. Stone*, 748 F. Supp. 749 (D.Haw. 1990) (finding no need to consider effects of transoceanic shipment in Environmental Impact Statement, where chemical weapons stockpile shipped from Germany to “unincorporated United States Territory” of Johnson Atoll, for storage and eventual disposal).

<sup>255</sup> See Major Kevin J. Luster, *The Field Citation Program Under The Clean Air Act: Can the EPA Apply it to Federal Facilities?* 22 WM. & MARY ENVTL. L. & POL’Y REV. 71, 74-75 (1997). Luster writes that the field citation program allows EPA inspectors to streamline the process of reporting, assessing and penalizing violations that they discover in the field. The inspector may issue an administrative order, a summons, a notice of violation, or a short-form settlement agreement on the spot. Luster concludes, “[f]ield citations are similar to traffic tickets in that they usually address clear-cut violations; require violators to correct the violations, usually impose small penalties, and provide an appeals process.” *Id.*



states, "[a] commander must be aware that there are several areas that could cause problems with the environmental overseers. These areas are the installation's current operations, historical operations, training activities, and construction/demolition activities. Each of these areas has a significant potential for environmental compliance problems."<sup>256</sup> If and when a problem is discovered, the commander must act immediately to comply, shut down the offending facility, negotiate a compliance schedule with the regulators, or seek a presidential exemption from compliance.<sup>257</sup>

A commander, therefore, has many options at hand to do the right thing, which is to voluntarily seek compliance, and thereby lead by example. The problems arise when responsibility is shirked, laws are violated, and shortcuts are taken. Leadership must, and will, come from outside the military establishment, to penalize noncompliance and mandate change. This is the *raison d'être* for environmental laws, to encourage and promote change in those who would otherwise not change on their own.<sup>258</sup> Those who will not or cannot lead, must follow.

## 2. Being Forced to Follow

One of those laws encouraging environmental compliance is Superfund, or the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA").<sup>259</sup> CERCLA provides that serious penalties will face any person "in charge of a facility" who fails to promptly notify the

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<sup>256</sup> Fugh, *supra* note 101, at 4.

<sup>257</sup> *Id.* at 5.

<sup>258</sup> See e.g., Ovink, *supra* note 21, at 243. Ovink writes that the EPA has negotiated numerous consent agreements and successfully enforced them as administrative "orders." Any who violate them may face civil or criminal liability resulting from direct EPA enforcement action; or from citizen suits initiated to either enforce these consent agreements, or to halt some other offending activity. There is, however, some evidence of changed priorities that have come from within the system. Cheyenne Mountain, Colorado, the legendary nerve center for early warnings in the case of a ballistic missile launch anywhere in the world, or an actual nuclear attack on the United States, has other roles. The facility currently assists with drug interdiction efforts, and monitors over 8,000 man-made objects of all sizes that are now orbiting the earth. See also Reuters, *U.S. Cold War Bastion Gets New Lease On Life*, N.Y. TIMES ON THE WEB, (Oct. 23, 1999) at <http://www.nytimes.com> (last visited Oct. 24, 1999).

<sup>259</sup> Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§ 9601-9675 (1980).

appropriate authorities of a hazardous material<sup>260</sup> release.<sup>261</sup> The Second Circuit in *United States v. Carr*,<sup>262</sup> held that this standard of accountability would bind even the low-ranked, civilian employee as one in charge. The issue here was the improper disposal of "waste cans of paint," which the court found to constitute the release of a hazardous substance that should have been reported.<sup>263</sup>

The Fourth Circuit in *United States v. Dee*,<sup>264</sup> validated a similar provision in the Resource Conservation and Recovery Act ("RCRA").<sup>265</sup> The

<sup>260</sup> See Nancy E. Milsten, *How Well Can States Enforce Their Environmental Laws When the Polluter is the United States Government?* 18 RUTGERS L. J. 123, 126 (1986). Milsten writes that a hazardous material is one that meets any one of four specific criteria of ignitability, toxicity, corrosivity, or reactivity. *Id.*

<sup>261</sup> Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601-9675 (1980).

§ 9603 Notification requirements respecting released substances:

(b) Penalties for failure to notify; use of notice or information pursuant to notice in criminal case

Any person— . . .

(3) in charge of a facility from which a hazardous substance is released, other than a federally permitted release, in a quantity equal to or greater than that determined pursuant to section 9602 of this title who fails to notify immediately the appropriate agency of the United States Government as soon as he has knowledge of such release or who submits in such a notification any information which he knows to be false or misleading shall, upon conviction, be fined in accordance with the applicable provisions of title 18 or imprisoned for not more than 3 years (or not more than 5 years in the case of a second or subsequent conviction), or both. Notification received pursuant to this subsection or information obtained by the exploitation of such notification shall not be used against any such person in any criminal case, except a prosecution for perjury or for giving a false statement.

*Id.*

<sup>262</sup> *United States v. Carr*, 880 F.2d 1550 (2d Cir. 1989).

<sup>263</sup> *Id.* at 1550-51.

<sup>264</sup> *United States v. Dee*, 912 F.2d 741 (4th Cir. 1990).

<sup>265</sup> Resource Conservation and Recovery Act, 42 U.S.C. § 6928 (2000). The section provides in pertinent part:

(d) Criminal Penalties

Any person who . . .

(2) knowingly treats, stores, or disposes of any hazardous waste identified or listed under this subchapter –

(A) without a permit under this subchapter or pursuant to title I of the Marine Protection, Research, and Sanctuaries Act (86 Stat. 1052) [33

court in *Dee* held that civilian federal employees were indeed persons who could be subject to applicable criminal sanctions, despite the fact that neither the United States nor any agency thereof was a person.<sup>266</sup> The issue here was the treatment, disposal, and storage of hazardous materials within a licensed complex, but at a site not specifically licensed for these activities.<sup>267</sup>

A third statute, the Clean Water Act ("CWA"),<sup>268</sup> also provides for criminal sanctions against a violating "person."<sup>269</sup> Following the precedent stated above and the plain meaning of the statute, the Ninth Circuit held in *United States v. Curtis*<sup>270</sup> that "individual federal employees acting within the course and scope of their employment are subject to criminal prosecution for violation of the Clean Water Act."<sup>271</sup> The issue in this case was a knowing discharge of jet fuel into United States waters.<sup>272</sup>

So it is, that a line of cases in the Second,<sup>273</sup> Fourth,<sup>274</sup> and Ninth Circuits<sup>275</sup> has held that civilian federal employees are fully accountable for the wrongs that they inflict, or that they cause to be inflicted on the environment while acting within the scope of their official duties as persons in charge. There is no split among the Circuits, here, for the law is quite consistent. Other Circuits have also followed suit, holding that although the

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U.S.C. § 1411 et seq.] . . . shall, upon conviction, be subject to a fine of not more than \$50,000 for each day of violation, or imprisonment not to exceed two years (five years in the case of a violation of paragraph (1) or (2)), or both. If the conviction is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment under the respective paragraph shall be doubled with respect to both fine and imprisonment.

*Id.*

<sup>266</sup> 912 F.2d at 744.

<sup>267</sup> *Id.* at 743.

<sup>268</sup> Clean Water Act, 33 U.S.C. § 1319 (2000). The statute provides in pertinent part: "(c) Criminal penalties. (6) Responsible corporate officer as 'person.' For the purpose of this subsection, the term 'person' means, in addition to the definition contained in section 1362(5) of this title, any responsible corporate officer." *Id.*

<sup>269</sup> *Id.* at §1362. "(5) The term 'person' means an individual, corporation, partnership, association, State, municipality, commission, or political subdivision of a State, or any interstate body." *Id.*

<sup>270</sup> *United States v. Curtis*, 988 F.2d 946 (9th Cir. 1993).

<sup>271</sup> *Id.* at 949.

<sup>272</sup> *Id.* at 947.

<sup>273</sup> *United States v. Carr*, 880 F.2d 1550 (2d Cir. 1989).

<sup>274</sup> *United States v. Dee*, 912 F.2d 741 (4th Cir. 1990).

<sup>275</sup> *United States v. Curtis*, 988 F.2d 946 (9th Cir. 1993).

government itself cannot generally be held liable,<sup>276</sup> the employees of contractors,<sup>277</sup> and the contractors themselves,<sup>278</sup> invariably can. When contractors are liable to suit, they should and will refuse to perform any of their activities, whether specifically contracted or ancillary thereto, in a shoddy or carefree manner. As the cases show, this threat of sanctions is very real indeed.

Despite the protections afforded by principles of sovereign immunity<sup>279</sup> and the unitary executive,<sup>280</sup> the record shows that neither the state, nor any of its instrumentalities such as the military, or even its contractors, has a license to pollute.<sup>281</sup> One observer who saw the criminal prosecution of federal employees as the best way around these immunity issues,<sup>282</sup> still feared that other structural factors would discourage the states and private citizens from exerting compliance pressure from outside.<sup>283</sup> As

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<sup>276</sup> See *United States v. Vertac Chem.*, 46 F.3d 803 (8th Cir. 1995) (holding that the United States cannot be held liable as operator or arranger under CERCLA). *Contra* *FMC Corp. v. United States Dept. of Commerce*, 29 F.3d 833 (3d Cir. 1994) (finding the government liable under CERCLA as operator for past wartime activities conducted at industrial facility).

<sup>277</sup> See generally discussion *supra* Part VI.C.

<sup>278</sup> See *United States v. Penn. Envtl. Hearing Bd.*, 584 F.2d 1273 (3d Cir. 1978) (private corporation operating government plant is not a federal "department, agency or instrumentality" deserving protection as a government entity under the Clean Water Act).

<sup>279</sup> Susan L. Smith, *Government Immunity Issues: Can the King Do No Wrong?*, 6 NAT. RESOURCES & ENV'T. 16, 16 (1991). Smith writes that sovereign immunity is a judicial construct that "forbids suits against both the federal government and federal employees in their official capacities." *Id.*

<sup>280</sup> See Adam Babich, *Circumventing Environmental Laws: Does the Sovereign Have a License to Pollute?*, 6 NAT. RESOURCES & ENV'T. 28, 30 (1991). Babich states the logic behind this sham correctly when he writes:

Under the unitary executive policy, EPA may not bring federal agencies to court over pollution problems. The idea is that all executive agencies work for the president, and the president cannot sue himself since such a case would present no case of actual controversy to which Article III jurisdiction can attach. Thus the argument goes, EPA cannot act against polluting executive agencies notwithstanding the wishes of Congress.

*Id.*

<sup>281</sup> See generally *id.*

<sup>282</sup> Margaret K. Minister, *Federal Facilities and the Deterrence Failure of Environmental Laws: The Case for Criminal Prosecution of Federal Employees*, 18 HARV. ENVTL. L. REV. 137, 140 (1994).

<sup>283</sup> *Id.* at 171. Minister writes:

Personal liability of federal employees will decrease the costs imposed on

the record shows, that feared result has not come to pass. Pressure is continuously being exerted from outside, in the form of citizen suits<sup>284</sup> and EPA enforcement mechanisms.<sup>285</sup>

If the state, through its national security apparatus (the military), is reluctant to change from within, then pressure on multiple fronts should come from without. In this respect, we should continue to encourage and uphold meritorious citizen suits, as well as the regular EPA and other statutory mechanisms. If and when properly employed, these mechanisms will serve to maintain strong pressure on the military to comply and simultaneously serve to remind the military that it is still very vulnerable to sanctions and stoppages for noncompliance.

With this concerted and united front, the military should eventually experience a change of mind and come to lead by example. Hopefully, this will occur sooner rather than later, as the land can only suffer further without the ability to fight back. The suffering of the land will invariably become the suffering of us all.

#### D. *Move as a United Front*

Building such a concerted and united front is the final challenge and recommendation. The nation must awaken from its collective lethargy to work and act as one.<sup>286</sup> The various branches of national and state government, academia, and industry need to work in concert,<sup>287</sup> finding and promoting the best ways for addressing these common issues that "affect the

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the public and on the agencies in charge of cleanup. The delay and cost of injunctive suits against the federal government, the barriers to information, and the unavailability of damages discourage states and private citizens from bringing injunctive suits.

*Id.*

<sup>284</sup> See, e.g., *Pub. Research Group of N.J., Inc. v. Rice*, 774 F.Supp. 317 (D.N.J. 1991) (holding that a citizen suit is an appropriate means for an environmental group to seek injunctive relief from Air Force violations of CWA).

<sup>285</sup> See discussion *supra* Part VI.C.1.

<sup>286</sup> See Bruce Ledewitz & Robert D. Taylor, *Law and the Coming Environmental Catastrophe*, 21 WM. & MARY ENVTL. L. & POL'Y REV. 599, 599-600, (1997); *supra* note 105 and accompanying text.

<sup>287</sup> WWF, *supra* note 2, at 123-24.

environment and the social and economic well-being of current and future generations.”<sup>288</sup>

Although collectively aimed at environmental harms<sup>289</sup> and focused on their prevention, remediation, or both,<sup>290</sup> most local and federal initiatives have been disparate, disjointed, and thereby largely ineffective and counterproductive. As one group of commentators aptly said, “[t]his splintering prevents broad analysis, understanding, and resolution of environmental problems, most of which transcend disciplines and cut across agency boundaries. Lack of integration also makes it hard for federal, state, tribal, and local governments to anticipate problems before they become environmental crises.”<sup>291</sup>

The Committee for the National Institute for the Environment (“CNIE”) suggested in the early 1990s that establishing some form of a National Institute for the Environment (“NIE”) would be a positive step toward bringing the issues and parties together in this way.<sup>292</sup> Furthermore, with four primary goals of the NIE, as initially proposed,<sup>293</sup> it was hoped that such an organization would also serve as a single contact point for the international community and nonindigenous entities in general.<sup>294</sup> The original participants in the CNIE had also suggested that the NIE’s establishment would be a boon for information-sharing and that it might also serve to speed both the formulation and the implementation of any applicable

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<sup>288</sup> CNIE, *supra* note 15, at 7.

<sup>289</sup> DEFENSE, *supra* note 95, at 7-8.

<sup>290</sup> Lydia B. Hoover, *The Commerce Clause, Federalism, and Environmentalism: At Odds After Olin?* 21 WM. & MARY ENVTL L. & POL’Y REV. 735, 748 (1997).

<sup>291</sup> CNIE, *supra* note 15, at 27.

<sup>292</sup> See generally CNIE, *supra* note 15.

<sup>293</sup> *Id.* at 2. The Committee for the National Institute for the Environment gives four central, guiding principles for its proposed institute:

- (1) Increase scientific understanding of environmental issues by sponsoring credible, problem-focused research;
- (2) assist decisionmaking by providing comprehensive assessments of current environmental knowledge and its implications;
- (3) facilitate and expand access to environmental information and better communicate scientific and technological results[;]
- (4) strengthen capacity to address environmental issues by sponsoring higher education and training.

*Id.*

<sup>294</sup> *Id.* at 15.

International Environmental Protocols,<sup>295</sup> especially any that involved a final solution for the nuclear "storage" problem.

Though these goals have not yet been fully reached, the CNIE has made a number of significant steps toward them since its inception. On January 26, 2000, the CNIE announced that effective immediately, it would be changing its name to The National Council for Science and the Environment ("NCSE").<sup>296</sup> Despite this change, the essential purpose behind the organization remains the same: "[i]mproving the scientific basis for making decisions on environmental issues."<sup>297</sup> Further evidence of a growing acceptance for both the body of, and the spirit behind, the renamed NCSE can be seen in its three successful conferences, held in 2000,<sup>298</sup> 2001,<sup>299</sup> and 2003.<sup>300</sup>

## VII. CONCLUSIONS

Environmental protection and national security are compatible, and they can indeed coexist. This possibility will become clearer, and eventually come to fruition, once we have expanded our definition of national security to include social welfare. Only then can we hope to instill a holistic approach

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<sup>295</sup> *Id.* at 13.

<sup>296</sup> Nat'l Council for Sci. and the Env't (NCSE), *The CNIE Becomes the National Council for Science and the Environment*, NCSE UPDATE, Jan. 26, 2000, No. 65, available at <http://www.cnie.org/updates/65.htm> (last visited Feb. 15, 2003).

<sup>297</sup> NCSE, *NCSE Strategic Plan Available*, NCSE UPDATE, Jul. 18, 2000, No. 77, available at <http://www.cnie.org/updates/77.htm> (last visited Feb. 9, 2003).

<sup>298</sup> The NCSE held its inaugural 2000 conference on December 7-8, 2000, in Washington, D.C. The theme for this First National Conference on Science, Policy and the Environment was, quite aptly: Improving the Scientific Basis for Environmental Decisionmaking, at <http://www.cnie.org/2000conference> (last visited Feb. 10, 2003).

<sup>299</sup> The NCSE held its 2001 conference on December 5-8, 2001, once more in Washington, D.C. NCSE, *Free Events Add to National Conference on Science, Policy and the Environment*, NCSE UPDATE, Dec. 3, 2001, available at <http://www.cnie.org/Updates/114.htm> (last visited Feb. 9, 2003). The theme for this Second National Conference on Science, Policy and the Environment, was: Sustainable Communities: Science & Solutions, at <http://www.cnie.org/NCSEconference/2001conference/agenda.cfm> (last visited Feb. 9, 2003).

<sup>300</sup> The third NCSE conference was actually held on January 30-31, 2003, in Washington D.C. The theme for this Third National Conference on Science, Policy and the Environment was: Education for a Sustainable and Secure Future, at <http://www.cnie.org/NCSEConference/2003Conference> (last visited May 6, 2003).

in the planners and policymakers responsible for setting and securing these national priorities.

While working toward this ultimate goal, the state has been (and should continue to be) held liable for its nonattainment. According to the state's own avowed policy in other endeavors, most notably statecraft, the threat of physical, economic or legal sanctions, or even social stigma, is the best catalyst for real and lasting change. So long as the eyes and ears of the local and international communities are upon the violators, and so long as the violators themselves take seriously the threat to our continued common existence posed by their noncompliance, they will make spontaneous individual efforts to come into full compliance. They will even come together to exert peer pressures among themselves, thus taking more concerted and cooperative action.

This Article shows that, despite occasional and stubborn resistance, we have already begun to move, collectively, toward greater compliance and a more reasoned and sustainable coexistence of environmental protection and national security.