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Indigenous Peoples and the Ethics of Remediation: Redressing the Legacy of Radioactive Contamination for Native Peoples and Native Lands

Rebecca Tsosie*

* Regent's Professor of Law, Arizona State University. The author thanks Professor Tseming Yang, Dean Lisa Kloppenberg, and the staff of the Santa Clara Journal of International Law for sponsoring this magnificent Symposium. Professor Tsosie's paper benefitted from the comments of conference participants and the presentations made by her co-panelists, Robert T. Coulter, Director of the Indian Law Resource Center, and Professor Elizabeth Kronk Warner, Professor of Law at the University of Kansas. Professor Tsosie is very grateful for the superb research support she received from Beth DiFelice, David Gay, and Tara Mospan, librarians at the Ross-Blakely Law Library at ASU, and from her student research assistant, Kristyne Schaaf-Olson. This Article is dedicated to the memory of Kenneth Lee, beloved brother-in-law, and all of the Navajo people who have suffered and died from the continuing effects of the policies discussed in this Article. Professor Tsosie thanks the many individuals who are fighting to ensure that the legacy of these lives inspires positive change for the people of the Navajo Nation.

Introduction

Most readers probably paid little attention to the small entry in a local New Mexico newspaper on December 28, 2013: “Uranium project on Navajo Nation gets green light.”¹ According to the article, Navajo lawmakers voted to grant a mining company permission to operate a “demonstration uranium recovery project” on lands within the Church Rock chapter of the Navajo Nation, east of Gallup, despite the existence of tribal laws banning uranium mining or processing within “Navajo Indian Country” and regulating the transport of radioactive substances across the reservation.² The U.S. Nuclear Regulatory Commission (NRC) licensed the project on lands owned by Uranium Resources, Inc. (URI), a company formerly known as Hydro-Resources, Inc. The site is located within the external boundaries of the Navajo Nation and is populated by members of the Navajo Nation. In fact, to access the mineral estate, URI must cross lands owned by the Navajo Nation, which entails recognition of a “right of way” in URI. Although the Navajo Nation Council recently invalidated the subcommittee’s approval of the project, the story is significant because it exemplifies the linkages between past, present, and future radioactive contamination on the Navajo Nation.³ In that sense, the case illustrates the theme of this article: the legacy of radioactive contamination continues for the Navajo Nation and for many other Native peoples.

Church Rock, New Mexico, is already one of the most highly contaminated areas in the country due to the abandoned mines at Northeast Church Rock and Quivira, which house some of the largest piles of radioactive tailings in the world.⁴ As documented by the U.S. Government Accountability Office in its recent report (the “GAO Report”), there are over 500 abandoned uranium mines on the Navajo Nation, including the ones at Church Rock, which left a poisonous legacy for the Navajo people, including many highly toxic sites for remediation.⁵ However,

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1. Noel Lyn Smith, *Uranium Project on Navajo Nation Gets Green Light*, ALBUQUERQUE JOURNAL THE DAILY TIMES (Dec. 28, 2013, 12:05 AM), <http://www.abqjournal.com/327733/news/uranium-project-on-navajo-nation-gets-green-light.html>.
 2. See Alastair Lee Bitsoi, *Despite Tsosie’s Pleas, Council votes against URI subcommittee*, NAVAJO TIMES, July 24, 2014, at A1-A3 (citing the 2005 Dine Natural Resources Protection Act, the 2012 Radioactive Materials Transportation Act, and a “Temporary Access agreement between the tribe and URI in which the uranium company agreed to cleanup waste” on lands in and near Church Rock before mining continues).
 3. *Id.* (noting that the Navajo Nation Department of Justice issued a legal opinion finding that the project would violate Navajo Nation law, and that the other members of the Navajo Nation Council voted to terminate the subcommittee).
 4. See Brandon Loomis, *Uranium Mine Cleanup on the Navajo Reservation Could Take 100 Years*, ARIZONA REPUBLIC, Aug. 6, 2014, at A1 [hereinafter Loomis, *Uranium Mine Cleanup*].
 5. U.S. Gov’t Accountability Office, GAO-12-323, *Uranium Contamination; Overall Scope, Time Frame and Cost Information Is Need for Contamination Cleanup on the Navajo Reservation* (2014) [hereinafter GAO Report]. See also Bindu Panikkar & Doug Brugge, *The Ethical Issues in*

remediation poses a daunting challenge because the radioactive contamination on the Navajo Nation is quite far-reaching and insidious due to the life cycle of the mining and milling process.⁶ The health hazards of environmental radiation can be attributed to abandoned mines, to the piles of mill tailings that represent the waste from mining, and to the radon particles that infuse the air and often the homes where many Navajo people reside.⁷ Unlike similar sites on state and federal public lands, Church Rock is the permanent home of a population that is 97% Navajo and includes many women of child-bearing age and children. The Navajo residents have family ties that trace back generations. In the traditional way, they are part of the land. Their umbilical cords might be buried there, as are those of their parents and grandparents.⁸ For this reason, many families will not move, even though the documented levels of exposure are in many cases significantly higher than the scientific literature deems “safe.” In addition, many residents continue to practice a traditional subsistence economy, which includes grazing livestock. They subsist on these animals, which also drink the water and breathe the air. The lands are within a windy part of the Southwest, and the wind kicks up dust. It is impossible to avoid exposure to the tailings, which emit radon-222, a known carcinogen. The only question is whether there is any “safe” way to maintain the human community of Church Rock or analogous communities on the Navajo Nation and elsewhere, given the fact that the intended “remediation” is far from complete and there are plans to open new mines in areas that have documented reserves of uranium.

The historic mining activities on the Navajo Nation triggered a plethora of litigation, including cases seeking damages for the health impacts to Navajo miners and for the 1979 Church Rock spill of contaminated water into the Rio Puerco, as well as the on-going Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) action to clean up the most toxic sites.⁹

Uranium Mining Research in the Navajo Nation, 14 ACCOUNTABILITY IN RESEARCH 121, 137-38 (2007) (describing the findings of environmental monitoring projects in Church Rock, which led the Navajo Nation and the U.S. Environmental Protection Agency to issue a Superfund enforcement order).

6. See Barbara Rose Johnston, Susan Dawson & Gary Madsen, *Uranium Mining and Milling: Navajo Experiences in the American Southwest*, in INDIANS AND ENERGY: EXPLOITATION AND OPPORTUNITY IN THE AMERICAN SOUTHWEST 111, 117 (Sherry Smith & Brian Frehner eds., 2010) (noting that “the nuclear fuel cycle involves four different industrial processes: mining, milling (producing uranium oxides commonly called yellowcake), enrichment and fuel fabrication”).
7. See JUDY PASTERNAK, *YELLOW DIRT: AN AMERICAN STORY OF A POISONED LAND AND A PEOPLE BETRAYED* 146 (2010).
8. *Id.* at 238 (quoting testimony of Navajo Council Delegate George Arthur).
9. The Comprehensive Environmental Response, Compensation, and Liability Act, 42 USC §§ 9601-9675 (2006) [hereinafter CERCLA] (establishing the authority and processes necessary to remediate contamination from past activities that have endangered or will endanger public

The focus of these cases is to determine who is legally responsible for paying for the harms of radioactive contamination. Liability is defined by principles of Anglo-American tort law, as well as the complex web of federal statutes authorizing recovery for human victims of radioactive contamination.¹⁰ This regime intersects with the equally complicated set of environmental statutes that covers mining reclamation, and recovery for toxic and hazardous releases that harm land and natural resources.¹¹ Unfortunately, the structures governing liability do not compensate the Indigenous peoples for the cultural harms to their traditional lands and livelihoods, which are intertwined with their identity as a separate people.¹² In that sense, the existing federal law lacks any capacity to provide redress for a set of wrongs that is part of a broader history of injustice for Indigenous peoples. This history of injustice has inspired an active dialogue within human rights circles, and it is also the inspiration for Indigenous lawmakers, as they exert political and cultural sovereignty over their lands in the exercise of their right to self-determination, which was recognized by the 2007 United Nations Declaration on the Rights of Indigenous Peoples.¹³

The exercise of self-determination is necessary to redress the legacy of the 19th century federal policy of treating Indian nations as “wards” of the United States, which enabled the U.S. as “trustee” to lease tribal lands to non-Indian corporations for mining and other forms of development.¹⁴ Within this model, tribal lands served as “resource colonies” for the use of the United States. The legacy of this history has been profound contamination of land and water resources. In 2005, Navajo lawmakers responded by enacting legislation banning uranium mining on any site within “the Navajo Indian country,” specifically acknowledging the devastating history of exploitation that resulted in the contamination of land and

health).

10. See, e.g., Radiation Exposure Compensation Act of 1990, as amended, 42 U.S.C. § 2210 et seq. (2000), available at <http://www.gpo.gov/fdsys/pkg/PLAW-106publ245/html/PLAW-106publ245.htm> [hereinafter RECA].
11. See, e.g., Uranium Mill Tailings Radiation Control Act of 1978, 92 Stat. 3021, 42 U.S.C. §§ 7901 et seq [hereinafter UMTRCA]. See generally JEFFREY C. MILLER & CRAIG N. JOHNSTON, *THE LAW OF HAZARDOUS WASTE DISPOSAL AND REMEDIATION* (1996).
12. See *In re Exxon Valdez: Alaska Native Class v. Exxon Corp.*, 104 F.3d 1196 (9th Cir. 1997) (upholding finding of district court that Alaska Native claimants could not recover damages for loss of their subsistence lifeways because these are “non-economic” injuries, and because culture exists “in the mind and the heart” of an individual). See also Rebecca Tsosie, *Cultural Challenges to Biotechnology: Native American Genetic Resources and the Concept of Cultural Harm*, 35 J. LAW, MED. & ETHICS 396, 405 (2007).
13. U.N. Declaration on the Rights of Indigenous Peoples, G.A. Res. 61/295, U.N. Doc. A/RES/61/295 (Oct. 2, 2007) [hereinafter Declaration].
14. See Rebecca Tsosie, *Tribal Environmental Policy in an Era of Self-Determination: The Role of Ethics, Economics, and Traditional Ecological Knowledge*, 21 VT. L. REV. 227, 301-02 (1996) [hereinafter Tsosie, *Tribal Environmental Policy*].

water, as well as the loss of lives of Navajo people who worked in the uranium mines.¹⁵ The Navajo Nation's then-President, Joe Shirley, noted the active involvement of the United States in promoting uranium mining on the Navajo Nation and equated this with a practice of "genocide" against the Navajo people.¹⁶

Given this 2005 legislation and President Shirley's strong statement, why did Navajo legislators vote in 2013 to grant permission to a non-Indian corporation to mine uranium in an area inhabited by tribal members? Why did the Nuclear Regulatory Commission license URI to operate a "demonstration uranium recovery project" on these lands? What is the role of the Environmental Protection Agency in remediation of past harm or authorization of new forms of mining? How is the health of tribal members affected by these policies? How does the history of the Church Rock Chapter inform the current issue, or does it? Given the support of certain Navajo Nation policymakers and allotted landowners for economic development, including uranium mining, what human rights or civil rights might be violated if the project were to move forward? Does the experience of the Church Rock chapter evoke a "reparative justice" issue for "past" harm or an "environmental justice" issue within the contemporary politics of energy development?

This paper will discuss these and related issues within a comparative framework that engages the idea of building an "ethics of remediation" for the radioactive contamination of Indigenous peoples and lands. U.S. Congressman Henry Waxman was the Chairman of the House Oversight and Governmental Reform Committee which conducted the 2007 hearings that paved the way for a five-year plan for federal cooperation on clean up of the radioactive contamination on the Navajo Nation.¹⁷ Waxman asserted that there is a "moral responsibility for the federal government to find responsible parties for cleanup or to do the work ourselves."¹⁸ The comment serves as a springboard for the argument that I want to make. Our existing legal system requires identification of toxic sites for remediation and identification of all "potentially responsible parties" who might be joined in a legal action to pay the costs of remediation. On the Navajo Nation, there are well over 500 abandoned mines and only a few dozen can be linked to specific owners.¹⁹ None of the sites on the Navajo Nation is yet listed on the

15. Diné Resources Protection Act, NAVAJO NATION CODE tit. 18, § 1301 (2005).

16. See Rebecca Tsosie, *Climate Change, Sustainability and Globalization: Charting the Future of Indigenous Environmental Self-Determination*, 4 ENVTL. & ENERGY L. & POL'Y J. 188, 213-14 (2009) [hereinafter Tsosie, *Charting the Future*].

17. See Brandon Loomis, *Navajo "Ghost Mines" Are Cold War's Deadly Legacy*, ARIZONA REPUBLIC, Aug. 10, 2014, at A21.

18. *Id.*

19. Loomis, *Uranium Mine Cleanup*, *supra* note 4, at A1.

National Priorities List under CERCLA, which would authorize recovery under the federal “Superfund” process.²⁰ The Northeast Church Rock site is the initial target for remediation and is only in the early stages of clean-up.²¹ It is clear that the existing U.S. legal process does not accord with the moral duties that inhere in an “ethics of remediation.”

In building my account of an “ethics of remediation,” I question how and why we authorize forms of redress for victims of radioactive contamination without necessarily taking account of broader justice considerations. Many communities have suffered from radioactive contamination, and American servicemen have also been exposed at unsafe levels.²² In that respect, the paper does not argue that this situation is unique to Indigenous peoples. However, the paper does argue that the harms of radioactive contamination are distinctive for Indigenous peoples because they have a different history of injustice due to their diminished political rights, because they reside on their lands in a different manner, and because they hold a different set of values about land. Indigenous peoples, unlike other groups, maintain an intergenerational presence on their lands and often practice a “subsistence” (sustainable) economy, which is infused with an integrated set of cultural norms comprising a system of environmental ethics. In addition, individuals who practice a subsistence economy often consume animals, fish, and plants from the local environment, which may be contaminated by radioactive waste. In this sense, the health impacts of radioactive contamination are continuous and ongoing for many Indigenous communities.

As President Shirley noted in the context of the Navajo Nation, the legacy of radioactive contamination can lead to cultural and even physical genocide for contemporary communities, if the harms are not fully engaged and redressed. Radioactive contamination is insidious but deadly for humans who live in close proximity to these sites, leading to what Navajo activist Klee Benally refers to as “a slow genocide of the Indigenous people” in the Southwest.²³ Indigenous peoples live with the legacy of radioactive contamination on a daily basis. They are vulnerable to radioactive contamination in ways that other communities are not. The historic harms of radioactive contamination are often attributed to race,

20. GAO Report, *supra* note 5, at 18.

21. *Id.* at 24.

22. See generally Costandina Titus, *Governmental Responsibility for Victims of Atomic Testing: A Chronicle of the Politics of Compensation*, 8(2) J. HEALTH POL. POL'Y & L. 277 (1983); STEPHEN SCHWARTZ, *ATOMIC AUDIT: THE COSTS AND CONSEQUENCES OF U.S. NUCLEAR WEAPONS SINCE 1940* (1998).

23. “A Slow Genocide of the People”: *Uranium Mining Leaves Toxic Nuclear Legacy on Indigenous Land*, DEMOCRACY NOW! (Mar. 14, 2014), http://www.democracynow.org/2014/3/14/a_slow_genocide_of_the_people (interviewing Klee Benally and Taylor McKinnon).

ethnicity, and diminished political rights.²⁴ Because the U.S. now endorses a notion of tribal self-determination, contemporary harms to Indigenous communities may be masked as “the exercise of tribal sovereignty” to the extent that the decisions of Native lawmakers align with the commercial interests of energy companies. For example, the 2013 decision by Navajo lawmakers to authorize URI to mine within the Navajo Nation was an act of sovereignty by a tribal government. Yet, as the Navajo Nation Department of Justice later determined, it also conflicted with the Navajo Nation’s sovereign act of banning uranium mining within the reservation. There is political disagreement among Navajo people about which action is in alignment with the Navajo Nation’s human right to “self-determination,” and the controversy is noted in the GAO Report, as well as by Rep. Waxman, without any attempt to assess which perspective is “right.”²⁵ It is possible that the contemporary politics of radioactive contamination of Native peoples and lands can be attributed to ongoing social, cultural, and economic inequities, which could invoke human rights violations for particular groups within the tribe. This is an issue for the Navajo Nation to decide, as Rep. Waxman noted with respect, quite sensibly determining only that “as a general rule . . . we ought to correct the wrongs of the past before inflicting new damage and we ought to ensure that mistakes of the past aren’t repeated.”²⁶ With that comment in mind, it should be noted that the harms of radioactive contamination fall disproportionately upon Indigenous women and children, as well as upon community members who practice traditional, subsistence economies, which often include elders. Needless to say, many of these individuals do not possess the political access necessary to exert political sovereignty. Rather, they exert cultural forms of sovereignty, in alignment with their traditional teachings.

This article explores the legacy of radioactive contamination for Native peoples by exploring the consequences of historical government policies and the way in which those policies are perpetuated in the present era. Although the analysis could be expanded to include other groups, the paper focuses on the experience of the Navajo Nation in comparison to that of the Indigenous peoples of the Marshall Islands. The article also engages the possibilities for remediation within the

24. See Barbara Rose Johnston, *Environmental Degradation and Human Rights Abuse*, in WHO PAYS THE PRICE?: THE SOCIOCULTURAL CONTEXT OF ENVIRONMENTAL CRISIS 7, 11 (Barbara Rose Johnston ed., 1994) (describing the social process of “selective victimization,” which exposes certain groups to hazardous environmental conditions based on cultural notions, including race and gender, as well as particular political histories, including colonialism).

25. See GAO Report, *supra* note 5, at 12-13; *The Health and Environmental Impacts of Uranium Contamination in the Navajo Nation*, 110th Cong. 8 (2007) [hereinafter 2007 Hearing Record] (statement of Rep. Harvey Waxman).

26. 2007 Hearing Record, *supra* note 25, at 8.

domestic and international frameworks of “environmental justice.” The paper argues that an “ethics of remediation” requires holistic attention to the current environmental and public health issues, as well as to the economic and ethical issues that divide nations at both the domestic and international levels. The politics of “war” and “peace” have driven the policy agenda of nuclear weapons and nuclear energy development. As a global phenomenon, this political agenda reprises a dynamic of colonialism that has used Native peoples and lands in ways that are exploitive and destructive of their traditional economies, norms, and relationships. Thus, an ethics of remediation is as much about redressing inequities of power, capacity, and agency, as it is about “cleaning up the environment.” I will argue that Indigenous justice systems and norms ought to be employed in designing an “ethics of remediation.” An intercultural approach to remediating the harm of radioactive contamination is necessary to achieve the moral objectives of reparative justice, as well as the legal obligation to redress tangible harms.

Part I of the paper provides a historical account of radioactive contamination on tribal lands within the Navajo Nation. This section of the paper evaluates the historic federal policy governing uranium extraction with current policies favoring economic development of energy resources on tribal lands, and explores the health consequences of such development. Part II of the paper provides a comparative historical account of radioactive contamination in the South Pacific, examining how the U.S. has engaged this history in the context of its sovereign interaction with South Pacific Island peoples and nations. Of course, the issue of who is responsible for cleaning up radioactive contamination from military operations during war continues to be a major, unresolved issue of international policy.²⁷ Part III of the paper constructs a framework for reparative justice and compares the historical experience of American Indian nations and South Pacific nations to examine what accounts of reparative justice are operating in each of those cases. Are they different depending upon a designation of political status (e.g. “Indigenous people” or “nation”)? Should they be different? What political rights or human rights are implicated by these differences? Part IV of the paper develops the framework for an “ethics of remediation” for radioactive contamination and explores how it might be invoked to evaluate environmental justice for affected peoples.

27. This point was made during the conference by Professor Dinah Shelton. See Dinah Shelton, *Whiplash and Backlash—Reflections on a Human Rights Approach to Environmental Protection*, 13 SANTA CLARA J. INT’L L. 11 (2015).

I. Radioactive Contamination of Tribal Lands: A Policy History

Radioactive contamination on American Indian reservations is a product of the United States' ability to control tribal lands under its "trustee" role, as well as its commitment to develop nuclear energy and create nuclear weapons technology to enhance its military power. The historic U.S. policy of incentivizing uranium production affected many reservations and adjacent lands, which resulted in contamination of land, water, and natural resources, including fish. This paper will focus on the Navajo Nation's experience, though it is important to acknowledge that many tribes have been affected, including the Pueblo Indian nations in the Grants mineral belt and the Indigenous nations in the Pacific Northwest, near the Hanford nuclear facility.²⁸ On the Navajo Nation, private companies extracted approximately 4 million tons of ore from mines within the reservation from the 1940s to 1986.²⁹ These activities took place under two sets of policies, which form the historical context for an "ethics of remediation."

A. Uranium Production and National Security: The Public Good Argument

The historic legacy of radioactive contamination for Native peoples and lands relates to the longstanding U.S. policy to treat uranium production as a "public good" intended to serve the country's interest in national security. In the 19th century, the United States government began mining uranium in this country, although it relied mainly on imported uranium from Canada and Africa until the 1940s.³⁰ In 1939, the U.S. government began preliminary exploration for uranium on the Navajo reservation, and in 1942, it began a classified survey of the Colorado Plateau, which revealed that many of the richest deposits in the country were located on these lands within Utah, Arizona, and New Mexico.³¹ The United States covertly mined uranium on the Navajo Reservation during World War II,

28. See Tsosie, *Charting the Future*, *supra* note 16, at 208-09; Bradford D. Cooley, *The Navajo Uranium Ban: Tribal Sovereignty v. National Energy Demands*, 26 J. LAND RESOURCES & ENVTL. L. 393, 417-18 (2006); Barbara Rose Johnston & Susan Dawson, *Resource Use and Abuse on Native American Land: Uranium Mining in the American Southwest*, in WHO PAYS THE PRICE?: THE SOCIOCULTURAL CONTEXT OF ENVIRONMENTAL CRISIS 142, 142-43 (Barbara Rose Johnston ed., 1994); See Doug Brugge & Rob Goble, *The History of Uranium Mining and the Navajo People*, 92 AM. J. PUB. HEALTH 1410 (2002).

29. GAO Report, *supra* note 5, at 1.

30. See generally PETER H. EICHSTAEDT, IF YOU POISON US: URANIUM AND NATIVE AMERICANS 1-22 (1994) (discussing history of uranium mining in the United States and Europe, including the transition to domestic exploration of vanadium and uranium, particularly on Indian reservations); Johnston, Dawson & Madsen, *supra* note 6, at 112-15 (discussing early history of uranium mining).

31. See Tsosie, *Charting the Future*, *supra* note 16, at 218-19.

and, after the war ended, Congress passed the 1946 Atomic Energy Act, which established the Atomic Energy Commission (AEC).³² In 1947, the AEC opened offices in Colorado, Utah, and New Mexico and offered a \$10,000 discovery bonus for high-grade deposits of uranium.³³ The Navajo people knew of the red and gold rocks that are associated with vanadium and uranium, and they guided U.S. officials to those deposits. Active mining commenced on the Navajo Nation in the 1940s, in mines leased to the Vanadium Corporation of America.

Under the 1946 Atomic Energy Act, the uranium industry was controlled by the AEC, and all uranium had to be sold to the AEC. The United States was the sole purchaser of the resource, and the justification for this monopoly was national security. This meant that uranium production was treated as a public good, for the benefit of all Americans. However, the harms disproportionately fell upon Navajo people, primarily the Navajos who worked in the mines on the reservation, as well as their families.³⁴ The effects of uranium mining on human health were known by the 1940s and precautionary measures were available.³⁵ However, the Navajo workers were not told of the hazards of uranium mining, and the companies did not provide any protection to the workers, who breathed the contaminated air in the mines and drank the contaminated water.³⁶

In 1949, the U.S. Public Health Service (PHS) initiated a study of the health impacts of uranium mining on the Navajo Nation and on other lands within the Colorado Plateau. By 1959, the study demonstrated a “statistically significant association between uranium mining and lung cancer for White miners,” and this result was published in medical literature in 1962.³⁷ Although miners from other ethnic and racial backgrounds took part in the field study, the study focused on White miners, purportedly due to “a scientific desire to report on a homogeneous population.”³⁸ The PHS study seems highly problematic under contemporary biomedical research standards applicable to human subjects.³⁹ However, the

32. *Id.*

33. *Id.* at 219. *See also* Johnston & Dawson, *supra* note 28, at 144.

34. *See* Panikkar & Brugge, *supra* note 5, at 121-22 (claiming that there were approximately 10,000 uranium miners in the U.S. from 1945-1988 and that approximately 3000 of those were Navajo men).

35. *See* Brugge & Goble, *supra* note 28, at 1410 (noting that by 1926, studies had documented “the histopathology of lung cancer in miners,” and by 1932, Germany and Czechoslovakia had designated such cancers as a “compensable occupational disease”).

36. In fact, the federal government did not even regulate miners’ exposure to the radioactive dust or require ventilation in the mines until 1967. *See* Alice Segal, *Uranium Mining and the Navajo Nation: Legal Injustice*, 21 S. CAL. REV. L. & SOC. JUST. 355 (2012).

37. *See* Brugge & Goble, *supra* note 28, at 1414.

38. *Id.*

39. *See generally* Joan L. McGregor, *Population Genomics and Research Ethics with Socially Identifiable Groups*, 35 J.L. MED. & ETHICS 356 (2007) (discussing current research protections for

research did not violate any legal duties, according to the federal court in *Begay v. United States*, which upheld the study as “consistent with the medical, ethical, and legal standards of the 1940s and 1950s,” because the researchers were merely “observing” the subjects and there were no active “experiments” on human subjects.⁴⁰

Follow-up studies drew a correlation between tobacco use in miners and the development of lung cancer, raising questions about the causal relationship between radon exposure and lung cancer.⁴¹ However, from the 1940s on, federal officials actively discouraged research scientists from public discussion of the probable health hazards of radon in uranium mines, presumably to ensure maximum opportunity for nuclear weapons development.⁴² In relation to tribal populations, the U.S. as “trustee,” failed to disclose the potential health and environmental risks to tribal governments.⁴³ On the Navajo Nation, the U.S. government awarded mining contracts to the Kerr-McGee Corporation and other companies, and forwarded the contracts to the Navajo Tribal Council for their “approval,” presenting them as a source of employment and economic development. The companies gave the PHS the names of the miners, and in return, the PHS agreed not to divulge potential health hazards to the employees nor inform those who became ill that their sickness might be attributed to the conditions in the mines.⁴⁴

Because the mines operated on tribal lands, no state laws applied that might have protected mine workers.⁴⁵ The AEC took the position that it was not responsible for the health or safety of the Navajo workers.⁴⁶ In addition, because the justification for uranium mining was national security, specific information about the mines was classified, and the federal government maintained sovereign

human subjects and the potential extension of those principles to socially identifiable groups).

40. Panikkar & Brugge, *supra* note 5, at 129 (discussing *Begay v. United States*, 591 F. Supp. 991, 1007 (D. Ariz. 1984)).
41. Brugge & Goble, *supra* note 28, at 1414.
42. *Id.* at 1413.
43. *See Navajo Tribe v. United States*, 9 Cl. Ct. 227 (1985) (in an action filed by the Navajo Nation against the United States for breach of trust, the court dismissed claims regarding government’s failure to control dangerous condition posed by uranium tailings, but held that government was accountable to the extent that it had failed to collect rents from third party lessees on behalf of Navajos).
44. Johnston, Dawson & Madsen, *supra* note 6, at 120.
45. As a general principle, states lack regulatory authority on trust lands within an Indian reservation, unless Congress specifically authorizes such jurisdiction. *See, e.g., Washington Dep’t of Ecology v. U.S. EPA*, 752 F.2d 1465 (9th Cir. 1985) (holding that the EPA appropriately refused to permit State of Washington to apply its hazardous waste regulations to the activities of persons on tribal lands).
46. Johnston, Dawson & Madsen, *supra* note 6, at 117.

immunity from suit.⁴⁷ This situation did not change until after 1971, when the law shifted to allow commercial operators to directly acquire the fuel source, removing the role of the United States as the sole purchaser.⁴⁸ Uranium production would now serve the public need for energy. When the mining companies began selling directly to utility companies, state employment and mine safety laws became an issue for the companies. In addition, the negative publicity about the PHS's covert studies of African Americans in Tuskegee illuminated other instances of unethical government-sponsored public health studies among poor and minority populations, including American Indians.⁴⁹ By Executive Order, the process to procure information protected by national security under the Freedom of Information Act was altered to facilitate public access to studies conducted during the Cold War, including military testing that exposed other citizens and communities to toxic and radioactive substances.⁵⁰

In the 1980s, Congress held hearings and heard testimony about the impacts of uranium mining on Navajo workers, and Congress ultimately passed the 1990 Radiation Exposure Compensation Act (RECA) (as amended in 2000) to provide limited compensation to miners or their widows, if they met stringent requirements that proved that radioactive exposure was the cause of the death or disability suffered by the worker/spouse.⁵¹ This is a tort model of legislation that authorizes individual payment to those who document that their injury is the direct result of the negligent conduct of the tortfeasors. It does not compensate the Navajo Nation for the harm that it suffered and continues to suffer from the contamination of tribal land and water resources, and for the health impacts to tribal members. In 1994, President Clinton appointed the Advisory Committee on Human Radiation Experiments (the "Committee") to "investigate any unethical human experiments undertaken by personnel and/or agents of the United States of America and to make recommendations to ensure non-reoccurrence, if necessary."⁵² The Committee found insufficient evidence of intentional human testing on the Navajo miners, although it cautioned the United States against

47. See, e.g., Brugge & Goble, *supra* note 28, at 1416.

48. See Johnston, Dawson & Madsen, *supra* note 6, at 117.

49. See Panikkar & Brugge, *supra* note 5, at 134.

50. See Exec. Order No. 12,958, 60 Fed. Reg. 19825 (1995) (establishing a uniform system for "classifying, safeguarding, and declassifying national security information" including a 10 year time limit on classification that pertains to most forms of government information).

51. RECA, *supra* note 10.

52. Special Rapporteur on the Implications for Human Rights of the Environmentally Sound Management and Disposal of Hazardous Human Wastes at ¶ 49, U.N. Doc. A/HRC/21/48/Add.1 (Sep. 3, 2012) (by Calin Georgescu) [hereinafter Georgescu Report], *citing* FINAL REPORT, ADVISORY COMMITTEE OF HUMAN RADIATION EXPERIMENTS [hereinafter Advisory Committee Final Report] (dealing directly with the federal government's conduct on the Navajo Nation).

continuing its policy of affirmatively keeping health data secret from the individuals being studied.⁵³ The Committee noted that the PHS's decision not to warn the miners was inconsistent with the agency's own regulation in effect from 1951-78 authorizing disclosure of otherwise confidential information "whenever the Surgeon General specifically determines disclosure to be necessary . . . to prevent an epidemic or other grave danger to the public health."⁵⁴ The Committee further found that the United States played a pivotal role in putting the Navajo miners in harm's way and in refusing to control the harms through procedures, such as ventilation of mines and protective gear, which were commonly applied to other mine workers in the country.⁵⁵

The Committee found that the government had a "moral obligation" to ensure that the risk to Navajo miners was not any greater than the risk to others under the prevailing standard at the time.⁵⁶ Congress responded to this by authorizing limited compensation to affected Navajo miners and their families.⁵⁷ The implication of this policy history is that the U.S. has paid appropriate "compensation" for the harms to Navajo workers under the 1990 statute. Was this legislation an instance of "reparative justice" for the Navajo people, or was it a prudent attempt to narrowly frame a legal claim for tort liability? Who decides? To answer those questions, one must evaluate the impact of the next phase of uranium production on tribal lands.

B. The Power of the Marketplace: "Privatizing" Uranium Production

After 1971, uranium production primarily served energy development in the private market. The private market controlled the price of the resource and the conditions of extraction, triggering a cost-benefit analysis for the companies that factored in the costs of mine safety and tort liability. Given the transition in federal policy that removed the guaranteed price paid by the U.S. as sole buyer, some mining companies dissolved or abandoned the uranium mines on the reservation, leaving huge piles of tailings, which are the refined byproduct of the ore.⁵⁸ Between 1946 and the late 1970s, approximately 4 million tons of uranium ore was extracted from the Navajo Nation.⁵⁹ For every 4 pounds of uranium extracted, an estimated 996 pounds of radioactive waste is generated as mine

53. Georgescu Report, *supra* note 52, at ¶ 50.

54. Advisory Committee Final Report, *supra* note 52, at Part II Ch. 12.

55. *Id.*

56. *Id.*

57. RECA, *supra* note 10.

58. See PASTERNAK, *supra* note 7, at 148.

59. GAO Report, *supra* note 5, at 1.

tailings.⁶⁰ Thus, the mere fact that a mine closes does not remove the hazards to human health.

In some cases, the mining continued, but the leases were often conveyed to different companies, leading to uncertainty about the obligations of a particular company to remediate past harms of a prior lessee, as opposed to avoiding its own negligent operation. This was the situation at Church Rock, where the United Nuclear Corporation (UNC) made a determination to continue operating the mine because Church Rock is in close proximity to Gallup, New Mexico, and was seen as a strategic site to serve the energy needs of the 22 commercial nuclear power plants operating as of 1971.⁶¹ UNC trucked the extracted uranium ore a short distance to its mill, which was just outside of the Navajo reservation, on the Nation's eastern boundary.⁶² The arrangement clearly enabled UNC to extract and process the resource in the most cost-effective manner, enabling profit even after the government stepped out of its role as buyer. However, the environmental costs were not factored into the equation because the statutory framework governing liability for uranium mines and mills was just emerging, and the Church Rock community would suffer from this regulatory gap.⁶³

By the 1970s, the radioactive tailings from the uranium mines had contaminated air, groundwater, streams, and soil on the Navajo reservation. A political fight ensued, in which the federal government disclaimed responsibility for covering the huge piles of tailings.⁶⁴ The political debate ultimately led to the complex web of federal statutes that governs uranium mining and milling activities today.⁶⁵ However, in the early 1970s, there was little recourse for affected communities such as Church Rock. UNC decided to liquefy and store the mill waste in large ponds of water held in place by an earthen dam,⁶⁶ but the dams were not well maintained.⁶⁷ In 1979, the mud dam near Church Rock failed, spilling over 1,100 tons of uranium tailings and an estimated 100 million gallons of radioactive wastewater into the Rio Puerco River on the Navajo Nation.⁶⁸ This is

60. Johnston, Dawson & Madsen, *supra* note 6, at 116.

61. PASTERNAK, *supra* note 7, at 148.

62. *Id.* at 149.

63. UMTRCA, *supra* note 11 (previously the statutory framework covered radiation from mining operations, but not from mill tailings).

64. PASTERNAK, *supra* note 7, at 148.

65. See Segal, *supra* note 36, at 368-76 (discussing applicable federal statutes and general regulatory structure for uranium mining and milling activities).

66. PASTERNAK, *supra* note 7, at 149.

67. Johnston, Dawson & Madsen, *supra* note 6, at 122 (discussing a later U.S. Congressional investigation of the Church Rock spill which revealed that United Nuclear "had known of cracks in the dam structure at least two months before the break but had made no effort to make repairs").

68. *Id.*

the largest nuclear spill in U.S. history, although it did not receive the national attention of the spill at Three Mile Island, which also occurred in 1979.

The Church Rock spill caused extensive damage to at least 1,700 Navajo residents, and contaminated their lands, water resources, and livestock.⁶⁹ The contamination had devastating economic consequences to an already impoverished community, effectively foreclosing commercial sale of Navajo sheep to outside markets for three years.⁷⁰ The same level of caution did not attach to subsistence use of the sheep by the Navajo people themselves. Rather, the Indian Health Service area director, William Mohler, advised the Navajos that they could safely eat their sheep, so long as they avoided the organ tissue where radioactive toxins might lodge at unsafe levels.⁷¹

Following the spill, the affected Navajo plaintiffs sought to bring a cause of action for damages against UNC in the Navajo Nation district court.⁷² However, this action was barred on jurisdictional grounds by an earlier ruling from the United States Supreme Court, holding that the United States government had implicitly preempted tribal jurisdiction over radioactive contamination on the reservation by centralizing any liability of nuclear companies in the federal courts.⁷³ The earlier case also involved a claim by Navajo plaintiffs.⁷⁴ The plaintiffs in that case sued El Paso Natural Gas Corporation and one of its subsidiaries, Rare Metals, for negligent operation of an open pit uranium mine in their community that contaminated the local water supply, causing injury to the Navajo families who drank the water for a fifteen year period before discovering the toxicity levels in the water.⁷⁵ Although the Price-Anderson Act does not contain any provision foreclosing tribal court jurisdiction, the Supreme Court interpreted the statute as transforming into a federal action “any public liability action arising out of or resulting from a nuclear incident.”⁷⁶ The Court remanded the case for a determination on whether the claim constituted a “public liability action . . . resulting from a nuclear incident.”⁷⁷ If so, the action would go to federal court.⁷⁸ The Price-Anderson Act serves the United States government’s interest in protecting the nuclear industry from devastating damages judgments. However, it can also impose significant barriers to the victims of radioactive contamination on

69. *Id.*

70. *Id.*

71. *Id.*

72. See Tsosie, *Charting the Future*, *supra* note 16, at 220.

73. *El Paso Natural Gas Co. v. Neztosie*, 526 U.S. 473 (1999).

74. *Id.*

75. *Id.* at 477.

76. *Id.* at 484.

77. *Id.* at 488.

78. *Id.*

tribal lands, as the Navajo plaintiffs discovered after the Church Rock spill. Eventually, UNC agreed to pay a minimal out-of-court settlement to the plaintiffs, thereby assuming some measure of responsibility for the harms that they had suffered.⁷⁹

CERCLA was enacted to ensure the cleanup of lands affected by toxic and hazardous waste, and it has been applied to reclaim lands contaminated by radioactive waste.⁸⁰ The U.S. Environmental Protection Agency (EPA) oversees the enforcement process, in collaboration with the U.S. Army Corps of Engineers, by testing the area to determine the nature and extent of contamination, as well as by issuing an order listing applicable sites for remediation.⁸¹ There are complex rules detailing the procedures necessary to finance remediation.⁸² Some highly contaminated sites are placed on the Superfund National Priorities List (NPL), where clean up can be financed through the Superfund Trust Fund.⁸³ None of the mine sites on the Navajo Nation are currently listed on the NPL.⁸⁴ Under CERCLA, the companies that caused the contamination are required to remediate the condition to a “reasonable level,” and if they do not do so (or contest liability), the EPA can undertake the cleanup process and sue the companies for damages.⁸⁵ Potentially responsible parties include property owners at the time of the contamination, as well as the current owners, operators, and any active agents in the disposal process.⁸⁶ All potentially responsible parties, including the government, where applicable, are jointly and severally liable.⁸⁷ The EPA sets the standard for cleanup, but has discretion to deviate from this standard if cleanup of a particular chemical is “technically impracticable” or if the nature of contamination does not pose a significant threat to human health, given low population density or availability of an alternative water supply.⁸⁸ On the Navajo Nation, the net result of this procedure is to put the companies and the EPA into a process that inspires these parties to work together to minimize their respective costs and liability. The victims ought to be compensated, but they are not parties to the process.

After the Superfund process was created under CERCLA in 1980, UNC closed

79. See Tsosie, *Charting the Future*, *supra* note 16, at 220-21.

80. Segal, *supra* note 36, at 370; GAO Report, *supra* note 5, at 15-18.

81. GAO Report, *supra* note 5, at 15-18.

82. *Id.* at 18.

83. See Segal, *supra* note 36, at 371.

84. GAO Report, *supra* note 5, at 18.

85. Segal, *supra* note 36, at 370.

86. *Id.* at 371.

87. *Id.*

88. *Id.*

its off-reservation mill, and that site went onto the National Priority List in 1983.⁸⁹ However, the Rio Puerco site on the Navajo Nation did not merit the same treatment.⁹⁰ In addition, the low population density in the Church Rock community and lack of public water infrastructure inspired the EPA to adopt lower standards for cleanup of contamination. Furthermore, the EPA chose to devote its enforcement authority to environmental remediation, rather than to compensation for victims who had become ill from the radioactive contamination. There was no broad-based compensation for the victims of the spill until 2011, when the combined efforts of the Navajo Nation's Department of Justice and the U.S. Department of Justice resulted in a successful claim against a corporation in bankruptcy and a judgment of \$1.2 million in damages.⁹¹

The cleanup process at Church Rock is still in the planning stage and will be extensive.⁹² A 2003 study by the Navajo Nation Environmental Protection Agency revealed continuing radioactive contamination of water, soil, and homes built with rocks from the tailings piles.⁹³ The exact number of abandoned uranium mines on the Navajo Nation is still unknown. The GAO Report claims that over 500 sites are verified to date, but many commentators agree that there are very likely over 1000 abandoned and partially unreclaimed uranium mines within the Navajo Nation.⁹⁴ Consequently, the nature and extent of the contamination to air, water, and land resources from the cumulative impact of the mines and the deterioration of the sites over time has not been fully evaluated. Similarly, the health impacts to the Navajo people of radioactive exposure have not been fully evaluated.⁹⁵ Existing research demonstrates high rates of lung and stomach cancer among residents in the Colorado Plateau region, as well as pancreatic, bladder, and

89. PASTERNAK, *supra* note 7, at 150.

90. *Id.* at 151.

91. Segal, *supra* note 36, at 372 n. 131 (citing Feb. 24, 2011 press release from Navajo Nation Environmental Protection Agency). The EPA website also details the agency's enforcement actions against Tronox Corporation and Kerr McGee in the respective bankruptcy actions for those companies and their subsidiaries for past contamination at sites throughout the country, including on the Navajo Nation. See *Case Summary: Tronox Incorporated Bankruptcy Settlement*, U.S. ENVTL. PROTECTION AGENCY, <http://www2.epa.gov/enforcement/case-summary-tronox-incorporated-bankruptcy-settlement> (last visited Jan. 3, 2015).

92. According to the GAO Report, the goal of the five year plan to clean up the Northeast Church Rock mine was not met as of 2014. GAO Report, *supra* note 5, at 24. There have been two interim removal actions to remove 130,000 cubic yards of contaminated soil in the surrounding community, but they have not yet commenced a clean up of the mine. The EPA maintains that it has selected a clean up remedy and organized an interagency work group preliminary to the actual clean up effort. *Id.*

93. See Johnston, Dawson & Madsen, *supra* note 6, at 123.

94. See Panikkar & Brugge, *supra* note 5, at 122.

95. *Id.* at 122.

reproductive organ cancers.⁹⁶ In addition, it is likely that other serious health conditions, such as lung and kidney disease, are attributable to radioactive contamination.⁹⁷ Epidemiologists struggle to determine the cause of a rare disease syndrome in this area known as “Navajo neuropathy,” which manifests in deformities of extremities and damaged eyes and livers. They have yet to ascertain the respective genetic or environmental causes.⁹⁸ The small sample size for residents in the area poses a caution for researchers who seek to document correlations between radioactive exposure and disease conditions or birth defects.⁹⁹ As an additional and complicating factor, biomedical data may be located in patient records within the state or federal (Indian Health Service) repositories, depending upon where the individual was residing or sought medical care. There are significant legal and ethical issues that attach to biomedical research on Native American patients who are victims of radioactive exposure, and securing reliable data may be difficult or impossible under current conditions.¹⁰⁰ The GAO Report documents an emergent effort to provide screening to Navajo residents and to “evaluate options for future health studies . . . and surveillance of health conditions,” but the full impacts to human health are unknown at this time.¹⁰¹

Given the need for further documentation of risks to environmental and public health, the Navajo Nation took the reasonable and prudent approach of foreclosing further development of uranium on the reservation until the nature and extent of the prior contamination could be evaluated and addressed. Through its elected officials, the Navajo Nation exercised its sovereignty to ban uranium production within the Navajo Nation in the Dine Natural Resources Protection Act of 2005.¹⁰² In its legislative findings, the Navajo Nation Council cites the fundamental laws of the Dine people, which were codified in 2002 as Title 1 of the Navajo Nation Code, for the principle that the Navajo Nation’s natural resources are the foundation of the spiritual ceremonies and way of life of the Dine people, and that it is the “duty and responsibility of the Dine to protect and preserve the natural world for future generations.”¹⁰³ In accordance with traditional teachings that counsel against disturbing “harmful substances” within the Earth, the Council concluded that

96. PASTERNAK, *supra* note 7, at 156.

97. *Id.*

98. *Id.* at 156-57.

99. *Id.*

100. This issue is of great importance, but cannot be fully addressed in this article. Panikkar and Brugge have documented the ethical issues that attach to uranium mining on the Navajo Nation in relation to the human health impacts, and their excellent work should serve as a springboard for further analysis. See Panikkar & Brugge, *supra* note 5, at 140-41.

101. See GAO Report, *supra* note 5, at 26.

102. NAVAJO NATION CODE ANN. tit. 18, § 1301.

103. *Id.* § 1301(C).

uranium extraction “should be avoided as traditional practice and prohibited by Navajo law.”¹⁰⁴

The Act proclaims that “no person shall engage in uranium mining or uranium processing on any sites within the Navajo Indian Country,” which is defined to include “all lands within the territorial jurisdiction of the Navajo Nation,” as defined in Title 7 of the Navajo Nation Code and 18 U.S.C. § 1151.¹⁰⁵ Interestingly, the federal definition of “Indian Country” is not identical to the Navajo Nation’s appraisal of “Navajo Indian Country.”¹⁰⁶ Rather, the definition in Title 7 of the Navajo Nation code includes lands within the exterior boundaries of “the Navajo Indian Reservation or of the Eastern Navajo Agency,” as well as its satellite communities (“dependent Indian communities”), Navajo Indian allotments, lands held in fee by the Navajo Nation, and “all other land held in trust for, owned in fee by, or leased by the United States to the Navajo Nation or any Band of Navajo Indians.”¹⁰⁷ Thus, an important issue for future consideration is whether the Navajo Nation can regulate uranium production on lands that are technically outside the reservation, but which still may be within Navajo communities.

C. The Current Policy Era: Uranium Production on or Near Tribal Lands

Radioactive contamination of tribal lands is often associated with past federal policies. However, there are several important issues that currently affect tribal governments seeking to regulate uranium production on or near tribal lands. First, nuclear energy is increasingly touted as “green energy” that will not have the harmful consequences of fossil fuels in an era of climate change.¹⁰⁸ Thus, uranium production may again be perceived as a “public good,” only now the “good” is cast as the need to curb excessive greenhouse gas emissions and facilitate the “energy transition” necessary to ameliorate climate change. Importantly, the U.S. government still controls the nuclear industry, and federal statutes can preempt tribal authority to protect tribal members and tribal lands from the impacts of uranium mining. For example, when tribal governments have sought to regulate the transport of nuclear waste across tribal lands, the federal courts have held that their jurisdiction to close the roads or provide additional protections that unduly

104. *Id.* § 1301(D).

105. *Id.* §§ 1302(A) & 1303.

106. See Tsosie, *Charting the Future*, *supra* note 16, at 222.

107. NAVAJO NATION CODE ANN. tit. 7, § 254.

108. See Jeanne Marie Zokovitch Paben, *Green Power and Environmental Justice: Does Green Discriminate?*, 46 TEX. TECH. L. REV. 1067, 1086 (2014) (discussing nuclear energy as a form of “green power”).

burden nuclear energy development has been preempted by federal law.¹⁰⁹

Second, U.S. public lands policy governs federal lands adjacent to the reservation, including the operation of uranium mines on those lands.¹¹⁰ Thus, uranium mining on federal public lands can jeopardize tribal resources, including water, air, and cultural resources. However, tribal governments do not have the power to stop uranium mining on public lands unless there are other legal rights at stake. For example, in the early 1990s, the Havasupai Tribe challenged the U.S. government's decision to allow uranium mining in the Grand Canyon, asserting that the site was part of the Tribe's aboriginal land base (its reservation today is located at the bottom of the Grand Canyon) and that mining on these lands would affect the health and well-being of tribal members, as well as their ancestral cultural and religious sites.¹¹¹ However, in *Havasupai Tribe v. United States*, the federal courts held that the U.S. government met its procedural obligation to consider these effects by generating an Environmental Impact Statement under the National Environmental Policy Act (NEPA).¹¹² According to the court, the federal land manager was under no duty to take a particular substantive course of action to avoid these impacts upon the Havasupai, and thus, the uranium mining could commence.¹¹³ Although the Obama Administration subsequently issued a moratorium on new uranium mining in the Grand Canyon, existing mines that were operational prior to the moratorium enjoy vested rights.¹¹⁴ The recent shift in energy policy to promote uranium production has triggered controversy as to whether active uranium mining ought to commence under existing leases, new leases, or both.¹¹⁵ The Havasupai Tribe is still heavily invested in this issue.

109. See e.g., *N. States Power Co. v. Prairie Island Mdewakanton Sioux Indian Cmty.*, 991 F.2d 458, 462 (8th Cir. 1993) (holding that tribal ordinance requiring companies transporting nuclear waste across reservation to obtain a tribal license was preempted by the federal Hazardous Materials Transportation Act).

110. See GEORGE C. COGGINS, CHARLES F. WILKINSON & JOHN D. LESHY, *FEDERAL PUBLIC LAND AND RESOURCE LAW* 340 (5th ed. 2002).

111. *Havasupai Tribe v. U.S.*, 752 F. Supp. 1471, 1489 (D. Ariz. 1990), *aff'd*, 943 F.2d 32 (9th Cir. 1991) (holding that government approval of uranium mine on public lands under administration of U.S. Forest Service did not jeopardize any tribal legal rights).

112. See *id.* at 1505.

113. *Id.*

114. On January 9, 2012, the Obama administration announced a 20-year ban on new mining claims on public lands near the Grand Canyon National Park, but exempted the approximately 3,000 existing sites already approved under federal law. See Jonathan DuHamel, *Uranium mining ban near Grand Canyon all politics, no science*, ARIZ. DAILY INDEPENDENT (Apr. 28, 2014), <http://www.arizonadailyindependent.com/2014/04/28/uranium-mining-ban-near-grand-canyon-all-politics-no-science/>. See also Press Release, U.S. Dep't of Interior, Secretary Salazar Announces Decision to Withdraw Public Lands Near Grand Canyon from new Mining Claims (Jan. 9, 2012), available at <http://www.doi.gov/news/pressreleases/Secretary-Salazar-Announces-Decision-to-Withdraw-Public-Lands-near-Grand-Canyon-from-New-Mining-Claims.cfm#>.

115. See Press Release, Grand Canyon Trust, BLM Fails to Respond to Groundwater Contamination at

Third, land status is very important to the question of whether uranium mining can commence on the reservation. Under the current self-determination policy, tribal governments decide whether to mine on tribal trust lands.¹¹⁶ Tribal governments also possess regulatory authority over their trust lands, as well as allotments held in trust by tribal members.¹¹⁷ However, the Supreme Court has limited tribal jurisdiction to regulate fee lands held by non-Indian landowners within the reservation.¹¹⁸ Consequently, on reservations where there are mixed holdings of fee and trust land within a particular area, there are significant obstacles to effective regulatory authority. This situation exists within the Navajo Nation's Church Rock chapter. The jurisdictional issues are further compounded by the fact that the EPA regulates the cleanup of past contamination from companies who have closed their mines, and the Nuclear Regulatory Commission regulates the licensing of new uranium mines that may pose a threat of future contamination. The two federal entities do not coordinate effectively, and existing standards may not protect tribal interests.

Many reservation communities continue to be affected by the mixed patterns of land ownership on the reservation. As a result of the 19th century allotment policy, which was codified in the Dawes Allotment Act of 1887, there are often non-Indian fee lands within the external boundaries of a reservation.¹¹⁹ Current courts consult those early acts to determine whether the statutes diminished the boundaries of the reservation, thereby authorizing state jurisdiction, or whether the reservation boundaries persist, albeit with trust and non-Indian fee parcels

Pinenut Mine (Aug. 4, 2014), *available at* <http://www.grandcanyontrust.org/news/2014/08/feds-urged-suspend-grand-canyon-uranium> (detailing effort by conservation groups to force federal regulators to suspend operations at a uranium mine north of the Grand Canyon, where the groundwater tests at high levels of radioactive contamination and environmentalists fear permanent contamination of the underlying aquifers). *See also* Felicia Fonseca, *Uranium mine north of Grand Canyon to stay open*, ASSOCIATED PRESS (Apr. 24, 2014, 1:15 PM), http://azdailysun.com/news/local/uranium-mine-north-of-grand-canyon-to-stay-open/article_17435534-cbf2-11e3-9e35-0019bb2963f4.html (discussing decision of Energy Fuels Inc. to mine all ore from the Pinenut site and stockpile it onsite, despite concerns of environmentalists and others that this would cause radioactive dust to be swept across Grand Canyon park).

116. *See* Energy Policy Act of 2005, 42 U.S.C §§13201 et seq. (2005).

117. *See* *Merrion v. Jicarilla Apache Tribe*, 455 U.S. 130 (1982); *see also* *Kerr-McGee Corp. v. Navajo Tribe of Indians*, 471 U.S. 195 (1985) (upholding tribal authority to tax non-Indian lessees mining on trust lands within the reservation).

118. *See* *Montana v. United States*, 450 U.S. 544, 565 (1981) (holding that tribal governments only retain authority to regulate non-Indian fee land owners within reservation when the nonmember has entered a "consensual relationship" with the tribe or its members, or when the nonmember's "conduct threatens or has a direct effect on the political integrity, economic security, or health or welfare of the tribe").

119. *See* *Solem v. Bartlett*, 465 U.S. 463 (1984) (discussing the 19th century allotment policy and its impact on current jurisdictional cases questioning whether these earlier statutes disestablished the boundaries of those reservations).

intersecting within a “checkerboard” area.¹²⁰ In either situation, state law may govern the question of whether a mining company can engage in uranium production on fee land, even though the population demographic in the area is predominantly Native American. This issue is being actively litigated on the lands near Church Rock, in areas contiguous to the reservation, but which have varying land ownership interests in the surface and subsurface estates.¹²¹ The “checkerboard lands” were granted by the U.S. to the railroad companies in sections.¹²² The alternating sections were held in the public domain and then granted to other owners, including lands set aside by Executive Order for the Navajo people, and lands granted to non-Indian settlers. Today, the “checkerboard area” in New Mexico, which is contiguous to the eastern boundary of the Navajo Nation reservation, is composed of trust lands held in Navajo tribal ownership, trust lands held by individual Navajo allottees, and fee lands held in private ownership. Section 8 is one of the areas of fee land.

Hydro-Resources, Inc. (HRI), a company that engages in uranium mining, owns lands within Section 8.¹²³ In 1989, the New Mexico Environmental Department approved a “discharge plan” for HRI in connection with the company’s proposed plan to commence active uranium mining in the area. HRI also applied to the EPA for an aquifer exemption in the area where the mining would occur, which was initially approved by the agency.¹²⁴ HRI subsequently sought to extend the permit to lands within Section 17.¹²⁵ The surface rights in Section 17 are held by the United States in trust for the Navajo Nation. However, the mineral rights and some surface rights are owned by HRI.¹²⁶ After a hearing and comment period, the EPA determined that Section 17 constituted “Indian land” under the agency’s underground injection control (UIC) program, and the EPA declined to extend the permit.¹²⁷ The EPA also found that the EPA, rather than the state, should also regulate the fee land within Section 8, because it is situated within a “dependent Indian community” for jurisdictional purposes.¹²⁸ The New Mexico Environmental Department disagreed with this determination and continued to process HRI’s

120. *Id.* See also FELIX S COHEN, COHEN’S HANDBOOK OF FEDERAL INDIAN LAW 310 (1942).

121. This section builds on my earlier published research, but has been updated to reflect more recent developments. See Tsosie, *Charting the Future*, *supra* note 16, at 223-25.

122. For a description of how this “checkerboard” area originated, see *Hydro Resources, Inc. v. U.S. EPA*, 608 F.3d 1131, 1136 (10th Cir. 2010) (en banc) [hereinafter *Hydro Resources v. EPA* (en banc)].

123. HRI has now become “Uranium Resources, Inc.” See Smith, *supra* note 1.

124. Tsosie, *Charting the Future*, *supra* note 16, at 223.

125. *Id.*

126. *Id.*

127. *Id.*

128. See 18 U.S.C. § 1151(b).

permit.¹²⁹ “Indian Country” is the jurisdictional touchstone for applying federal and tribal regulatory authority instead of state authority.¹³⁰ The EPA used a “community of reference” test that looked at the population demographic and potential environmental exposure of the residents in the area, rather than at the technical ownership status of the section of land. The area in question was the home of primarily Navajo residents, who were grazing livestock and using water resources in the area. Furthermore, the area was situated within the political boundaries of the Church Rock Chapter, and under Navajo Nation governance.

Given the complicated dimensions of the land status and asserted authority of the Navajo Nation, the federal government (EPA), and the state of New Mexico, the case wound up in the federal courts. The federal district court and Tenth Circuit Court of Appeals found that the EPA had authority to administer the UIC program of the Safe Drinking Water Act in collaboration with the Navajo Nation on the lands within Section 8 (as a “dependent Indian Community”) and within Section 17 as “Indian lands.”¹³¹ In a split decision, the Court of Appeals, sitting *en banc*, rejected this holding as to Section 8, finding that the “community of reference” test was inconsistent with the Supreme Court’s definition of a “dependent Indian community” in the *Alaska v. Native Village of Venetie* case, and ruled that the lands within Section 8 should be regulated by the state of New Mexico.¹³² Thus, the state of New Mexico had the ability to issue the requisite permit under the Safe Drinking Water Act, which was needed for the mining operation to move forward.

The current in situ leach (ISL) technology for mining uranium, which is what HRI proposed, involves drilling and use of water and chemical compounds to “leach” uranium out of deep deposits.¹³³ The process carries a significant risk of contamination to the underground water supply, and also uses a large quantity of water.¹³⁴ Both issues are problematic from a tribal governance perspective and require coherent management. Unfortunately, that is not possible. The regulatory authority that governs the HRI mining operation is split between the state (Section

129. *Id.*

130. *See id.* *See also* *Alaska v. Native Village of Venetie Tribal Gov’t*, 522 U.S. 520 (1998) (finding the fee lands owned by Native Alaskan tribal governments are not “dependent Indian communities” because they are not under the “superintendence or supervision” of the federal government, as are tribal trust lands).

131. *Hydro-Resources, Inc. v. U.S. EPA*, 562 F.3d 1249, 1254 (10th Cir. 2009).

132. *Hydro Resources v. EPA* (en banc), *supra* note 122.

133. Segal, *supra* note 36, at 380. *See also* *Morris v. U.S. Nuclear Comm’n*, 598 F.3d 677, 682 (10th Cir. 2010) (describing the ISL mining process in which uranium is separated from the chemical compound, processed into yellowcake, and shipped to other facilities where it is enriched for use as reactor fuel).

134. *Id.*

8) and federal or tribal environmental protection agencies (Section 17), which have responsibility for effectuating the Safe Drinking Water Act, and the Nuclear Regulatory Commission, which issues new permits for uranium mining.¹³⁵ Notably, the respective government entities do not use the same standards to assess the safety of the ISL process.¹³⁶ This set of issues gave rise to another action, in which affected Navajo residents of the Church Rock chapter sued the Nuclear Regulatory Commission to enjoin its decision issuing a mining permit to HRI.¹³⁷

In *Morris v. U.S. Nuclear Regulatory Commission*, the Tenth Circuit Court of Appeals upheld the decision of the NRC to license HRI's permit to mine uranium on four sites within the "checkerboard area," using the ISL process.¹³⁸ Two sites are near Church Rock, and the other two sites are near Crownpoint, New Mexico.¹³⁹ The license was issued collectively for the "Crownpoint Uranium Project."¹⁴⁰ All of the sites share a common aquifer system with tribal lands and constitute the major source of drinking water for the thousands of local residents, 97% of whom are Navajo.¹⁴¹ HRI commenced its application process with the NRC in 1988, triggering an environmental review under NEPA.¹⁴² Because Section 17 is within the Navajo reservation, it was necessary to involve the participation of the agencies exercising oversight authority over these lands.¹⁴³ In 1997, the NRC, in cooperation with the Bureau of Land Management (BLM) and the Bureau of Indian Affairs (BIA), issued a final environmental impact statement, recommending that the NRC grant HRI's license application, and the license was granted in 1998.¹⁴⁴

An association of concerned Navajo residents (Eastern Dine Against Uranium Mining) and other environmental and community organizations filed suit, seeking review of the NRC's licensing decision. In the *Morris* case, petitioners argued that the NRC's decision violated the requirements of the Atomic Energy Act of 1954 as well as the requirements of NEPA.¹⁴⁵ Specifically, the petitioners cited the current regulation under the Atomic Energy Act, which limits acceptable levels of airborne

135. Segal, *supra* note 36, at 378; *see also* Cooley, *supra* note 28, at 419-20 (discussing state and federal jurisdiction under the SDWA on lands within the "checkerboard area").

136. Segal, *supra* note 36, at 378-79.

137. *Id.* at 378-81 (discussing the facts leading up to *Morris*, *supra* note 133).

138. *Morris*, *supra* note 133, at 677.

139. *Id.* at 681.

140. *Id.* at 682.

141. Tsosie, *Charting the Future*, *supra* note 16, at 224.

142. *Morris*, *supra* note 133, at 681.

143. *Id.* at 682.

144. *Id.*

145. *Id.* at 681.

radiation from an NRC-licensed operation to 0.1 rem per year.¹⁴⁶ Petitioners noted that there was already extensive airborne radiation in Section 17, due to the unremediated conditions of the earlier uranium mining, and the cumulative effect of a new source of radiation would pose a public health hazard, thereby precluding issuance of a permit under the Atomic Energy Act, which provides that a license shall not issue where it would compromise public health and safety.¹⁴⁷ The court rejected this argument, holding that the NRC had acted reasonably in limiting its determination of airborne radiation to the “new” proposed source, rather than the cumulative dose in the area.¹⁴⁸

The court’s decision to ignore the *actual* level of radioactive exposure, which far exceeded the maximum standard, was only possible because the court construed the residue from the unremediated uranium mines in the area as “naturally occurring background radiation” under the terms of the statute. As Judge Lucero noted in his dissenting opinion, this term is not defined in the statute, but should be given a reasonable construction as the level of radiation that occurs naturally within certain geographic regions because of the constituent minerals in the earth, rather than as the result of toxic residue from earlier, unremediated contamination by a mining company.¹⁴⁹ Additionally, the majority of the court concluded that the NRC had acted reasonably in requiring HRI to restore the quality of the groundwater in the future, *after* mining activities have concluded, rather than requiring the company to secure water quality in the present for the residents and their livestock.¹⁵⁰ This astounding conclusion was justified under the court’s reading of NEPA, which “does not prohibit an agency from approving a project with negative cumulative effects, so long as the agency considered those affects.”¹⁵¹ Thus, HRI was poised to start a new set of uranium mines within “Navajo Indian Country,” once again to the detriment of the Navajo people.

The outcome of the *Morris* case differs significantly from the national sentiment about nuclear waste. There is a continuing national debate around where to site nuclear waste, and to date, no state has agreed to house a permanent repository for the vast stores of radioactive waste within the country. At one point, the U.S. government was offering incentives to tribal governments, including the Mescalero Apache Tribe and Skull Valley Paiute Tribe, to house this waste. This was hotly challenged as an example of “environmental injustice” for Native Nations.¹⁵² The

146. 10 C.F.R § 20.1301(a)(1); *Morris*, *supra* note 133, at 684.

147. *Morris*, *supra* note 133, at 685-86.

148. *Id.* at 689.

149. *Id.* at 707 (Lucero, J., dissenting).

150. *Id.* at 701.

151. *Id.* at 705.

152. See Lincoln L. Davis, *Skull Valley Crossroads*, 68 MD. L. REV. 290 (2009) (discussing proposal to

reality is that the U.S. already has created a *de facto* nuclear waste dump on the lands within the Southwest that are home to the Navajo Nation and other tribes. The largest pile of radioactive waste is located on the fee lands near Church Rock, New Mexico, within the Navajo Indian Country. Furthermore, the White Mesa Uranium Mill, owned by Energy Fuels, is the only conventional uranium mill currently operating in the United States. The White Mesa Mill is located ten miles from Blanding, Utah, which is near the Navajo Nation, and it is only two and a half miles from the Ute Mountain Ute Tribe's White Mesa community.¹⁵³ The mill processes all of the ore from the mines near that Grand Canyon, and it is not a coincidence that Energy Fuels owns and operates the uranium mines in the Grand Canyon as well as the mill.

It is apparent where the benefit of uranium production resides today. It is also clear that the Native people of this region continue to bear a disproportionate level of harm from the radioactive contamination of air, water, and land caused by the mining and processing of uranium in the Southwest. Yet, the affected communities lack any direct governance authority over the White Mesa Mill because it is on state, rather than tribal land.¹⁵⁴ The rights of tribal members, if any, are dependent upon access to the civil rights enjoyed by all Americans, namely the right to sue for environmental compliance if the company is in violation of a federal or state law that permits "citizen's suits."

The U.S. Environmental Protection Agency has adopted regulations under the Clean Air Act imposing technical limitations on radon emissions from uranium mines.¹⁵⁵ Because the Clean Air Act contains a citizen's suit provision, it is possible for claimants to file a lawsuit if the company is in non-compliance, which requires testing and documentation, and if the data supports a finding of non-compliance under the technical limitations established by the regulations. In short, this option entails a long, arduous, and expensive process that requires substantial scientific and legal expertise and is well beyond the ability of the average "citizen." In a rural area like Blanding, where many residents lack the education or monetary resources to bring this type of lawsuit, securing "justice"

store high level nuclear waste on tribal lands).

153. See Press Release, Grand Canyon Trust, *Lawsuit Expands as More Pollution Problems Emerge at White Mesa Uranium Mill* (July 30, 2014), available at <http://www.grandcanyontrust.org/news/2014/07/lawsuit-expands-pollution-problems-emerge-white-mesa-uranium-mill/> (noting that the Grand Canyon Trust expanded its lawsuit against Energy Fuel Resources after receiving records indicating further air quality violations by the White Mesa Uranium Mill reflecting increased levels of radon pollution).
154. See *id.* See also *Grand Canyon Trust v. Energy Fuel Resources*, Complaint for Declaratory Relief, Injunctive Relief, and Civil Penalties, Case No. 14-cv-00243-DBP, filed in central division of federal district court in Utah on April 2, 2014.
155. See 40 C.F.R. §§ 60.252 & 61.252(a) (establishing emissions limits and work practice standards).

under the law will likely depend upon intervention by a third party with resources and standing to bring this federal claim.

D. Human Rights Implications

Johnston, Dawson, and Madsen describe the human costs of uranium mining and milling on the Navajo Nation as involving three central injustices.¹⁵⁶ First, as a historical matter, the United States treated Navajo and other American Indian workers differently from its own atomic energy scientists and lab workers, because it failed to disclose or warn the Native workers of the dangers of radiation, while it took precautionary measures to protect the health of its own scientists and lab workers. Second, the federal government studied the health effects among Native workers and documented their illnesses, but failed to notify them or provide any compensation for the illnesses and deaths until 1990, when these events came to public attention, and Congress enacted legislation. However, even after 1990, many Native workers could not recover because they lacked the forms of documentation that other employees were given to prove dates of their employment and the hours that they worked in the mines. Finally, the government has failed to remediate much of the ecological damage caused by uranium mining and milling, including the contamination of land and water resources. Not only has the government failed to remediate the radioactive contamination caused by past mining and milling, but also continues to license new mining operations on and adjacent to tribal lands.

As demonstrated above, domestic law is only partially responsive to addressing the environmental and human costs of uranium mining and milling on tribal lands. Assuming that the domestic construction of justice is insufficient to protect the Native peoples of the Southwest, we could look to the U.N. Declaration on the Rights of Indigenous Peoples (the “Declaration”) for guidance on the norms that might define justice. This is the approach recommended by Walter Echo-Hawk, the legendary Pawnee attorney who litigated many of the most important civil rights cases for Native people in this Nation’s history.¹⁵⁷ The Declaration takes the position that Indigenous peoples have civil rights equal to those of other citizens within their society, so it is a harm to treat them differently for purposes of employment, political access, education, health, or any other area of social development.¹⁵⁸ The Declaration also proclaims that Indigenous peoples have a right to autonomy as “peoples,” and that this entails a collective right to govern

156. See Johnston, Dawson & Madsen, *supra* note 6, at 111.

157. See WALTER ECHO-HAWK, *IN THE COURTS OF THE CONQUEROR AND IN THE LIGHT OF JUSTICE* (2010).

158. See Declaration, *supra* note 13, at art. 1-2.

themselves on their territories and under their own political, economic, and social institutions.¹⁵⁹ Finally, the Declaration requires that the rights of Indigenous peoples be fully respected by providing redress for past harms and by ensuring that contemporary institutions and laws meet the conditions for justice.¹⁶⁰

It is apparent that the human rights of Native American peoples, such as the Navajo Nation, have been heavily impacted by the historical context of nuclear development in the United States. They are also affected by contemporary energy policy because their land continues to hold reserves of uranium. Many of the Declaration's provisions describe the rights of Indigenous peoples to their traditional lands, waters, and resources, and call upon States to engage Indigenous peoples when taking actions that would impair these resources, and also to offer compensation for unlawful or unjust appropriations of land that have already taken place.¹⁶¹ To the extent that Indigenous lands have been appropriated and contaminated by radioactive waste, the nation-states ought to have an obligation to provide redress. This should include remediation of radioactive contamination, as well as a duty to insure that future decision-making (for example, about where to store nuclear waste or how to transport it across tribal land) is made in cooperation with the affected Indigenous communities.

The unique harms of uranium mining might also be considered under several specific provisions of the Declaration. For example, Article 29 provides that "Indigenous peoples have the right to the conservation and preservation of the environment and the productive capacity of their lands or territories and resources."¹⁶² States have two corresponding and related duties. First, States are required to take "effective measures to ensure that no storage or disposal of hazardous materials" takes "place in the lands or territories of indigenous peoples without their free, prior, and informed consent."¹⁶³ Thus, even if tribal lands are not directly involved, it would seem that adjacent areas within traditional tribal territories qualify as protected areas. Second, States must take measures to monitor, maintain, and restore the health of indigenous peoples who have been affected by toxic or hazardous materials.¹⁶⁴ This provision obviously requires States to study and consider the impacts to human health and the environment, as well as to develop programs to address the health conditions experienced by

159. *See id.* at art. 3-4.

160. *See, e.g., id.* at art 28 (covering redress for lands and resources which have been taken or damaged without the free, prior and informed consent of the Indigenous people).

161. *See* Rebecca Tsosie, *Reconceptualizing Tribal Rights: Can Self-Determination Be Actualized within the U.S. Constitutional Structure?*, 15 LEWIS & CLARK L. REV. 923, 942-43 (2011).

162. Declaration, *supra* note 13, at art. 29.

163. *Id.* (emphasis added).

164. *Id.*

peoples that have already suffered from radioactive exposure. It is not clear that either requirement has been honored in the context of uranium mining in the Southwest.

Article 10 provides that “Indigenous peoples shall not be forcibly removed from their lands or territories,” and further states that any relocation must take place with the “free, prior, and informed consent of Indigenous peoples” and “after agreement on just and fair compensation and, where possible, with the option of return.”¹⁶⁵ This provision is relevant for many Indigenous communities, such as those at Church Rock, New Mexico, or White Mesa, Utah, which might be asked to vacate highly contaminated lands in the future to avoid serious health consequences to tribal members. While relocation is commonly understood to be a viable solution to toxic contamination in non-Native communities, it is a human rights violation to separate Indigenous peoples from their traditional lands without their “free, prior, and informed consent.” In fact, many tribal members will refuse to move from a contaminated site as individuals, and it is very difficult to move an entire community, particularly where only some members are deemed to have a dangerous risk of exposure based on their proximity to the contamination.¹⁶⁶ Radon gas emissions fall more heavily on residents living closest to the tailings and processing site. Thus, it is likely that any future attempt to offer monetary compensation for relocation will be to individuals, rather than to the entire community.

Finally, the human rights implications of radioactive contamination can be seen as an international or domestic issue related to military activity. To a large extent, the existence of radioactive waste in Indian Country is a byproduct of the U.S. military’s activities and requirements. Article 30 of the Declaration provides that “military activities shall not take place in the lands or territories of indigenous peoples, unless justified by a relevant public interest or otherwise freely agreed with or requested by the indigenous peoples concerned.”¹⁶⁷ The latter requirement imposes the obligation upon States to “undertake effective consultations with the indigenous peoples concerned, through appropriate procedures and in particular through their representative institutions, prior to using their lands or territories for military activities.”¹⁶⁸ While the United States will undoubtedly argue that its

165. See Declaration, *supra* note 13, at art. 10.

166. For example, I interviewed individuals who said that the EPA had offered a one-time buyout to certain Navajo individuals in Church Rock, but this same offer was not made to other individuals because they were assessed as being within an “acceptable” zone of risk. Interview with a Researcher who Worked with Navajo Individuals in Church Rock and Albuquerque, N.M. (Summer 2013).

167. Declaration, *supra* note 13, at art. 30.

168. *Id.*

historic support for uranium production on the Navajo Nation was justified by the public's interest in national security, this should not be sufficient to outweigh the continuing harms of the policy upon the Navajo people. At the very least, the United States should be held accountable for the damage caused by its policies, including the cost of documenting the nature and extent of the harms, as well as the cost of remediation, and it should be required to make a full disclosure to the Navajo Nation and its members.¹⁶⁹ As discussed in the next section, this model has been at least partially employed for the Island Nations of the South Pacific, which were once considered "wards" of the U.S., but are now recognized as nations and parties to a "Compact of Free Association" (the "Compact") with the United States.

II. Radioactive Contamination in the South Pacific

The United States engaged in widespread nuclear weapons testing in the South Pacific between 1946 and 1958, and this had devastating consequences for the Indigenous people of the Marshall Islands and other Island nations. This region has been heavily contaminated because of its use by nation-states for nuclear testing over many decades, leading some commentators to describe the area as "the nuclear Pacific."¹⁷⁰ In 1985, the thirteen independent and self-governing states of the region joined together as "the South Pacific Forum" and adopted the "South Pacific Nuclear Free Zone Treaty," reclaiming the area from the military control of other nation-states.¹⁷¹ Similar language was incorporated into the domestic constitutions of modern states, such as Palau, as they "decolonized" their governance structures during the modern era.¹⁷² However, by this time, the damage was extensive, and the consequences have been devastating for the Indigenous peoples throughout the Pacific, who share cultural ties, but have long maintained a sovereign existence upon their respective islands. The United States and other nations used the South Pacific for weapons testing as though the Islands were "vacant" or "desert" lands to be sacrificed for the "greater good" of national

169. The issue of disclosure is very important here. Prof. Francisco Rivera mentioned that this is a current issue for the people in Puerto Rico, who were victims of a bomb that was recently detonated, but have difficulty accessing information from the U.S. military. See Elyse Amberg, *IHRC Students Travel to Vieques, Puerto Rico to Investigate Human Rights Violation by the U.S. Navy*, SANTA CLARA LAW (Apr. 8, 2014), <http://law.scu.edu/ihrblog/ihre-students-travel-to-vieques-puerto-rico-to-investigate-human-rights-violations-by-the-u-s-navy/>.

170. See, e.g., Jonathan M. Weisgall, *Micronesia and the Nuclear Pacific since Hiroshima*, 5(2) SAIS REV. 41, 41 (1985); see also Stewart Firth, *The Nuclear Issue in the Pacific Islands*, 21(4) J. PAC. HIST. 202, 202 (1986) (describing the politics of nation-states such as France, New Zealand, and the United States in the region).

171. See Firth, *supra* note 170, at 203.

172. *Id.* at 214.

security. This reprises the dynamic of domestic weapons testing, which primarily occurred in rural areas with small populations.¹⁷³ In many cases, of course, these “desert” areas are also the homelands of Indigenous peoples.¹⁷⁴

According to Davor Pevec, an attorney who represented the Enewetak people, the United States conducted sixty-seven nuclear tests in the Marshall Islands during that period, primarily on the Enewetak Atoll and the Bikini Atoll.¹⁷⁵ “The yield of the tests in the Marshall Islands totaled 108 megatons which is equivalent to 7,200 Hiroshima bombs.”¹⁷⁶ During the time of the testing, the Marshall Islands were part of a United Nations Trust Territory, administered by the United States. In its trustee capacity, the United States made a specific promise to “protect the inhabitants against the loss of their lands and resources.”¹⁷⁷ However, it clearly did not uphold that promise. In particular, the “Bravo shot” on March 1, 1954 was the largest U.S. nuclear test in history, equivalent to 1,000 Hiroshima-type atomic bombs.¹⁷⁸ The massive hydrogen bomb vaporized two islands in the atoll altogether, as well as part of the Island of Nam (which remains highly contaminated), forming a huge cloud of radioactive fallout, which then drifted in “the wrong direction,” irradiating inhabitants of the Rongelap and Utirik (Utirik) Atolls, as well as the crew of a Japanese fishing vessel named “the Lucky Dragon.”¹⁷⁹

The program of U.S. reparations for this interval of history has strong correlations to the experience of Native American people, and yet, it also has a distinctive history because the Marshall Islands ultimately negotiated an

173. See, e.g., Anne B. Jennings, Amy M. Seward & Thomas M. Leschine, *Living in a Nuclear Landscape: Rehabilitation and Resettlement of Proving Grounds in Australia and the Islands of the Western Pacific*, in LONG TERM MANAGEMENT OF CONTAMINATED SITES: RESEARCH IN SOCIAL PROBLEMS AND PUBLIC POLICY 165, 165-92 (Thomas M. Leschine ed., 2007).

174. See, e.g., RECA, *supra* note 10, at § 2(a) (Congress found that the “fallout emitted during the Government’s above-ground nuclear tests in Nevada exposed individuals who lived in the downwind affected area in Nevada, Utah, and Arizona to radiation that is presumed to have generated an excess of cancers among these individuals.” The lands in Nevada are the home of the Paiute and Shoshone peoples, and the lands in Utah are the home of the Ute peoples, and the lands in Arizona are the home of twenty-two federally-recognized Indian nations, including the Navajo, Hopi, and Havasuapai peoples).

175. Davor Pevec, *The Marshall Islands Nuclear Claims Tribunal: The Claims of the Enewetak People*, 35 DENV. J. INT’L L. & POLY 221, 221 (2006).

176. *Id.*

177. *Id.*

178. Weisgall, *supra* note 170, at 44.

179. See Barbara Rose Johnston, *Experimenting on Human Subjects: Nuclear Weapons Testing and Human Rights Abuse*, in WHO PAYS THE PRICE?: THE SOCIOCULTURAL CONTEXT OF ENVIRONMENTAL CRISIS 131, 133-41 (Barbara Rose Johnston ed., 1994); see also Compensation for the People of Rongelap and Utirik: A Report by the Special Joint Committee Concerning Rongelap and Utirik Atolls to the Fifth Congress of Micronesia 6-8 (Congress of Micronesia, 2d. ed. 1972) [hereinafter Compensation for People of Rongelap and Utirik] (describing the harm to the fishing crew and the fishing industry of Japan, as well as compensation paid).

independent political status through their Compact of Free Association, which is also the instrument that structured the terms of “reparations” for the victims of U.S. nuclear testing.¹⁸⁰ This section of the article discusses two sets of claims that are implicated by the Compact: the claims of individual people who were the direct victims of radioactive fallout from the bombs, and the claims of the Native people who were relocated from their Islands to accommodate the testing. The first set of claims follows the standard U.S. tort model of reparative justice for victims of government negligence that causes direct physical harm to specific individuals. The second set of claims involves the multiple political, economic, social, and cultural harms suffered by Indigenous peoples, who are relocated from their traditional lands and then seek repatriation of those lands, including restoration of the lands to a habitable condition. Repatriation of land is vital to sustain the claim of the people of the Marshall Islands for self-determination. The problem, of course, is that the lands are hazardous to human health in their current state, and this can only be remedied by extensive remediation efforts. There are parallels in this experience to that of Indigenous peoples within the United States, and there are also lessons to be learned.¹⁸¹

A. The Tort Model of Compensation for Victims of Radioactive Contamination

The tort model of compensation for innocent victims of the radioactive contamination was the predominant mechanism for redress available for victims of radioactive contamination caused by the actions of the U.S. in the Pacific until the 1980s.¹⁸² In 1986, Congress finally settled the damages claims that had been filed against the United States by agreeing to the Compact for Free Association,

180. See Compact of Free Association Act of 1985, H.R. Res. 187, 99th Cong. (1985) (enacted) (joint Resolution to Approve the “Compact of Free Association” and for Other Purposes, 99 Stat. 1770) [hereinafter Compact of Free Association]. Subsection (f) discusses the respective compensation to be paid to the peoples of Bikini, Enewetak, Rongelap, and Utrik for the effects of U.S. nuclear testing in this region and references the fund to be established for implementation of “Section 177” of the Compact, which is the operative provision effectuating compensation.

181. Significantly, the Advisory Committee on Human Radiation Experiments clustered the experience of the Navajo Nation and the Marshall Islands together, and combined these cases into the same chapter with the 1956-57 “iodine 131 experiment” in Alaska, which exposed many Native Alaskan individuals to radioiodine and tested their thyroid activity, again without informing them, purportedly to test the role of climate on thyroid activity due to the increasing presence of Air Force personnel in the arctic. According to the Committee, all three case studies “raise troubling questions that will stay with us into the future, but they do so in different ways, and with different consequences.” See Report, Advisory Committee on Human Radiation Experiments 603-04 (1995), available at <https://ia700402.us.archive.org/10/items/advisorycommitte00unit/advisorycommitte00unit.pdf>.

182. See Pevec, *supra* note 175, at 221.

inclusive of the Section 177 agreement that established a \$150 million Nuclear Fund.¹⁸³ Prior to 1986, efforts at compensation were largely targeted at certain classes of individuals. For example, in 1957, Congress enacted the “Law for Health Protection and Medical Security for A-Bomb Sufferers,” directed at the Japanese people who survived the bombings in Hiroshima City and Nagasaki City.¹⁸⁴ The class of claimants designated as “A-Bomb sufferers” were people living in those areas who required medical care because of their exposure to the radiation.¹⁸⁵ These payments were made to Japan, but calculated per sufferer. The U.S. government also conveyed the sum of \$2,000,000 to the Japanese government for the harms to the Japanese fishermen of the Lucky Dragon and the larger fish industry that was impacted by the radioactive fallout of the Bravo test in the South Pacific.¹⁸⁶

In a 1974 Report, a Study Committee on radioactive contamination in the Marshall Islands compared the treatment of Japanese victims with the people of “Rongelap and Utirik,” who were not enemies of the U.S., but were instead the “innocent victims of error and negligence on the part of the United States.”¹⁸⁷ The United States had appropriated \$950,000 in a 1964 statute as a “compassionate responsibility to compensate inhabitants in the Rongelap Atoll, in the Trust Territory of the People of the Pacific Islands, for radiation exposure sustained by them as a result of the thermonuclear detonation at Bikini Atoll in the Marshall Islands on March 1, 1954.”¹⁸⁸ The sum was granted to the Secretary of the Interior to be administered to affected inhabitants (or if they had died, to their heirs) in “full settlement and discharge of all claims against the United States” arising from the Bravo bomb.¹⁸⁹ The resultant distribution was vastly insufficient to pay the multitude of injuries and harms that the people had suffered. Moreover, the authors of the report noted that the U.S. was acting as a “trustee” at the time of the bombing, and should have honored its “sacred trust” with the people, which was to “promote the political, economic, social and educational advancement of the people of Micronesia and to also protect their lands, their health and foster their general welfare.”¹⁹⁰ Because of this trust responsibility, the authors of the report observed, it was inappropriate to employ the narrow calculation given by nations

183. See Compact of Free Association, *supra* note 180; see also Pevec, *supra* note 175, at 221.

184. See Compensation for People of Rongelap and Utirik, *supra* note 179, at 5.

185. See *id.* at 5-6 (comparing the statutory compensation offered to Japan with the relative lack of resources provided to the affected people in the Marshall Islands).

186. *Id.* at 6-7.

187. *Id.* at 36.

188. *Id.* at app. no. v.

189. *Id.*

190. See Compensation for People of Rongelap and Utirik, *supra* note 179, at 36.

for “war claims,” namely “the economic value of a human life, or the economic impairment or loss suffered by injury and medical treatment.”¹⁹¹

This statement contains the heart of what I want to argue in this paper, which is that a trustee has a greater moral duty to repair harm than a nation that does not have this responsibility (such as the United States and Japan, which were at war with one another as political equals). The U.S. assumed a trust responsibility to American Indian Nations, such as the Navajo, and it also assumed a trust responsibility to the people of the Marshall Islands. This affirmative act authorized the United States to act on behalf of the Indigenous nation and therefore supports a greater responsibility to account for the harms to land, human health, and traditional Indigenous economies and societies. However, instead of acknowledging this responsibility, the United States has relied upon the vulnerable status of these Indigenous groups, employing the notion of the “ward”—a group of individuals who may be removed from their lands, poisoned by radioactive materials, and then must petition the very government that caused these circumstances for “relief” as a matter of charity, rather than as a matter of right. In comparison, the principles of reparative justice that govern compensation for wartime injuries caused by the negligent or intentional acts of nations are seen as a “matter of right,” rather than as an instance of charity. In the case of the Marshall Islands, reparative justice has entailed a claim for repatriation of the Islands that were appropriated by the U.S. for military use. Repatriation of land is central to Indigenous self-determination, and is fundamentally linked to the political and cultural sovereignty of Indigenous peoples.¹⁹² This is equally true for American Indian Nations, the Native Hawaiian people, and the peoples of Micronesia.

B. Reparative Justice for Indigenous Peoples: Honoring Self-Determination and the Right to Repatriation

At the time the testing took place, the people of the Marshall Islands were in a distinctive political relationship with the United States, as the inhabitants of a U.N. “Trust Territory,” under U.S. administrative authority.¹⁹³ Under this relationship, the people of the Marshall Islands had Constitutional rights to their

191. *Id.*

192. See Wallace Coffey & Rebecca Tsosie, *Rethinking the Tribal Sovereignty Doctrine: Cultural Sovereignty and the Collective Future of Indian Nations*, 12 STAN. L. & POL’Y REV. 191, 204-06 (2001).

193. See Weisgall, *supra* note 170, at 43 (noting that in July 1947, the islands of Micronesia became the “Trust Territory of the Pacific Islands,” one of eleven U.N. trusteeships, and the United States was given the authority to use the islands for security purposes, and thus was designated as the “administering authority” for purposes of reporting to the Security Council).

land (as private property), and the U.S. had an obligation to protect the people and their lands.¹⁹⁴ This meant that the United States had the power to test nuclear weapons in the area (as a “trust territory” or possession of the U.S.), and it exercised this power by determining that it would remove the people from the areas of direct bombing (such as Enewetak and Bikini), and then effectuate agreements of resettlement with the affected people.¹⁹⁵ The U.S. promised to compensate the people for the loss of use of the property or damage to it, and it assured the groups that the removal would be temporary, that the U.S. government would take care of them while they were away from their Island, and then they would be resettled at home.

1. Enewetak

The United States military used the Island of Enewetak continuously between 1947 and 1980.¹⁹⁶ The U.S. officially ended atmospheric testing in 1958, and then signed a test ban treaty with the Soviet Union in 1963.¹⁹⁷ However, after it stopped nuclear testing, the U.S. used the Island for intercontinental ballistic missile testing, high-energy upper level rocket testing (fueled by the toxic substance of Beryllium), and Pacific cratering experiments (which entailed detonating explosives as a means of predicting the impact of nuclear detonations upon strategic defense installations).¹⁹⁸ The U.S. even suggested using the Island of Nam for a permanent U.S. nuclear waste dump, a suggestion that was rejected by the Bikini Council.¹⁹⁹

Prior to their relocation, the people of Enewetak had lived on their Island for generations and maintained the close cultural relationship that all Indigenous peoples maintain with their traditional lands. In the words of one expert who offered testimony:

For Marshall Islanders in general, and Enewetak people in particular, land is a part of one’s person and one’s entire identity. It is an integral part of a person’s sense of who they are in the world One’s sense of self, both personal and

194. See Nancy J. Pollock, *Three Pathways to Compensation for Nuclear Testing*, 3 SOC. JUST.: ANTHROPOLOGY, PEACE AND HUM. RTS. 191, 195-96 (2003) [hereinafter Pollock, *Three Pathways to Compensation*] (discussing property rights); see also Compensation for the People of Rongelap and Utirik, *supra* note 179, at 36 (discussing the trust relationship).

195. See Pevec, *supra* note 175, at 221.

196. *Id.* at 226.

197. Ruth Levy Guyer, *Radioactivity and Rights: Clashes at Bikini Atoll*, 91 AM. J. PUB. HEALTH 1371, 1372 (2001).

198. Pevec, *supra* note 175, at 226-27.

199. Guyer, *supra* note 197, at 1372.

cultural, is deeply embedded in a particular parcel of land on a particular atoll.²⁰⁰

The Enewetak people maintain clan relations and the clans hold specific lands. This relationship is intergenerational and tied to the practice of traditional subsistence lifeways, including agriculture and fishing. All of this was disrupted when the people were relocated from their land to Ujelang, which did not have the same features to permit continuation of these lifeways.

The Enewetak people were exiled on Ujelang for over 33 years, and they suffered from malnutrition, illness, lack of health care, and lack of education. The U.S. paid little attention to the situation of the Enewetak people until 1974, when the First Congress of Micronesia pressured Congress to hold hearings on the damage and residual radiation at Enewetak, as well as the situation of the survivors of the radioactive fallout from the testing. The Department of Interior produced reports documenting the harms to the people who had been relocated, and the testimony of survivors and physicians documented the extensive impacts of the radioactive contamination on the health and lands of the affected people. In response to this evidence, the U.S. government engaged in an extensive cleanup, rehabilitation, and resettlement effort between 1977 and 1980.²⁰¹ The cost of this effort was over \$100 million, and yet, only the southern half of the Enewetak atoll was inhabitable. The cleanup was insufficient to rehabilitate the soil or revegetate the land. So, although the Enewetak returned to their atoll, they did not return to the same natural environment, nor were they the same people, given the years of extensive hardship and health impacts that they endured.

In the 1980s, the Enewetak people filed a claim against the U.S. in the Court of Claims for the damage to and loss of use of their lands, as well as the other hardships they suffered.²⁰² A total of 14 cases were filed by different groups of Marshall Islanders for takings of land and tort damages.²⁰³ Some of these concerned the impact of the nuclear fallout on the groups in adjacent areas, who were suffering from leukemia, thyroid cancer, and other documented health conditions related to extensive radioactive exposure. Congressional hearings had documented that the earlier assumptions that government officials made about the toxic load and potential health impacts had been vastly underestimated.²⁰⁴ Some

200. Pevec, *supra* note 175, at 223 (citing Dr. Laurence Carucci's testimony before the Tribunal).

201. *Id.* at 228-29.

202. *See id.* at 229.

203. *Id.* at 229.

204. *Id.* at 238 (referencing 2005 hearings before Congress); Jennings, Seward & Leschine, *supra* note 173, at 173 (documenting scientific testing that proved high radiation levels and cost of remediation as compared to projection in subcommittee of the Committee on Appropriators House of Rep. 95th Congress, 2nd Sess. (1979)).

of the children had been exposed at levels thousands of times higher than those which had been predicted.²⁰⁵ One victim, Lekoj Anjain, was one year old when he was exposed to the radioactive fallout of the Bravo test on his home Island of Rongelap, which is approximately 100 miles from the Island of Bikini.²⁰⁶ Many of the Rongelese were burned, disfigured, and became sick from the radioactive exposure.²⁰⁷ Lekoj lived to the age of 19, when he died in the NIH hospital in Bethesda, Maryland, from complications related to leukemia and pneumonia.²⁰⁸

Through the litigation process, attorneys discovered that although the U.S. had tested the people of the Marshall Islands and documented their condition, it had also concealed the results from the victims.²⁰⁹ This was consistent with the Navajo Nation's experience. In both cases, the health effects of radioactivity were classified as secret under the U.S. Atomic Energy Act of 1946 for purposes of national security.²¹⁰ This shameful history, along with the momentum of international self-determination for the trust territories in the South Pacific under the United Nation's decolonization principles, inspired a complex political restructuring of the U.S. relationship with the Marshall Islands, as well as a political solution to the multiple cases that were pending in the U.S. courts.²¹¹ In 1983, the United States and the Republic of the Marshall Islands concluded a treaty process by signing a Compact of Free Association, which was then formalized in a 1986 Joint Resolution from Congress.²¹² The Compact replaces the former Trusteeship with a new political relationship recognizing the independence of the Republic of the Marshall Islands, as well as its right to structure the terms of a future political engagement with the United States. The Compact includes a subsidiary arrangement (the Section 177 Agreement), which established a \$150

205. Jennings, Seward & Leschine, *supra* note 173, at 173.

206. See Steward Alsop, *That First Hydrogen Death: Another Micronesian Claim to Fame*, 5 MICRONESIAN INDEPENDENT 1, 1-2 (1974), reprinted in Compensation for the People of Rongelap and Utirik, *supra* note 179, at app. no. 8.

207. Compensation for People of Rongelap and Utirik, *supra* note 179, at 36-37.

208. Alsop, *supra* note 206, at 9; see also Compensation for People of Rongelap and Utirik, *supra* note 179.

209. *Supra* note 204.

210. See Nancy J. Pollock, *Learning about Radioactive Contamination of Food: Lessons from Hiroshima and US Nuclear Testing in the Marshall Islands*, in FOOD AND WAR IN MID-TWENTIETH-CENTURY EAST ASIA 165, 170 (Katarzyna J. Cwierkta ed., 2013) [hereinafter Pollock, *Radioactive Contamination of Food*] (citing U.N. Scientific Comm. on the Effects of Atomic Radiation, Report, Vienna, 2008, at 6) (finding that the effect of this was collusion between the U.S. scientific teams, under U.S. Atomic Energy Commission Jurisdiction, and the U.N. Committee responsible for overseeing the Trust Territory of Micronesia to keep information regarding hazards of radioactive contamination secret from residents of Island nations).

211. See generally Pevec, *supra* note 175; see also Pollock, *Three Pathways to Compensation*, *supra* note 194.

212. Compact of Free Association, *supra* note 180.

million Nuclear Fund, the income from which is earmarked for the people of the four different atolls as “a means to address past, present and future consequences of the Nuclear Testing Program.”²¹³ The U.S. also set aside a fund to establish a “Nuclear Claims Tribunal,” which would have jurisdiction to render “a final determination upon all claims past, present and future, of the Government, citizens and nationals of the Marshall Islands which are based on, arise out of, or are in any way related to the Nuclear Testing Program.”²¹⁴ The Section 177 Agreement is intended to constitute the full settlement of all claims against the United States, and it specifies that any pending claims in U.S. courts would be dismissed.²¹⁵ This includes the claims for takings of property under the U.S. Constitution, as well as the damage to land and human health caused by nuclear testing.

After the Compact of Free Association went into effect, the U.S. filed motions to dismiss all of the pending cases on the grounds that the cases were non-justiciable and involved political questions, given the Compact’s express provisions.²¹⁶ The Enewetak people protested that the sums that were set aside were not sufficient to constitute the Constitutional measure of damages for loss of property (just compensation), but the Court of Claims dismissed all of the cases, finding that the adequacy of compensation would be established by the Claims Tribunal, and thus the issue was not appropriately before the federal courts.²¹⁷ The Marshall Islands Nuclear Claims Tribunal was constituted in 1988. The Tribunal was to be in place for 15 years (due to terminate on September 30, 2002) and the Compact was subject to renegotiation.²¹⁸

The Enewetak people brought their claims before the Tribunal for “loss of use of their land, for the costs to restore the land to a condition of full and unrestricted use, and for the hardship and suffering they endured while in exile on Ujelang.”²¹⁹ According to Pevec, the damages to the Enewetak people for loss of land alone would amount to an award of \$244 million.²²⁰ The cost to restore was predicted to include the cost of full “radiological remediation” (half of the Island was uninhabitable, and the people from that part of the Island would still need to be resettled at an estimated cost of 100 million dollars), and also the cost of “soil and

213. Agreement Between the Government of the United States and the Government of the Marshall Islands for the Implementation of Section 177 of the Compact of Free Association, U.S.-Marsh. Is., June 25, 1985, H.R. Doc. No. 98-192, at 309 (1984).

214. This is the Section 177 agreement, referenced in the compact and Joint Resolution. *See id.* at 316.

215. Joint Resolution to Approve the Compact of Free Association, 99 Stat. 1771, Section 103(g).

216. *See Pevec, supra* note 175, at 229.

217. *Id.* at 230.

218. Pollock, *Three Pathways to Compensation, supra* note 194, at 193.

219. Pevec, *supra* note 175, at 231.

220. *Id.* at 231.

plant rehabilitation” (estimated at 18 million dollars).²²¹ Hardship damages are a product of calculating the pain and suffering of a group, displaced from its home for 33 years and subjected to conditions of overwhelming poverty and deprivation. As Pevec notes, it is hard to calculate the cost of famine, starvation, disease epidemics (including measles and polio), and rat infestation.²²² And even if those costs could be distilled to a hard figure (such as the figure of \$7,000-\$10,000 dollars per person per year estimated for the American citizens who were forcibly relocated to the Japanese Internment camps during WWII), how would it be possible to calculate the spiritual and emotional harm of being removed from sacred lands, in some cases witnessing the land being “vaporized,” and having to see the barren “physical skeleton” of a once rich and prosperous homeland?²²³ Despite the vast extent of damages, the Tribunal could only award the Enewetak people a small portion of their loss, namely \$1.7 million.²²⁴

2. Bikini

The people of Bikini suffered a similar set of harms.²²⁵ The U.S. government removed them from their lush, tropical Island and sent them to the Island of Rongerik, which has a place in their traditional stories as “the home of an evil spirit, a devil woman, and fish that were poisonous.”²²⁶ Once there, the people faced starvation because the fish on that reef are indeed poisonous.²²⁷ They suffered high rates of illness and death throughout the time they stayed on the Island. In 1972, after declaring the Island “radiologically safe,” 100 people were resettled on the Island of Bikini.²²⁸ However, in 1978, lab tests revealed high levels of radioactive compounds in their blood, and they were once again taken off of the Island.²²⁹ Most of the people from Bikini and their descendants live on the Island of Kili, though they continue to press for repatriation of their Island.²³⁰ The Native people strongly advocate soil remediation, but scientists are concerned that the Island’s food resources, such as coconut trees and the crabs that feed on coconuts, are highly radioactive.²³¹

221. *Id.* at 232-34.

222. *See id.*

223. *Id.*

224. *Id.*

225. *See generally* Guyer, *supra* note 197; *see also* Pollock, *Radioactive Contamination of Food*, *supra* note 210.

226. Guyer, *supra* note 197, at 1373.

227. *Id.* at 1374.

228. *Id.*

229. *Id.*

230. *Id.*

231. *See id.*; Pollock, *Radioactive Contamination of Food*, *supra* note 210.

Ruth Guyer has documented the impacts of this history on the health and well-being of the people of Bikini. According to Guyer, the Nuclear Claims Tribunal awarded the people of Bikini \$563 million in damages, although Congress must appropriate that sum, and the bulk of it will go to cleanup and repair of the physical damage to the Island.²³² She states:

The fundamental human right of the Bikini people to live in a safe environment and in their own land . . . was trumped by shows of military might at Bikini during the Cold War. Both at that time and in the intervening years, other rights of these people—the right to protection from harm, the right to have their autonomy respected, the right to be told the truth, the right to just treatment, have routinely been ignored.²³³

C. *Lessons for the Future*

The case studies from the South Pacific carry several lessons for other Indigenous peoples. Reparations to Indigenous peoples who were victims of nuclear contamination are a continuing issue throughout the world, because Indigenous peoples are either living on those lands or want to return home to lands that are badly contaminated, and which will cost millions and probably billions of dollars to clean up—if they can ever become “clean,” meaning safe for human habitation.²³⁴ In the context of the Bikini Islanders’ claims, “on principle, the Bikinians wanted—and still want—the U.S. to accept full remediation as a moral obligation.”²³⁵ This would not only entail monetary payments, but also the return of displaced people to their place of origin. However, U.S. officials point out that repatriation of the Islands for human habitation would require massive removal of soil, and the U.S. lacks any obvious place to put 1.2 million tons of contaminated soil. In short, the U.S. argues, restoration of the land would not only be cost-prohibitive, but would also result in further environmental damage.²³⁶

The “moral obligation” of the U.S. to repatriate the land is related to the struggle for Indigenous self-determination. As one commentator observes:

The importance of a return to traditional lands and a return to a traditional lifestyle for the Bikini, Enewetak, and Maralinga [Australian Aboriginal people] is connected to a long and complicated history. Cultural identity amongst Pacific Islanders and Aboriginal Australians is a geographical identity that flows from memories and values attached to places. Oral traditions,

232. Guyer, *supra* note 197, at 1371.

233. *Id.* at 1375.

234. *See* Jennings, Seward & Leschine, *supra* note 173.

235. *Id.* at 173.

236. *Id.*

religious and spiritual beliefs, superstitions and lore often trace the evolution of cultural identity through sacred symbols and sacred places.²³⁷

For the peoples of the Pacific Islands, the relocation and harm to their Islands is compounded by the impacts of climate change. Many Island nations in the South Pacific are being submerged into the ocean due to global warming and rising sea levels.²³⁸ The destruction of cultural knowledge from the loss of Island lands is staggering: “In coastal villages and island nations the sea is a guide to social history. Certain reefs, channels, islands, passages and seamounts are associated with particular spirit beings.”²³⁹ The Polynesian peoples chart their histories and genealogies by the stories attached to the various Islands they have lived upon and visited, and in relation to the stars in the night sky which guided their voyages for centuries.²⁴⁰ There is a link to ancestral history, spiritual associations, stories, and intergenerational knowledge, and all of this may be lost as the lands are appropriated for other uses.

Some may argue that it is not feasible to reclaim severely contaminated lands. However, if we accept the view that a given land base is permanently contaminated and cannot be inhabited again by human beings, what would preclude a judgment that the land should become a permanent disposal site for nuclear waste that cannot be safely placed anywhere else? The “public good” argument can be used to support a notion of “sacrifice areas.” For example, the intensive use of the Four Corners Region for coal strip-mining and power plants fueled the growth of large urban centers in California, Arizona, and Nevada, but devastated lands belonging to the Navajo and Hopi people within this region, which were ultimately designated as a “national sacrifice area.”²⁴¹ Similarly, the rapid development of the “Tar Sands” in Canada is devastating Indigenous lands and resources.²⁴² It is unclear whether the Native people will be displaced from

237. *Id.* at 181.

238. See generally Rebecca Tsosie, *Indigenous People and Environmental Justice: The Impact of Climate Change*, 78 U. COLO. L. REV. 1625 (2007) [hereinafter Tsosie, *Indigenous People and Environmental Justice*].

239. Jennings, Seward & Leschine, *supra* note 173, at 182.

240. Tsosie, *Indigenous People and Environmental Justice*, *supra* note 238, at 1638.

241. The National Academy of Sciences designated the Four Corners Region a “national sacrifice area” due to the needs of U.S. energy policy. See Tsosie, *Tribal Environmental Policy*, *supra* note 14, at 308.

242. See *Many Canadian Aboriginals See No Compromise on Oil Sands Pipeline*, REUTERS (Apr. 21, 2014, 1:12 AM EDT), http://www.nytimes.com/reuters/2014/04/21/world/americas/21reuters-pipeline-aboriginals.html?partner=rssnyt&emc=rss&_r=0; see also *What We Do: Tar-Sands*, INDIGENOUS ENVTL. NETWORK, <http://www.ienearth.org/what-we-do/tar-sands/> (discussing Canadian tar sands resistance by the First Nations in Canada). According to the materials posted on this website, there are 20 corporations exploiting the 10.6 million acres in Alberta that contain tar sands and are in the traditional territory of several First Nations, including

these lands, or whether they will live with the toxic debris of this energy development and suffer the harms for generations to come. A recent health report confirms a link between development of tar sands in Canada to increased cancers and other serious illnesses among the Native people in these communities.²⁴³ The study also documented that the increase of cancer fell disproportionately upon women, those who worked in the oil fields, and those who consumed traditional foods and locally caught fish.²⁴⁴

D. Summary and Conclusions

The debate over the future of contaminated Islands in the Pacific should inspire a global human rights dialogue on “international sacrifice areas” and the disproportionate harms for Indigenous peoples living within traditional, subsistence economies. Similarly, the dialogue about Indigenous self-determination, which is exemplified by the Compact with the Marshall Islands and the Declaration on the Rights of Indigenous Peoples, ought to promote a vision of Indigenous governance and participation in decision-making, instead of a conversation about what happens to the “vulnerable victims” of events that are beyond their control. The “helpless victim” image was embedded within the narrative of 19th and early 20th century colonial nations who sought to reduce Indigenous peoples to the status of “wards.” In this way, the appropriation of Indigenous political and cultural rights by the dominant government could be justified because it was for the good of the ward. This cannot be the narrative of contemporary Indigenous self-determination. However, if self-determination merely means that the Indigenous group agrees to use its lands for the broader “public good” in exchange for money and the right to participate in global capital markets, then it is pointless to argue that there is any independent moral value for this right.²⁴⁵ In this case, an Indigenous Nation’s right to “self-determination” is

various communities of Cree, Chippewyan, and Metis peoples. *Id.* This development will also impact Indigenous communities in the United States, given the planned construction of the Keystone XL Pipeline.

243. See Renee Lewis, *Canada Tar Sands Linked to Cancer in Native Communities, Report Says*, AL JAZEERA AMERICA (July 8, 2014, 6:00 PM EDT), <http://america.aljazeera.com/articles/2014/7/8/canada-oil-cancer.html>.

244. *Id.*

245. See Special Rapporteur on Extractive Industries and Indigenous Peoples, U.N. General Assembly Hum. Rts. Council, 14th Sess., ¶ 33, U.N. Doc. A/HRC/24/41 (July 1, 2013) (by S. James Anaya) [hereinafter Anaya Report] (noting that “[w]hen Indigenous peoples freely give consent to extractive projects under terms that are aimed to be protective of their rights, there can be a presumption that any limitation on the exercise of rights is permissible and that rights are not being infringed”). Because development of uranium on tribal lands would require tribal consent, this presumption would arguably apply to any argument that Indigenous human rights had been violated.

purely an instrumental political right, recognized by the domestic nation-state because it aligns with its own benefit. Conversely, if self-determination means that the Indigenous group has a right to protect its traditional lands and lifeways as well as the health of its members, or that the Indigenous group merits redress for harms suffered during the “wardship” era, then the concept does have moral weight. Assuming that Indigenous peoples are exercising a traditional, cultural duty to protect the lands that were given to them at Creation, there is a principled basis for this claim, albeit one of Indigenous rather than European origin.

It is unclear whether the U.S. model of treating Indigenous peoples as “domestic, dependent nations,” which supports the right of tribal governments to develop coal and uranium on tribal lands under federal law, is the type of governance model that would truly facilitate an “ethics of remediation” in the service of Indigenous self-determination.²⁴⁶ It may be more instructive to examine the governance models that were created in the South Pacific in the wake of decolonization. The states of the former United Nations-sanctioned Trust Territory of the Pacific Islands—the Republic of the Marshall Islands (RMI), the Federated States of Micronesia (FSM), and the Republic of Palau (ROP)—are now independent political entities, capable of making claims for reparations from other nations.²⁴⁷ The Island nations now have a political relationship of “free Association” with the United States. They are no longer part of a “Trust Territory” as a “ward” of the U.S. They are exercising self-determination, but also demanding reparations sufficient to meet the moral obligation that they understand belongs to the United States because of its past practices, as well as the economic limitations that have been imposed upon recovery from the Tribunal.

As of 1998, according to a study by the Brookings Institute, the people of the Marshall Islands have received “four compensation packages to redress the damage from U.S. nuclear tests.”²⁴⁸ In 1956, the U.S. government gave the Bikini Islanders \$25,000 in one dollar bills and a \$3 million trust fund to offset the costs of their displacement, which provided them “with annual payments of about \$15 (then-year) per person.”²⁴⁹ In 1964, they received the \$950,000 payment for the damage caused by the Bravo bomb.²⁵⁰ And, in 1986, Congress created a \$150 million trust fund for the Marshall Islands, supplemented by an additional \$90

246. See generally Tsosie, *Tribal Environmental Policy*, *supra* note 14 (describing the contours of the domestic right to self-determination under principles of Federal Indian Law).

247. Wakako Higuchi, *Japan and War Reparations in Micronesia*, 30 J. OF PACIFIC HISTORY 87, 97 (1995).

248. SCHWARTZ, *supra* note 22, at 418.

249. *Id.* at 418, 420.

250. *Id.* at 420.

million in 1996.²⁵¹ It was also in 1996 that the Tribunal adopted a policy of making initial payments of 25% of each award because it could not pay the full amount.²⁵²

In addition, the U.S. Department of Energy (DOE) asserts that it provides “high quality medical care” for the approximately 130 individuals who survived the Bravo test and high levels of radiation and require health care costing approximately \$18,000 per year per person.²⁵³ Medical surveillance and monitoring of radiation levels is a big part of this cost. Many individuals developed cancer or had to have their thyroid glands removed to avoid thyroid cancer. The Centers for Disease Control and Prevention (CDC) completed a study in 1994-95 of thyroid cancer in the Marshall Islanders. Studies have also documented an increased incidence of stillbirths and miscarriages among pregnant women in the first four years after exposure.²⁵⁴ The DOE currently provides care to 137 of the 54,000 inhabitants of the Marshall Islands, and the Department of Interior assumed responsibility for providing general medical care to 11,000 inhabitants in the 1986 Compact.²⁵⁵ The Brookings Institute Study estimated the total compensation costs to the people of the Marshall Islands as “at least \$759 million” in 1998.²⁵⁶

Thus, reparations to the people of the Marshall Islands included monetary damages for claims related to loss of use value for land and property, costs of remediation and cleanup, and “hardship and consequential damages.” There are ongoing problems with loss of land and cultural identity from the relocation and contamination, spiritual harms, and harms to food “as shared substance, and as a material part of their life.”²⁵⁷ There are also significant intergenerational harms to human health.²⁵⁸ Monetary compensation “can only partially meet concerns for social justice,” and can never alleviate the physical, spiritual, and social harms that the Marshallese have suffered.”²⁵⁹

How does the experience of the people of the Marshall Islands line up with broader notions of reparative justice, or with the specific experience of American Indian Nations with U.S. reparative justice? The next section of this article will address those questions.

251. *Id.*

252. Pollock, *Three Pathways to Compensation*, *supra* note 194, at 191.

253. *Id.*

254. SCHWARTZ, *supra* note 22, at 415-16.

255. *Id.* at 420.

256. *Id.*

257. Pollock, *Three Pathways to Compensation*, *supra* note 194, at 201.

258. *Id.*

259. *Id.* at 203.

III. Indigenous Peoples and Reparative Justice: A Framework for Consideration

For Indigenous peoples within the United States, the discussion of reparative justice centers around the obligations of nations, and the primary injustice has been a refusal by the United States to admit that it should assume the multiple moral, legal, and political obligations assumed in treaties with Indigenous nations, which also approximate the political relationship between Great Britain and Indigenous nations.²⁶⁰ Instead, successive eras of Supreme Court jurisprudence seek to differentiate which “legal” obligations imposed by the treaties survived into the modern era, versus which treaty rights have been invalidated by contrary applications of federal law.²⁶¹ The core of the U.S.-tribal treaty relationship, of course, was the United States’ obligation to protect Indian nations, given their physical incorporation into the U.S. as “domestic dependent nations.”²⁶² The federal duty of protection was specifically delineated in many Indian treaties and is of vital importance, given that the initial effect of the “domestic, dependent nation” status was to remove the ability of a Native Nation to engage in multi-lateral treaty relationships with various sovereigns.²⁶³ Without the political authority to negotiate with other sovereigns and without the population necessary to declare “war” upon the United States, most Indian nations during the 19th century were placed at the mercy of the federal government. Thus, the moral bargain embedded within Indian treaties maintains that the U.S. assumed a sacred “trust” obligation to protect the Indian nations against incursions from U.S. citizens, the states, or any other sovereign government.²⁶⁴ The U.S. government affirmatively assumed a moral duty to act in good faith to further the best interests of the Indian people.

In fact, however, the United States used its “plenary” authority under federal law to diminish the rights of Indian nations during the 19th century, using the fiction that they had the status of “wards” and could have their affairs managed for

260. See Rebecca Tsosie, *Sacred Obligations: Intercultural Justice and the Discourse of Treaty Rights*, 47 UCLA L. REV. 1615, 1621-23 (2000) [hereinafter Tsosie, *Sacred Obligations*].

261. See, e.g., *Minnesota v. Mille Lacs Band of Chippewa Indians*, 526 U.S. 172, 207-08 (1999) (holding that the off-reservation hunting, fishing, and gathering rights secured to the Chippewa Indians by an 1837 Treaty survived into the modern era); but see *United States v. Dion*, 476 U.S. 734, 738 (1986) (holding that tribal right to hunt eagles within boundaries of Yankton reservation had been abrogated by the federal Eagle Protection Act).

262. See Coffey & Tsosie, *supra* note 192, at 192 (discussing the Cherokee cases and judicial articulation of the guardian-ward relationship).

263. See *id.* at 193; see also *Cherokee Nation v. Georgia*, 30 U.S. 1 (1831); *Worcester v. Georgia*, 31 U.S. 515 (1832).

264. Coffey & Tsosie, *supra* note 192, at 204.

them by a supposedly beneficent federal guardian.²⁶⁵ Thus, the federal government exercised its power without an effective limiting principle, arguably violating its trust duty to protect the Indigenous nations. In *Lone Wolf v. Hitchcock*, for example, the United States Supreme Court held that Congress maintained the political authority to dispose of tribal lands as it believed necessary, and that any violation of Indian treaty rights was a “political” issue that was not justiciable in the federal courts.²⁶⁶ Following this line of reasoning, the “wardship” status attributed to American Indian nations enabled the federal government to use tribal lands to build its nuclear defense program and use the labor of tribal members without offering them precautionary measures to protect their health.²⁶⁷ The actions of the Atomic Energy Commission (AEC), when evaluated in retrospect, were highly damaging and exploitive to tribal interests. And the AEC wielded a political power with the Department of Interior and federal land management agencies that enhanced its ability to mine uranium at the lowest cost for the country. The political status of Indian nations as “wards” of the U.S. clearly worked against their rights during the era of nuclear weapons development. The costs were not apparent to the tribal government at the time of the injury, and it has been virtually impossible to sue the trustee for any damages, except the failure to collect lease payments as directed by the terms of a given contract with a mining company.²⁶⁸

In the United States, reparations for radioactive contamination on tribal lands proceeds under principles of compensatory justice. As noted above, the Radiation Exposure Compensation Act provides statutory authorization for victims of radiation exposure, and affected individuals may sue corporations under principles of tort law, to the extent consistent with the parameters of the Price-Anderson Act.²⁶⁹ Injuries to tribal governments, such as contamination of land and water, are a different matter. Tribal governments face an uphill battle in obtaining remediation of radioactive contamination, as the Navajo Nation cases demonstrate. The Navajo Nation is not a direct party to the CERCLA action, but must rely upon the federal Environmental Protection Agency to bring enforcement actions against the potentially responsible parties.²⁷⁰ In addition, multiple federal agencies participate in the federal remediation effort, including the EPA, the BIA, the DOE,

265. *Cherokee Nation v. Georgia*, *supra* note 263, at 2.

266. *Lone Wolf v. Hitchcock*, 187 U.S. 553, 565 (1903).

267. See SCHWARTZ, *supra* note 22, at 402; Tsosie, *Charting the Future*, *supra* note 16, and accompanying text.

268. See *Navajo Tribe v. United States*, *supra* note 43, at 263.

269. See, e.g., RECA, *supra* note 10 and accompanying text.

270. See Segal, *supra* note 36, at 370-71; GAO Report, *supra* note 5, at 18 and accompanying text.

the Nuclear Regulatory Commission, the Indian Health Service, and the CDC.²⁷¹ This may seem like a positive structure, given the differing expertise and resources of each agency. However, it should be apparent from the discussion above that the Department of Energy and Nuclear Regulatory Commission are successors of the Atomic Energy Commission, and in that sense, they serve the broader public agenda for energy development and national security. In addition, the IHS and BIA are notoriously underfunded and do not have the resources to engage a full-scale effort to protect public health on the Navajo Nation. Thus, it is at least arguable that the multi-agency effort is subject to political agendas inconsistent with making full reparation for the moral and legal wrongs of radioactive contamination on the Navajo Nation.

With this background in mind, the following discussion examines whether the domestic legal structure is sufficient to meet the moral requirements of reparative justice, or whether an alternative structure is needed.

A. Reparations and Justice Theory

The concept of reparations may be used to support legal, political, or moral claims for justice, and it is broadly applicable to relationships between individuals, groups, and nations.²⁷² As applied to individuals and groups within a domestic legal system, reparative justice entails “making amends, offering expiation (atonement), or giving satisfaction for a wrong or injury.”²⁷³ This is widely understood as the dominant principle justifying damages for breach of contract or redress for injury to property or persons under our domestic tort and property law systems. As applied to nations, reparations entail compensation payable for injuries suffered by innocent victims during wartime or payment for damages sustained as a result of hostilities with the defeated nation.²⁷⁴ The dominant model of reparations under domestic and international law is based on principles of compensatory justice rather than restorative justice.

In comparison, Martha Minow argues that for societies that have emerged from episodes of mass violence, reparative justice ought to embody an ideal of “restorative justice,” sufficient to repair the harms and to institute future changes to correct the injustice.²⁷⁵ Minow’s argument is supported by philosopher

271. GAO Report, *supra* note 5, at 20-21.

272. See Rebecca Tsosie, *Acknowledging the Past to Heal the Future: The Role of Reparations for Native Nations*, in REPARATIONS: INTERDISCIPLINARY INQUIRIES 43, 50 (Jon Miller & Rahul Kumar eds., 2007) [hereinafter Tsosie, *Acknowledging the Past*].

273. *Id.*

274. *Id.*

275. MARTHA MINOW, BETWEEN VENGEANCE AND FORGIVENESS: FACING HISTORY AFTER GENOCIDE AND MASS VIOLENCE 91-117 (1998).

Margaret Walker's account of "moral repair," which examines what it means "in moral and human terms, to respond adequately in the wake of wrongdoing and serious harm."²⁷⁶ Walker posits that such a response must align with principles of justice "in an ancient and enduring sense, putting individuals in right relationship with each other and communities as a whole," and in accordance with mutually agreed measures of "what is due to each other."²⁷⁷

Building on these arguments and others, I will argue that the account of reparative justice that will be embodied within an "ethics of remediation" must be "intercultural," and must respond to a mutually agreed upon account of the harm that was caused to Indigenous communities and the needs that must now be addressed. The potential "modes of reparations" that support an "ethics of remediation" must be broad and inclusive.²⁷⁸ Minow suggests, for example, that various forms of reparative justice might be appropriate in any given case because they will serve different purposes.²⁷⁹ Material reparations, including money or resources, serve as a symbolic replacement for what was lost.²⁸⁰ This is important, but not complete. Where actual replacement of what was wrongfully taken from Indigenous peoples is possible, restitution might be preferable, facilitating the return of wrongfully appropriated land, cultural objects, and human remains. Apology offers verbal acknowledgement of responsibility for wrongdoing and affords victims the chance to forgive or refuse to forgive.²⁸¹ Public apologies and memorials may be used to highlight the injury to the larger society, as a mechanism of public atonement to the victims. Similarly, the use of "truth-telling commissions" might be an integral part of the reparative process, because they vindicate the experience of those who suffered the harms, as well as their descendants, and serve to "correct the historical record," given the pervasive tendency of governments to minimize or deny historic (and sometimes ongoing) harms.²⁸²

Under the restorative justice approach, the process of reparations has a material component and an intangible, psychological component. At a minimum, it is important to emphasize the humanity of victim and offender, to repair social or political connections, restore trust, and instill a sense of peace, rather than

276. See MARGARET URBAN WALKER, MORAL REPAIR: RECONSTRUCTING MORAL RELATIONS AFTER WRONGDOING 6 (2006).

277. *Id.*

278. See, e.g., ALFRED L. BROPHY, REPARATIONS: PRO AND CON 167-79 (2006) (arguing for this approach in the context of reparations for African American slavery).

279. See MINOW, *supra* note 275, at 91-117.

280. *Id.* at 103-07.

281. *Id.* at 114-17.

282. See BROPHY, *supra* note 278, at 12 (building on author's account in ERIC K. YAMAMOTO, INTERRACIAL JUSTICE (1999)).

ongoing conflict. In order to “heal” the past, victim groups must be able to move beyond their sense of powerlessness and vulnerability, and they may need to tell their stories and have the public acknowledge them. To date, this has not occurred in any meaningful way for Indigenous groups that have suffered from radioactive contamination. Rather, the approach of the United States to reparative justice for Indigenous groups tends to focus on material compensation. For example, the loss of Native lands has largely been compensated by monetary judgments paid under the authority of the Indian Claims Commission Act of 1946, which also authorized tribal access to the Court of Claims for post-1946 cases of property damage or tort damage caused by federal conduct.²⁸³ Significantly, the GAO Report mentions that many Navajo community members stated that “an official apology from the federal government for failing to ensure that companies” engaged in uranium development on the Navajo Nation “were protective of the environment and public health would go a long way toward improving relationships.”²⁸⁴

There have been limited cases of restitution to Native peoples in the United States, mainly of cultural objects and human remains under the Native American Graves Protection and Repatriation Act of 1990.²⁸⁵ In some cases, Native Nations have achieved restitution of land, with the most famous example being the restitution of Blue Lake to the Taos Pueblo.²⁸⁶ There have also been a few, sporadic “apologies” for past bad behavior. In the Radiation Exposure Compensation Act, Congress apologized on behalf of the nation to all affected uranium miners (Native and non-Native) and their families.²⁸⁷ President Obama apologized to Native Americans for past misdeeds of the United States in a rider buried in a huge defense appropriations bill.²⁸⁸ Assistant Secretary of Indian Affairs, Kevin Gover, apologized to Native Americans on behalf of the Bureau of Indian Affairs for the historic wrongs caused by that agency.²⁸⁹ The U.S. Congress issued a Joint Resolution in 1993, apologizing to Native Hawaiians for the overthrow of the Hawaiian Kingdom and calling for a process of “reconciliation.”²⁹⁰

283. See Indian Claims Commission Act of 1946, Pub. L. No. 79-726, 60 Stat. 1049.

284. GAO Report, *supra* note 5, at 67.

285. Tsosie, *Acknowledging the Past*, *supra* note 272, at 54-55.

286. Coffey & Tsosie, *supra* note 192, at 206.

287. RECA, *supra* note 10.

288. Department of Defense Appropriations Act, 2010, Pub. L. No. 111-18, § 8113, 123 Stat. 3409, 3454.

289. See Rebecca Tsosie, *The BIA’s Apology to Native Americans: An Essay on Collective Memory and Collective Conscience*, in *TAKING WRONGS SERIOUSLY: APOLOGIES AND RECONCILIATION* 185,186 (Elazar Barkan & Alexander Karn eds., 2006) [hereinafter Tsosie, *The BIA’s Apology to Native Americans*].

290. Pub. L. No. 103-150, 107 Stat. 1510 (1993) [hereinafter Apology to Native Hawaiians] (“Joint Resolution to acknowledge the 100th anniversary of the January 17, 1893 overthrow of the Kingdom of Hawaii, and to offer an apology to Native Hawaiians on behalf of the United States

As of 2014, however, it is unclear what this entails. Although they have some access to some benefits under federal programs for health, education, cultural maintenance, and social welfare, Native Hawaiians do not have the same political status as federally-recognized Indian tribes.²⁹¹ They do not have a recognized government, and therefore they do not enjoy the same political rights to consultation and legislative protection as tribal governments do.

To date, the apologies to Native Americans have not been coupled with tangible redress. Nor has the United States established a Truth and Reconciliation Commission on the impacts of its egregious past policies toward Native Americans, as other nations have done.²⁹² In fact, federal policymakers often demonstrate resistance to renaming historic sites to reflect historical truth, as demonstrated by the controversy over renaming the Wounded Knee monument to reflect its identity as the site of the U.S. Cavalry's massacre on innocent and unarmed Native people, rather than a "battlefield."²⁹³ In general, Americans are very suspicious of "reparations" for particular groups within what they view as a "unitary" society. The United States Congress has steadfastly opposed reparations for African American slavery or for the harms to Mexican citizens, including appropriation of property and denial of civil rights, after annexation under the Treaty of Guadalupe Hidalgo.²⁹⁴ Americans routinely ask: What do *they* want now? How much will this cost *us*? Can't *they* "just get over it"? The responses illustrate the problem. Reparations are deemed unnecessary in a society where "we" are all "Americans," and no one alive today actually committed the "historical" wrong.²⁹⁵

for the overthrow of the Kingdom of Hawaii").

291. See generally FELIX S. COHEN, COHEN'S HANDBOOK OF FEDERAL INDIAN LAW 363-66 and accompanying notes (Nell Jessup Newton et al. eds., LexisNexis 2012) (discussing political status of Native Hawaiians).
292. See, e.g., *Solomon Islands Truth and Reconciliation Members Names*, ABC RADIO AUSTRALIA (Apr. 27, 2009, 15:14 EST), <http://www.radioaustralia.net.au/international/radio/onairhighlights/solomon-islands-truth-and-reconciliation-commission-members-named>. See also TRUTH & RECONCILIATION COMM'N OF CANADA, <http://www.trc.ca/websites/trcinstitution/index.php?p=3> (last visited Jan. 3, 2015). Indigenous peoples in that country were sent to residential boarding schools, where they were often abused and tortured. The website's home page has a quote from Justice Murray Sinclair stating: "Reconciliation is about forging and maintaining respectful relationships. There are no shortcuts." *Id.*
293. See The National Congress of American Indians Resolution #DEN-07-082, National Congress of American Indians, available at http://www.ncai.org/attachments/Resolution_fOSOGeojTdXUoobgcGFhZGXSsjZtszItPFNyXQAQXAWisTSCWI_DEN-07-082_final.pdf. ("Requesting the United States Congress and the United Nations to Recognize the 1890 Wounded Knee Massacre was Not a Battle," and to revoke the Congressional Medals of Honor that were issued to the soldiers of the 7th Cavalry for their participation in the massacre).
294. See Tsosie, *Sacred Obligations*, *supra* note 260.
295. See Robert Meister's theory on the politics of "reidentification" in post-Civil War America, where the Nation was deemed to have been "reborn" to equalize the position of "all Americans." Robert Meister, *Forgiving and Forgetting: Lincoln and the Politics of National Recovery*, in HUMAN RIGHTS IN POLITICAL TRANSITIONS: GETTYSBURG TO BOSNIA 135-75 (Carla Hesse & Robert Post

However, for Native peoples, the politics of “equal citizenship” that undergirds this view is insufficient. Rather, a constitutional politics of “representation” pertains, requiring the United States to recognize the separate national identities of American Indian nations (and certainly of the Nations of the South Pacific Islands) and to meet their claims to redress past and present injustice.²⁹⁶ In this way, Indigenous self-determination provides the baseline requirement for an effective theory of reparative justice.

B. Native Peoples and Reparative Justice for Radioactive Contamination

As demonstrated above, the harms of radioactive contamination experienced by the Navajo people and Pacific Islanders are related to U.S. imperialism and to this country’s treatment of Indigenous peoples as “wards” that could be sacrificed for the public good (designated first as military security, and after 1971, as energy independence). Of course, the United States will argue that it did not “intend” to harm the Indigenous peoples, and therefore lacks moral responsibility for the multiple harms that have ensued. Yet, Native peoples in the Southwest and the Pacific Islands continue to suffer the effects of loss of land, poisoned food, water, and air, and intergenerational health impacts. They have suffered spiritual and emotional harms, as well as the economic and social harms caused by dislocation. If climate change has the effect that many scholars foresee, there will be a second wave of harm and displacement.²⁹⁷ This type of impact on small, land-based populations that are already in jeopardy could be even more devastating than the last wave. Therefore, the discussion of reparative justice for the harms of radioactive contamination must necessarily focus not only on past “wrongs,” but also on the current disparities, inequities, and vulnerabilities that pertain to the Indigenous peoples of these regions to assess what is now due to them.

For Native peoples, “the discussion about reparations . . . is a discussion of how the past, present and future are co-joined and interdependent.”²⁹⁸ Any discussion of reparative justice ought to engage Native normative frameworks of justice because, for Native peoples, reparative justice is a process that is “simultaneously emotional and spiritual, political and social.”²⁹⁹ There is no “uniform” theory of reparations that can fit all cultures, all nations, and all peoples. Rather, the theory will differ depending on the particular historical context and cultural framework

eds., 1999).

296. See Tsosie, *Sacred Obligations*, *supra* note 260, at 1665.

297. See Tsosie, *Indigenous People and Environmental Justice*, *supra* note 238, at 1675.

298. Tsosie, *Acknowledging the Past*, *supra* note 272, at 43.

299. *Id.*

that applies. For Native peoples, any discussion of reparative justice for radioactive contamination must take into account the historical parameters of injustice for Native peoples.

Under principles of compensatory justice, reparations are deemed appropriate only where one group has suffered some legally cognizable harm at the hands of another.³⁰⁰ Of course, only a limited subset of the actual harms to Native peoples can be redressed under existing law, because much of the harm occurred due to the diminished political rights of Native people under U.S. law. Even today, Native peoples are constrained by the limitations imposed by federal courts in recovering damages for “breach of trust,” which is the available cause of action to sue the federal government for its negligence in allowing mining companies to contaminate tribal lands and waters.³⁰¹ Although the federal government no longer uses the language of “wardship,” the trust doctrine has become a narrow legal calculus designed to avoid financial cost to the federal government. Thus, to the extent the tribe has suffered injury because the trustee was acting for the “public” benefit, rather than for the benefit of its tribal beneficiary, there may not be any effective legal recovery.

In addition, the current environmental conditions are to some extent exacerbated by the political, economic, and social harms of past government policies, which now result in significant economic and social challenges for many tribal governments. For example, former Assistant Secretary Kevin Gover apologized for the misdeeds of the Bureau of Indian Affairs over the past century by describing the net harm to Native peoples as “intergenerational”:

The trauma of shame, fear, and anger has passed from one generation to the next, and manifests itself in the rampant alcoholism, drug abuse, and domestic violence that plague Indian country. Many of our people live lives of unrelenting tragedy as Indian families suffer the ruin of lives by alcoholism, suicides made of shame and despair, and violent death at the hands of one another.³⁰²

With significant social and economic disparities to overcome, tribal governments simply lack the ability to deal with the environmental and health costs of radioactive contamination. Can they look to their “trustee” for assistance for prospective relief (as opposed to past “damages”)? What is the role of the Bureau of Indian Affairs? It is interesting that the Bureau of Indian Affairs actually

300. *Id.* at 48.

301. See *United States v. Navajo Nation*, 556 U.S. 287 (2009) (The most recent decision of U.S. Supreme Court rejects “network theory” of finding liability for federal trustee’s misconduct in approving a lower royalty rate for Navajo coal leases after ex parte communications).

302. Tsosie, *The BIA’s Apology to Native Americans*, supra note 289, at 194.

supported the new ISL mining project proposed by HRI on the lands within Section 17 owned by the Navajo Nation.³⁰³

How does this discussion of reparative justice line up with an ethics of remediation for radioactive contamination? Within the Navajo Nation, the bulk of the harm is positioned as monetary reparations to “clean up” severely contaminated lands and resources within the constraints of CERCLA’s process. The CERCLA process attempts to invoke a “polluter pays” approach, in which all responsible parties share in the payment for harms caused. To the extent that the U.S. government shares complicity (as the BIA does because it approved the leases for uranium mining, perhaps in part responding to pressure from the AEC to open these reserves on tribal land), the U.S. (through the EPA) must actually sue itself. Naturally, it is in the interest of every defendant to attempt to “settle” claims for some amount less than its actual liability, and this appears to be true for the federal defendants in that action as well as for private defendants.

The CERCLA process responds to past harm. What about the possibility of further contamination from new mining activities? Except for the EPA, federal and state agencies appear to support the further development of the significant reserves of uranium within the Navajo Nation and on the “fee lands” within the “checkerboard area.” There is also significant support to continue mining uranium on “public lands” within this region, such as the Grand Canyon, which are contiguous to reservation lands, and are part of the traditional territory of several Indigenous Nations within this region.³⁰⁴ This indicates that, once again, the trustee is acting to further the public benefit, rather than to protect the interests of Indian nations.

So, where does Indigenous governance fit into this equation? At this level, it is necessary to separate the moral and political construct of “self-determination” from the construction of tribal rights that exists under domestic federal law. From a human rights perspective, Indigenous peoples possess a right to self-determination as “peoples” within their traditional territories.³⁰⁵ In comparison, prevailing federal law largely restricts the jurisdiction of tribal governments to trust lands on the reservation and tribal members, unless there are specific statutes supporting tribal jurisdiction.³⁰⁶ The Navajo Nation possesses 25% of the recoverable uranium in the country, which means that if national energy policy favors production of

303. Tsosie, *Charting the Future*, *supra* note 16; *see also infra* notes 309-310 and accompanying text.

304. For example, there have been attempts by some Congressmen to sponsor legislation that would override the administrative decision not to open new uranium mines within the Grand Canyon. These attempts have so far been unsuccessful. *See, e.g.*, The Northern Arizona Mining Continuity Act of 2011, H.R. 3155, 112th Cong. (2011).

305. *See Declaration*, *supra* note 13, at art. 10.

306. Tsosie, *Charting the Future*, *supra* note 16, at 212-16.

uranium, the tribal government will be pressured to develop reserves on trust lands within the reservation.³⁰⁷ Currently, the Navajo Nation Code bans uranium mining within the Navajo Indian Country; however, the news report that inspired this article suggests that the pressure has already begun.³⁰⁸ The political sovereignty of the Navajo Nation supports its decision to develop or refuse to develop uranium on trust lands. On fee lands, however, that is not the case.

As discussed above, the Tenth Circuit Court of Appeals held that the parcel of fee land owned by Hydro-Resources, Inc. within Section 8 of the “checkerboard area” adjacent to Navajo trust land and within the Church Rock Chapter was not within a “dependent Indian community.”³⁰⁹ Consequently, state regulatory authority will govern this land in a district that is overwhelmingly populated by Navajo people, rather than allowing the EPA and the Navajo Nation to regulate the area. The costs to human health and the environment, however, will be born primarily by the Navajo Nation and its trustee, the United States. Similarly, the Tenth Circuit’s decision in *Morris v. United States Nuclear Regulatory Commission*, authorizes Hydro Resources, Inc. to move forward with its ISL mining permit, based on the Nuclear Regulatory Commission’s determination of what is consistent with “public safety” in this area.³¹⁰ In Section 17, the surface rights are under tribal ownership, but the existing radiation levels already exceed the maximum exposure limits, and it is unclear whether the groundwater contamination can ever be remediated. The Navajo residents rely upon the groundwater as a source of their drinking water and the water for their livestock. The risk of harm is on the Navajo people. What should the federal role be?

In the final section of this article, I will argue that the contemporary role of the federal government should be to support the Navajo Nation’s right to self-determination, using existing principles of the Declaration on the Rights of Indigenous Peoples to ascertain the appropriate moral and legal requirements of “environmental” self-determination.³¹¹ The federal government is still the “trustee” for the Navajo people. The federal government also controls national energy policy, national security, and public health. There is no existing available site for high-level nuclear waste, nationally or internationally. The contamination of the past has yet to be remediated. Drawing on work in disaster ethics, climate ethics, environmental and climate justice, and environmental ethics, the

307. *Id.* at 218-19.

308. Smith, *supra* note 1.

309. *Hydro Resources v. EPA* (en banc), *supra* note 122, at 1166.

310. *Morris*, *supra* note 133, at 703-05.

311. See Tsosie, *Indigenous People and Environmental Justice*, *supra* note 238 (setting up an account of environmental self-determination).

concluding section of this article develops the framework for an “ethics of remediation.”

IV. Toward an “Ethics of Remediation”

Remediation of nuclear contamination is a serious and pervasive global issue. This article has focused on the consequences of radioactive contamination for Indigenous peoples in the South Pacific and in the Southwest. However, the broader issues include contamination of land and inland and ocean waters by military use of nuclear weapons, temporary storage of tailings or waste pending a “permanent” repository, and by failed power plants, including the facilities at Chernobyl and Fukushima, Japan. The obligations of the government to affected citizens are routinely governed by domestic law and by the theoretical view that civil society is governed by a “social contract” that enables citizens to require certain actions from their government, for example, security and safety. This, in turn, justifies a measure of power in the government to discharge these obligations.³¹² The social contract theory is said to provide a moral underpinning for governance authority because it evaluates the respective rights of citizens within the context of the duties owed to them by the state.³¹³ However, we should be cautious about assuming the morality of “neutral” government policies as applied to particular groups, such as Native peoples, who are vulnerable to exploitation and harm by the dominant society. In these cases, the morality of governance authority may depend upon whether the nation’s policies are truly fair and equal, or whether they disproportionately burden Native peoples or other vulnerable groups (women, the elderly, and children) in order to secure benefits for the dominant society.

Furthermore, we should probe whether our existing social policies assign a “moral” value to human life, or a “monetary” value, as the government decides what level of remediation is sufficient. If we assigned a “moral” value to human life, then each human life would be of equal and inviolate value, not to be outweighed by material economic considerations. However, our social policy does not align with that intuition. Naomi Zack discusses a 2008 decision by the EPA to revise its monetary evaluation of “an American human life from \$7.8 to \$6.9 million.”³¹⁴ The policy drew public controversy, but it was merely a statement of what was already in place. The existing policy was too costly. Naturally, “a lower value of statistical life permits spending less money on life-saving practices,” such

312. *See generally* NAOMI ZACK, ETHICS FOR DISASTER 71-72 (2009) (discussing social contract theory and United States governance structure).

313. *Id.*

314. *Id.* at 131.

as the remediation of toxic and hazardous conditions.³¹⁵ And what if the individual is deemed to have a “less useful” life, for example, because of age, infirmity, or “diminished capacity”?³¹⁶ That life could have less value depending on whether the assumption of a statistical life is measured by the potential value that an individual places on her life or the value that society imagines her life has to others based on her individual capacities and potential.³¹⁷

As Zack demonstrates in the context of “disaster ethics,” there are many important moral considerations in constructing effective public policies to deal with remediation of environmental harm. I would like to build on her insights and suggest that constructing an “ethics of remediation” will to some extent depend upon a shared understanding of the duties that pertain to the natural world, and those which govern human interactions. Within the existing literature on ethics, the former set of questions is generally framed as “environmental ethics,” while the second set of questions is addressed as “environmental justice.”³¹⁸ Within environmental ethics, there is a robust exchange as to whether we ought to value “nature” (absent human presence) for its own sake, or only because it serves human interests. Within environmental justice, the discussion often revolves around notions of fairness and equality in the distribution of benefits and burdens within society, with special attention to disparities caused by economic deprivation or racial discrimination. The literature on climate justice invokes both questions, as scholars attempt to discern which part of “climate change” is attributable to “natural phenomena,” and which part is anthropogenic.

In building an “ethics of remediation” for the harms caused by radioactive contamination of Indigenous lands, I will argue that the standard utilitarian ethical approaches continue to obscure the problem. For example, if a “national sacrifice area” can be justified by appeal to the greater “public good,” and if the “solution” is simply to assume the costs of relocating tribal members or providing a minimal standard of healthcare for those who become ill from the toxicity of the environment, then our account of reparative justice will merely replicate the standard tort model of compensatory justice that pertains to other categories of harm. Under this model, monetary payments or other tangible benefits are perceived to “compensate” victims for the harm suffered. However, if we accept the premise that traditional Indigenous value systems speak of a set of duties between

315. *Id.*

316. *Id.* at 132.

317. *Id.*

318. See Tsosie, *Tribal Environmental Policy*, *supra* note 14, at 246-86 (discussing Western and Indigenous environmental and land ethics); Tsosie, *Indigenous People and Environmental Justice*, *supra* note 238, at 1629-43 (discussing environmental justice and climate justice movements).

human beings and specific lands, then we must at least accord some moral value to those persons who continue to possess this knowledge and live by it.³¹⁹ If these Indigenous, land-based communities are the ones suffering from the direct impacts of toxic contamination, then a simple appeal to “tribal sovereignty,” as the right of a current government to decide whether or not to engage in mining, is hardly an adequate principle to support an “ethics of remediation.” In such a case, the tribal government may have a short-term economic incentive to authorize conduct that replicates past harms and causes cumulative toxic exposure to tribal members. The liability of the federal government for radioactive contamination is also potentially mitigated by the consent given by the tribal government for new mining on tribal lands.

Rather, an “ethics of remediation” would arguably call for a study of the nature and extent of contamination of tribal lands and toxic exposure to tribal members, and then a concerted strategy and program to remediate the harm and protect human health. In addition, it is arguable that the pressure exerted upon tribal governments by outside corporations or governments to develop energy reserves on tribal lands (designated as “tribal economic development”) is in fact coercive and exploitive, because it depends upon the fact that contemporary tribal governments often suffer from high levels of poverty and unemployment and do not have diversified economies that would support more sustainable forms of economic growth. If the costs of remediation are in fact placed on the U.S. government and corporations that it licenses to mine uranium prior to any new development, there might be a different outcome. However, it would also be unwise to condition remediation activities this way. Rather, it may be that “moral repair” requires a commitment to build sustainable tribal economies, rather than encouraging destructive forms of development that jeopardize the long-term viability of tribal lands and the health of tribal members.³²⁰

In the text that follows, I will first discuss the nature of remediation efforts on the Navajo Nation and demonstrate that the Navajo Nation is not being engaged as an equal sovereign within the politics of remediation for past harm. I will then discuss the use of the international human rights forums by tribal members as a mechanism to engage in a public dialogue about radioactive contamination. The latter effort is an exercise of “cultural sovereignty” by the affected community.³²¹

319. See Tsosie, *Tribal Environmental Policy*, *supra* note 14, at 289, 324.

320. See WALKER, *supra* note 276, at 199 (discussing “[t]he basic elements of repair and their conditions of success”).

321. See Coffey & Tsosie, *supra* note 192, at 196 (defining cultural sovereignty as “[t]he effort of Indian nations and Indian people to exercise their own norms and values in structuring their collective futures”).

This section of the article concludes by discussing human rights and remediation efforts in the South Pacific, which provide an instructive foundation for future work directed to creating an “ethics of remediation.”

A. Domestic Law and Remediation Efforts on the Navajo Nation

One of the most serious issues involves the effects of uranium mining on the health of tribal members. This is an intergenerational issue, raising the need to study incidence of cancers, birth defects, and related health conditions (for example, hypertension, autoimmune diseases, and kidney disease).³²² Church Rock is located between two former mining sites, and it is highly contaminated. The Northeast Church Rock mine was the largest uranium mine on the Navajo Nation, and significant amounts of radioactive waste are stored in the arroyo that runs through the community.³²³ To date, the EPA has only partially remediated lands in the vicinity of the mine by removing an 18-inch layer of topsoil on surrounding lands, but the full remediation of the mine is estimated to require at least until 2020 to complete.³²⁴ It will be very costly to remove the tailings, and it is unclear that there is another site to receive them. The cost of the prospective remediation for the Northeast Church Rock site alone is estimated at \$44 million.³²⁵

The tribal members living in this portion of the Church Rock chapter were relocated temporarily while the topsoil was removed, but most of the community members returned, claiming that they do not have anywhere else to go.³²⁶ The community was further split during the remediation process as some members were deemed eligible to be relocated because they lived in areas that were “highly contaminated,” while the level of contamination in other areas was determined to be “safe” for human habitation. Those who resided on “contaminated lands” were offered a “permanent buyout” not to return, although there was no effort to find alternative lands for them. Certain lands on top of the mesa are potentially open for settlement, but there are no roads or other infrastructure to enable this. In addition, community members possess strong cultural views against leaving land where their umbilical cords are buried.

In 2005, the State of New Mexico published water quality standards calling for the recognition of the public interest in maintaining health and safety in the state’s

322. See Segal, *supra* note 36, at 363.

323. GAO Report, *supra* note 5, at 3.

324. *Id.* at 36-38.

325. *Id.* at 38.

326. Interviews at Univ. New Mexico, in New Mexico (Summer 2013); see also Chris Shuey, M.P.H., *Uranium Exposure and Public Health in New Mexico and the Navajo Nation: A Literature Summary* (Southwest Research and Information Center, 2008, in Albuquerque, New Mexico).

water resources.³²⁷ After a challenge to the state law, the New Mexico Court of Appeals issued an opinion upholding the state's determination.³²⁸ It is obvious that in this rural area, many people consume water from the wells, including pregnant women and those who are breastfeeding. In addition, they eat livestock that drink the water and graze plants growing in the contaminated soil. Although, the environmental health implications of this issue are profound, there does not appear to be a longitudinal study of the impacted population (some analysts say that the study population is too "small" to draw statistical inferences on causal factors for health conditions that might be associated with radioactive exposure).³²⁹ Thus, the type of tracking that was done on South Pacific Island populations and on the survivors of Hiroshima appears to be unavailable for Navajo residents of the Church Rock chapter.

In sum, the legal response to radioactive contamination of the Navajo Nation appears to be insufficient, at the very least. There are two highly contaminated sites in this area, and there is currently no available site to dispose of the tailings permanently. CERCLA's emergency response program is a targeted remediation strategy that depends upon an "imminent and substantial endangerment standard."³³⁰ Under this approach, the EPA sues potentially responsible parties (including federal agencies who were complicit in the contamination), and the Navajo Nation and Church Rock community are not direct parties in interest. In fact, the Church Rock chapter does not even have a separate attorney to represent its interests. Many of the uranium companies have now gone out of business, so the remaining parties, including the United States, have an incentive to reach a settlement for a fraction of the amount that it would take to truly "remediate" this area. Absent adequate participation from the responsible parties, the federal government has considerable discretion in its decision-making about whether or not to conduct remediation on tribal lands. For example, in *El Paso Natural Gas Co. v. United States*, the D.C. Circuit Court of Appeals refused to allow judicial review of the government's decision not to remediate uranium contamination on the Navajo Nation under the Uranium Mill Tailings Remediation and Control Act, finding that this statute is designed to "protect public health in general, rather

327. N.M. STAT. ANN. § 74-6-4.

328. *New Mexico Mining Ass'n v. Water Quality Control Comm'n*, 142 N.M. 200, 202 (Ct. App. 2007).

329. *See e.g.*, Jere Millard et al., New Mexico Env'tl. Improvement Division Health & Env't Dep't, Summary Report, *The Church Rock Uranium Mill Tailings Spill: A Health and Environmental Assessment*, at i, available at http://www.epa.gov/region6/6sf/newmexico/united_nuclear/06-1000720.pdf (observing that the CDC tested "six Navajo individuals" who were likely exposed to contaminants from the spill and found that they had acceptable levels of radioactive material in their bodies). The Report recommended, however, that the "Puerco River should not be used as a primary source of water for human consumption, livestock watering or irrigation." *Id.* at ii.

330. CERCLA, *supra* note 9, at § 9604.

than tribal health in particular.”³³¹

Clearly, the indicators are not positive for an approach that even remotely resembles an “ethics of remediation” on the Navajo Nation. Given the shortcomings of domestic law, concerned residents have turned to international tribunals for assistance. The next section of this paper examines the human rights approach to the “ethics of remediation.”

B. Human Rights Cases

Experts within the United Nations structure assert that, worldwide, Indigenous peoples have suffered a disproportionate share of the harms stemming from radioactive contamination. In 2012, the United Nations Human Rights Council Special Rapporteur Calin Georgescu conducted a visit to the Marshall Islands and the United States to investigate environmental contamination, toxic waste, and other human rights issues arising from activities undertaken by the U.S. military in these areas. Georgescu’s report, which was presented to the Human Rights Council in September 2012, documented the ongoing and extensive contamination in the Marshall Islands, and recommended a strategy for remediation.³³² Professor S. James Anaya, the Special Rapporteur on the Rights of Indigenous Peoples also issued a report, finding that Indigenous peoples worldwide had suffered a disproportionate share of the harms of uranium mining, and this report was also presented to the Human Rights Council.³³³ The U.N. process facilitates deeper exploration of these issues than the domestic structures of the nation-states have allowed, and the Human Rights Council also invites the participation of NGO’s representing Indigenous peoples and women, who remain uniquely vulnerable to the harms of radioactive contamination.³³⁴

Recently, a group of Navajo tribal members, organized as Eastern Dine Against Uranium Mining (EDAUM), took action to engage political redress for the harms of radioactive contamination on their lands, filing a petition in the Inter-American Commission on Human Rights within the Organization of American States. In *Eastern Navajo Dine Against Uranium Mining and Mitchell Capitan et al. v. United States*, petitioners claim that acts and omissions of the United States that have “contaminated and will continue to contaminate natural resources in the Dine communities of Crownpoint and Church Rock” have violated petitioners’

331. *El Paso Natural Gas Co. v. United States*, 632 F.3d 1272, 1278 (D.C. Cir. 2011).

332. See Georgescu Report, *supra* note 52, at ¶ 63.

333. *A Call to Protect Indigenous Communities from Waste Producing Industries*, OFFICE OF THE HIGH COMM’R FOR HUM. RTS. (June 11, 2012), <http://www.ohchr.org/EN/NewsEvents/Pages/Acalltoprotectindigenouscommunitiesfromwasteproducingindustries.aspx>.

334. Email from Barbara Rose Johnston to Rebecca Tsosie (Aug. 4, 2012, 5:23 PM) (on file with author).

“human rights and breached its obligations under the American Declaration of the Rights and Duties of Man.”³³⁵ The petition documents that petitioners have exhausted their legal remedies under domestic law, and that there are no additional avenues to challenge the Nuclear Regulatory Commission’s grant of a license to HRI to mine uranium on lands within the Navajo Indian Country.³³⁶ Petitioners assert that HRI’s plan to mine uranium using an ISL mining process threatens to contaminate the groundwater within this entire area.³³⁷ Church Rock and Crownpoint lie within the traditional use area of the Dine people, which sits within the Four Sacred Mountains that define the Dine territory.³³⁸

According to the proposal that HRI submitted to the NRC, the company intends to develop four proposed mine sites within the extended territory of the Dine people—two within the Church Rock chapter and two within the Crownpoint chapter. According to the petition, the uranium slurry that is “generated by the mining process will be processed at a central processing plant in Crownpoint.”³³⁹ The target location for the central processing plant is in the middle of a Navajo community, within several hundred feet of homes inhabited by Navajo residents and near churches and community buildings where community members gather. Radon emissions from the processing plant are within a range which is likely to impair human health, and for this reason, this is not an activity that is typically found in residential areas. The disregard for Navajo residents raises an environmental justice issue for the United States, and forms the core of the human rights complaint. The petition is founded upon several human rights that are explicitly outlined in the American Declaration on the Rights and Duties of Man, including the right to life (inclusive of the right to a clean and healthy environment), the right to health, the right to property, and the right to cultural and religious integrity.”³⁴⁰

If the United States decides to respond, it might assert that it already protects these rights under the “neutral” laws applicable to all citizens. However, this claim is simply not true. As the D.C. Circuit Court of Appeals noted, the laws of the United States governing radioactive waste are designed to protect “public health,” and not “tribal health.”³⁴¹ Reservations are still treated like “public lands”

335. Eastern Navajo Dine Against Uranium Mining and Mitchell Capitan, et al. v. United States, Case P-654-11, Inter-Am. Comm’n, Report No. __, OEA/Ser.L./__, doc. __ at 1 (2011), *available at* http://nmenvirolaw.org/images/pdf/ENDAUM_Final_Petition_with_figures.pdf [hereinafter ENDAUM Petition].

336. *Id.* at 4.

337. *Id.* at 26.

338. *Id.* at 7.

339. *Id.* at 10.

340. *See id.* at 30-42.

341. *See El Paso Natural Gas Co.*, *supra* note 331, at 1278.

where “citizens” do not reside. In addition, the unique cultural concerns of the Navajo people do not have a separate space within the discourse of remediation. As petitioners note, the communities of Church Rock and Crownpoint are within Dine Bikeyah, and they have profound spiritual and cultural importance to the Dine people.³⁴² The Navajo families within these areas have been on the lands for generations. They have buried the umbilical cords of each generation within the land, imparting a sacred and enduring bond between the people and Mother Earth. The people pray to the mountains each morning and live close to their relatives, practicing the ethical duties defined as “K’ei”—“which means you have respect for the deep bonds that exist between one another and that you carry out certain duties to each other.”³⁴³ The people in this area do not want to relocate to avoid the mining project, and they would lose their lands and lifeways if they are forced to relocate. The traditional way of life includes raising sheep and other livestock, which are considered essential to the survival and health of the people.³⁴⁴ The water that sustains the community is also sacred and necessary for survival.

Adopting an “intercultural approach” to the “ethics of remediation” requires according equal respect to the deeply held cultural views of the traditional Navajo people living within the Church Rock and Crownpoint chapters. These communities practice the Dine philosophy encompassed within the phrase “sa’a’naghai bik ‘e hozho,” which imparts an ethics of “universal beauty, harmony and happiness.”³⁴⁵ Under this ethical view, to destroy a part of the natural world is to destroy one’s self. The community believes that the destruction of water will disrupt the natural balance of things and create disharmony. Under these teachings, the “corn pollen” embodies life and sustainability, while the yellow dust from the earth (uranium) is considered “a source of evil, best left within the ground.”³⁴⁶

It is very likely that the ISL process of mining uranium will contaminate the community’s groundwater resources. Uranium is immobile in an aquifer in its undisturbed state. ISL mining involves establishing a series of injection and production wells throughout the area. “Mining is conducted by injecting a solution of water, dissolved oxygen and sodium bicarbonate through injection wells and into the discrete areas of uranium mineralization known as ‘ore zones.’”³⁴⁷ The solution dissolves the ore zone and causes the uranium to become mobile in the aquifer.³⁴⁸

342. ENDAUM Petition, *supra* note 335, at 18.

343. *Id.* (quoting petitioner Mitchell Capitan).

344. *Id.*

345. *Id.* at 19.

346. *Id.*

347. *Id.* at 24; *see* Cooley, *supra* note 28, at 397-98 (discussing the ISL process).

348. Cooley, *supra* note 28, at 398.

The production wells then pump the solution to the surface to process the uranium.³⁴⁹ There are cases from other jurisdictions, including Texas, documenting contamination of groundwater from ISL uranium mining.³⁵⁰ The potential for future contamination in an area already harmed by past mining practices is not supportable under principles of environmental justice or environmental ethics.

In 2010, Phil Bluehouse, a member of the Dine Haatali (Navajo Medicine Men Association) and distinguished practitioner of Navajo peacemaking, initiated a peacemaking approach to the legacy of the Church Rock Spill. Bluehouse facilitated a series of comprehensive planning workshops with representatives from the EPA, the Navajo EPA, and companies participating in the remediation effort.³⁵¹ The federal process was beset with conflict, and community members felt that their experience, including the illnesses that they had experienced after the spill, were being ignored and minimized.³⁵² The hope was that a cultural method of conflict resolution focused on “healing” and “creation narratives that correspond to [the] spiritual, psychological, and biophysical” needs of the people would promote a more comprehensive approach to remediation in a community that does not want to move from its traditional place.³⁵³

Robert Yazzie, a Navajo jurist, educator, and policy analyst, has also endorsed an intercultural approach to remediation.³⁵⁴ Robert Yazzie, who served as the Chief Justice of the Navajo Nation Supreme Court for many years, proposed creating a “Navajo Uranium Commission” that would engage in a “Truth and Reconciliation Process.”³⁵⁵ This proposal inspired Navajo Nation President Ben Shelley to issue an Executive Order in 2012, authorizing this process to go forward, and the EPA provided initial support for a set of dialogues on remediation of radioactive contamination.³⁵⁶ In a public meeting, Navajo Tribal Council member George Arthur spoke of this effort as a form of reparations for Native Nations, comparing the movement with the U.S. effort to pay reparations for damages

349. *Id.*

350. ENDAUM Petition, *supra* note 335, at 28 n. 94 (citing U.S. Dep’t of the Interior, U.S. Geological Survey Open-File Report 2009-1143, *Groundwater Restoration at Uranium In-Situ Recovery Mines, South Texas Coastal Plain* (2009), available at <http://pubs.usgs.gov/of/2009/1143/pdf/OF09-1143.pdf>).

351. See Carol Berry, *Uranium Spill Elicits Traditional Approach*, INDIAN COUNTRY TODAY, Oct. 20, 2010, at 6, available at <http://uranium-news.com/2010/11/11/lingering-ill-effects-of-radioactive-uranium-spill-at-church-rock/>.

352. *Id.*

353. *Id.*

354. Interview with Chris Shuey, MPH, Southwest Research and Information Center (July 17, 2013) (Albuquerque, NM) with student, Neomi Gilmore.

355. *Id.*

356. *Id.*

caused by its bombing of Hiroshima.³⁵⁷

The human rights and reparative justice approaches use intercultural norms to assess the nature of the costs and the objectives of “remediation.” These approaches also counsel against further contamination in these areas, which continue to be the home of Indigenous peoples. In comparison, the compensatory justice approach of the U.S. looks at contamination as a “past” issue that ought to be handled in a “cost-effective” manner. This approach negates the important values held by Indigenous communities, as well as the legacy of their historical experience.

The approach taken in the Marshall Islands provides an interesting comparison because the Compact focused on dissolving the Trust Territory and restoring the self-determination of the Pacific Island Nations, including restoration of their land base. Although remediation in the Marshall Islands is not complete, the political approach seems more closely aligned with the needs of the Navajo Nation than with the standard “tort compensation model” that has traditionally been accorded to victims of government negligence or misfeasance.

C. Indigenous Peoples and an “Ethics of Remediation”

Building on the discussion of reparative justice outlined above, the starting point of building an “ethics of remediation” for Indigenous peoples should be the recognition that their unequal political status as “wards” allowed their exploitation and contamination of their lands and resources. Special Rapporteur Georgescu emphasizes that this is the relevant context for remediation as a human rights claim in the South Pacific.³⁵⁸ His report details that the Compact actually reshaped the “trusteeship” to further the positive goals of the trust, namely: “(1) to secure self-government for the Marshall Islands; (2) to assist the Marshall Islands in its efforts toward attaining economic development and self-sufficiency; and (3) to ensure certain national security rights for all parties.”³⁵⁹ It is important to note that section 177(a) of the Compact specifically states that the U.S. “accepts responsibility for compensation owing to citizens of the Marshall Islands for loss or damage to property and person” that was caused by the U.S. nuclear testing program.³⁶⁰ Section 177(a) is the subject of another agreement that establishes a trust fund for economic assistance and compensation.³⁶¹ In comparison, American

357. *Id.*

358. Georgescu Report, *supra* note 52, at 4 (observing that the United States, as Administering Agency for UN Trust Territory assumed an obligation “to protect the land, resources, and health of Micronesia’s inhabitants”).

359. *Id.* at 5.

360. *Id.* at 6.

361. *Id.*

Indian nations are faced with the Supreme Court's rulings that the "trust responsibility" is only enforceable if there is a legal cause of action.³⁶² This principle now allows the United States to disregard its moral responsibility to "set things right," which is the operative principle of an "ethics of remediation."

In the Radiation Exposure Compensation Act, the United States Congress apologized to specified victims of radioactive contamination, including those who lived downwind of the nuclear weapons testing sites in Nevada, Utah, and Arizona, as well as uranium miners and their families, "for the hardships they have endured."³⁶³ There was no similar apology to the Navajo Nation or any other Nation whose lands, citizens, and resources were harmed. In some sense, the Congressional hearings that led up to RECA and its amendments were a form of "truth-telling," allowing the Navajo miners and other victims to share their experiences. However, years later, these hearings are ghostly vestiges of the "past." No one focuses on the current and continuing harms faced by the Navajo people who still live in the areas of the reservation that were heavily mined, including Tuba City, Shiprock, Church Rock, and Crownpoint. Nor is there a public monument that details the number of human lives that were sacrificed for the "public good" of national security.

Rather, the U.S. government has approached the question of remediation from the perspective of what is cost-effective. It is not cost-effective to remove all topsoil to remediate all of the contaminated lands on the Navajo Nation or the Island Nations, nor is it cost-effective to remove the huge pilings of tailings, given the lack of any available site to store nuclear waste. In this respect, the "acts of redress" fall short of the desired outcome. Similarly, compensation is generally paid at the individual level rather than the group level under domestic law. This is where the Special Rapporteur's report for the Marshall Islands is very instructive.

Georgescu's report states that the U.S. nuclear testing program "resulted in both immediate and continuing effects on the human rights of the Marshallese," specifically those linked to human health and environmental contamination.³⁶⁴ The report documents the fatalities and serious illnesses that have occurred among the Marshallese people and finds that the radioactive contamination has violated their human right to health.³⁶⁵ In addition, the Marshallese people were displaced from their homes and many were subjected to public and humiliating examinations. For example, several Marshallese women testified that they were forced to strip naked in front of others so that radioactive emissions from their

362. See *United States v. Navajo Nation*, *supra* note 301.

363. RECA, *supra* note 10, at § 2(c).

364. Georgescu Report, *supra* note 52, at 6.

365. *Id.* at 6-8.

bodies could be measured by a Geiger counter, and that they faced cultural stigmas from such treatment.³⁶⁶ The Marshallese suffered severe cultural impacts from being removed from their traditional lands and cultural lifeways, and the appropriation of lands was particularly severe for Marshallese women, who are the custodians of land under customary law.³⁶⁷ Thus, the consequences of the United States' policies in the South Pacific not only affected the health of the people and their environment, but also imposed severe cultural harms, including particular harms for Marshallese women that have continuing impacts.

Significantly, the Special Rapporteur looked to Article 26 of the Declaration on the Rights of Indigenous Peoples, which describes the rights of Indigenous peoples to their traditional lands and territories as a way to prompt the United States to engage in a dialogue about the unresolved land issues.³⁶⁸ The report also looks at Article 28, which speaks to the need to hold consultations with Indigenous peoples to determine what is adequate redress for the loss, and to consider all available alternatives, including restitution of land, where possible, and if that is not possible, "just, fair and equitable compensation."³⁶⁹

Given the serious and on-going consequences of radioactive contamination in the Pacific, the Special Rapporteur specifically engages the issue of reparations by endorsing "a comprehensive approach incorporating the full range of judicial and non-judicial measures, including, among others, individual prosecutions, reparations, truth-seeking, institutional reform, or an appropriately conceived combination thereof, in order to, *inter alia*, ensure accountability, service justice, provide remedies to victims, promote healing and reconciliation."³⁷⁰ The main emphasis of this program of reparations is directed at the health impacts, including an examination of whether the United States specifically used the Marshallese as "human subjects" to assess the effects of nuclear weapons on human beings.³⁷¹ Although the U.S. Advisory Committee on Human Radiation Experiments disclaimed such intentional conduct, the Special Rapporteur's report details the unethical aspects of U.S. programs and the enduring "legacy of distrust" that they created."³⁷²

The report concludes by recounting existing efforts by the U.S. Department of Energy to remediate the contaminated lands around village housing and agricultural areas, as well as sampling of commonly consumed foods to assess the

366. *Id.* at 9.

367. *Id.*

368. *Id.*

369. *Id.* at 10.

370. Georgescu Report, *supra* note 52, at 12.

371. *Id.* at 13.

372. *Id.*

risk of exposure.³⁷³ Both issues are critically important to the future of the Marshallese people. In addition, the Special Rapporteur noted that some military sites containing radioactive waste are not being well maintained and pose a significant threat.³⁷⁴ The report recommends a comprehensive terrestrial and marine survey that can identify and map the sites where toxic and radiogenic substances remain from U.S. military activity on the Marshall Islands.³⁷⁵

The approach taken by the Special Rapporteur provides an excellent template for what should occur in the United States in relation to radioactive contamination of tribal lands. It is important for the United States to assume responsibility as a trustee for the harms that occurred in the past, as well as for the continuing consequences of those harms for human health and the environment on reservation lands and on lands adjacent to the reservation where tribal members live. The United States ought to invoke the provisions of the Declaration on the Rights of Indigenous Peoples to identify the rights of Native people to their lands, territories, and resources, and to their right to have a standard of health that is equivalent to that of other citizens. Without studying the nature and extent of the contamination and its impacts on human health, this will not be possible. Moreover, the United States should focus on remediation, rather than on encouraging companies to develop uranium resources in areas that are already so badly contaminated that tribal members are exposed to radiation levels significantly higher than the maximums permissible under federal law.

This strategy will likely require institutional restructuring because the federal courts have been very reluctant to impose liability upon the United States or constrain the Nuclear Regulatory Commission from approving new mining projects.³⁷⁶ The efforts in the United States and the Marshall Islands should involve effective and meaningful consultation about the nature and extent of the contamination, as well as about the desired outcomes for remediation. The consultation process should be intercultural, allowing the Navajo people and other Indigenous Nations to detail the harms that they have suffered and what they require for remediation of these harms.

In sum, an “ethics of remediation” should be based on a platform of mutual respect, honoring Indigenous self-determination and the protective aspects of the federal trust responsibility. It is necessary to build new institutions and develop intercultural norms of justice that can offer effective redress for past harms and restructure current relationships to facilitate human health and environmental

373. *Id.* at 15.

374. *Id.* at 14.

375. *Id.* at 17.

376. *See Segal, supra* note 36, at 382; *see also Morris, supra* note 133, at 705.

restoration.

Conclusion

This article has explored the past and present context of radioactive contamination of Native peoples and lands, and has attempted to construct the outlines of an “ethics of remediation.” As we move forward in the era of climate change, we will see increasing pressure to develop uranium as “green energy.” This use of political rhetoric may obscure the grave consequences of uranium mining to Native people, their lands, livestock, and water resources. The Navajo Nation has banned uranium mining within the Navajo Indian Country, and the Navajo Nation Council has rescinded the earlier approval for a “demonstration uranium recovery project” on Navajo land. However, ISL uranium development on fee lands outside the reservation continues under the control of state and federal licensing agencies.

The Navajo Nation’s ban on uranium mining appears to resonate with the decision of Pacific Island nations to declare the South Pacific a “nuclear-free zone” and to demand reparations for the harms caused by the nation-states who used this area for bomb testing. In comparison, the 2013 vote of the Navajo legislators could reflect a sense of fatalism or powerlessness, given that the NRC has licensed new ISL mining in this region, that the remediation of past harm is far from complete, and that the “checkerboard land” status has limited effective regulatory authority by the Navajo Nation. The Navajo Nation’s ban on uranium mining and current legislative action appear to be a true exercise of “self-determination,” and yet, it may be the case that the Navajo Nation lacks the authority under current law to adequately protect its lands, resources, and tribal members, or to demand effective reparation for past contamination.

In closing, I would like to reflect on a powerful insight shared by Martin Wagner, an attorney with Earth Justice and one of the keynote speakers at the Santa Clara Symposium on Human Rights and the Environment. He spoke of his work on behalf of the Inuit and related a comment by Inuit leader, Sheila Watt-Cloutier, who said that the Inuit human rights petition filed in the Organization of American States against the United States for the harms of climate change was designed to show the world what was really happening. The will to continue a traditional way of life exists at the level of the heart, he said, while the legal claim is constructed at the level of the mind. Too often, the law abstracts the “heart” out of the claim, leaving only the bare intellectual outline of a claim for “damages.” In this sense, the human rights petition served the interests of the affected Inuit people to highlight continuing wrongs at a global level despite the likelihood of ever recovering any “damages” against the United States. This is very consistent

with the petition that ENDAUM has filed against the United States for the continuing harms of radioactive contamination on the Navajo Nation's traditional territory.

On the Navajo Nation and in the Pacific Islands, the claims for remediation engage the need to repair the damage caused by past policies that are now seen as "wrong" but have been justified by the United States as necessary to serve the "public good" at the time that they occurred. Similarly, the current initiative to conduct ISL mining within the Navajo Indian Country seeks to serve the energy needs of the public, at the expense of the Navajo communities who live on these lands. The rhetoric of a "vulnerable population" is insufficient to gain redress for past wrongs or to stop the continuing harms. We must recast the claims of Indigenous communities in the form of self-determination, appreciating the unity of land, community, and culture that provides the nexus for this moral and political right.

When we consider the question of justice, we often ask whether there is a "fair" distribution of goods and harms.³⁷⁷ In the area of nuclear energy, the public good is constructed at the cost of placing the harms upon Indigenous peoples. This constitutes environmental injustice, and possibly a form of environmental racism that negates the equal dignity of Indigenous peoples by sacrificing their health and well-being for the good of the majority society.

An additional problem to consider is that of "epistemic injustice."³⁷⁸ Science policy continues to determine what a "safe" level of contamination is and what acceptable technologies for mining are. The dominant society also constructs the legal framework that governs redress for harm, mainly as a tort cause of action for specific, proven physical and tangible injuries. Indigenous peoples are excluded from participation in generating these policies, and so they become victims of the policy, whether this is acknowledged or not. The relevant legal framework under domestic law omits the experience of harm as spiritual and cultural, which is a form of "hermeneutical injustice."³⁷⁹ It also omits the testimony of Indigenous community members as "experts" in favor of scientific and economic accounts of harm, which constitutes a form of "testimonial injustice."³⁸⁰

In constructing an "ethics of remediation," it is necessary to engage these disparate accounts of injustice and to invoke Indigenous norms in the service of

377. JOHN RAWLS, *POLITICAL LIBERALISM*: 5-N (1993) (explaining the basic principles of justice that ensure an egalitarian distribution of goods.)

378. See Rebecca Tsosie, *Indigenous Peoples and Epistemic Injustice: Science, Ethics, and Human Rights*, 87 WASH. L. REV. 1133 (2012).

379. *Id.* at 1158-59.

380. *Id.* at 1154-58.

building a more inclusive and balanced approach to the issue of radioactive contamination of Indigenous peoples and lands. The human rights approach illuminates the moral, legal, and political issues at the level of “heart” and “mind,” evoking the actual experience of the communities that suffer from the politics surrounding nuclear energy development and remediation efforts. As Martin Wagner noted, “what we fail to understand, we destroy.” This is the common lesson of the case studies presented in this article, and it serves as an enduring challenge for every government.