

Environmental Justice, American Indians and the Cultural Dilemma: Developing Environmental Management for Tribal Health and Well-being

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ABSTRACT

Environmental justice in the tribal context cannot be contemplated apart from a recognition of American Indian tribes' unique historical, political, and legal circumstances. American Indian tribes are sovereign governments, with inherent powers of self-government over their citizens and their territories. Their status as sovereign entities predates contact with European settlers. This separate status, nonetheless, was affirmed by the United States early on and is enshrined in the U.S. Constitution. Tribes today continue to exist as distinct sovereigns within the boundaries of the United States.

THE PURPOSE OF THIS ARTICLE is to reignite thinking about the relationship between the tribes and the United States regarding management of tribally important resources, so as to better foster tribal health and well-being. In particular, our aim is to start from Native peoples' understandings of their relationship to these resources and what that means for their role in environmental management. Although this attempt works within the present legal and political framework to a considerable degree, it draws on a tribally informed understanding of tribes' management authority over tribal resources (irrespective of their location), and assumes a robust interpretation of the recognition currently accorded by U.S. courts and other institutions of tribes' management authority for tribal resources. In this context, we want to address the cultural dilemma that tribes face in terms of the overall regulatory structure and approach and how to deal with it—through indigenous knowledge and experience as well as through new uses of and inquiries in environmental science. Here, we highlight some current ways that tribes and

tribal programs are addressing this "cultural dilemma" in regulatory programs for resources both within and outside of Indian reservations. In our conclusion, we draw on this experience to make policy suggestions that aim to enlarge tribes' opportunities to manage resources critical for their health and well-being in more vibrant and culturally appropriate ways.

I. SELF-GOVERNMENT AND TRIBES' UNDERSTANDINGS OF ENVIRONMENTAL MANAGEMENT

Environmental justice in the tribal context cannot be contemplated apart from a recognition of American Indian tribes' unique historical, political, and legal circumstances. American Indian tribes are sovereign governments, with inherent powers of self-government over their citizens and their territories. Their status as sovereign entities predates contact with European settlers. This separate status, nonetheless, was affirmed by the United States early on and is enshrined in the U.S. Constitution. Tribes today continue to exist as distinct sovereigns within the boundaries of the United States.¹

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¹While some attributes of sovereignty have been curtailed, tribes remain vested of their inherent sovereign powers except where these have been expressly qualified by treaty or congressional legislation. Felix Cohen, *Handbook of Federal Indian Law* (1982), 235.

Self-governance, for American Indian tribes, centers on the management of tribally important natural resources.² While the same can be said to some degree of non-Indian governments, as Dean Suagee explains, “American Indian tribal cultures are indigenous to the United States with cultural roots in this land, and this is a significant difference...”³ He elaborates:

Tribal cultural practices and religious beliefs are rooted in the Earth and woven into the web of life. Tribal members use wildlife and plants and other natural resources in ways that are different from other ethnic groups that exist within the American society. They use places in the natural world for religious and cultural activities, and their oral traditions include stories about these places. Like other cultures, tribal cultures are dynamic, and most Indian people do not live the way their ancestors did, but traditional cultural and religious beliefs and practices are still important components of the identities of contemporary Indian people....⁴

Tribes have long concerned themselves with managing the resources on which they depend, ensuring the health and well-being⁵ of their people and shaping their distinctive cultural identities in the process. Tribal environmental management, then, also predates contact with European settlers.

Maintaining tribal health and well-being—a central task of any sovereign vis-à-vis its people—depends not only on protecting the resources themselves, but also on ensuring tribes’ ability to manage these resources. That is to say, tribal health and well-being includes tribes’ ability to act as managers for their resources, and to apply tribally-derived and -developed regulatory-cultural approaches to this undertaking. Tribes should be able to have their cultures reflected in the regulatory approaches and structures that impact their resources. These acts of environmental management provide important occasions for enhancing and transmitting traditional ecological knowledge and resource management skills to succeeding generations; for observing closely the condition of a tribe’s lands and waters and monitoring the status of a tribe’s natural and cultural patrimony; for cementing social bonds, norms, and values, including those learned directly from the natural world; for developing innovative management approaches; and, ultimately, for upholding the tribe’s responsibilities to the natural world. Illustrating this point, Larry Campbell Sr., a Swinomish

tribal elder⁶ describes the integral relations between natural resources, ceremonies and health.

[W]herever you go to procure food, there’s a proper way to doing it, of gathering that, being respectful to nature, thanking the spirit of, say, the animal or the fish that we caught to bring home, to provide for us...at the same time, there is a proper way to fix it when you get home...all these little things that need to be done to make sure that when it was prepared that it was prepared in a good way, in a healthful way. The old people say that if you do a lot of this with good thoughts and with prayers, that it adds to the strength of the food that you’re sharing with your family or your guests and your visitors, whatever it may be, or yourself. So, when you pray when you gathered it, when you pray when you prepare the food, this all adds to the strength that we receive when we partake in this.

Yet, today, the natural resources on which tribes and their members depend are in many cases managed not by the tribes themselves, but by other governmental entities.⁷ Tribes may exercise environmental regulatory authority over considerable lands and resources within the boundaries of their respective reservations. Tribes may also exercise authority to “co-manage” tribally important resources off-reservation. For example, the fishing tribes in the Pacific Northwest share authority to regulate the fishery resource—an authority recognized to be implicit in the rights reserved by these tribes in treaties negotiated with the United States.⁸ Even so, there remain many instances in which tribally important resources are managed primarily or exclusively by non-tribal governments. For example, the grasses and other plant materials that have traditionally been used by Indian basket weavers in what is now California may be located on non-tribally owned lands managed by the U.S. Forest Service or the California Park Service. Additionally, because the impacts of environmental degradation are not constrained by geopolitical boundaries, management decisions by non-tribal governments will often affect tribal lands and resources.

Indeed, many of the environmental justice issues faced by American Indian nations can be fairly characterized as stemming from non-tribal management.⁹ The

²This use of the term “tribally important natural resources,” as well as other similar terms, is meant to refer broadly to all those resources on which tribes are entitled to depend—whether presently located on- or off-reservation. Moreover, what we refer to as “natural resources” can also be understood as “environmental resources” and are thus subject to what we consider to be the same “environmental management” regulatory structures.

³Dean B. Suagee, *Dimensions of Environmental Justice in Indian Country and Native Alaska*, (Second National People of Color Environmental Leadership Summit Resource Paper Series, 2002).

⁴*Id.*

⁵We use “health and well-being” to identify the ways that tribal communities and cultures understand the relationship between humans, non-humans, the environment and community, and what it takes to sustain all of these inter-relationships in a healthy balance.

⁶The Swinomish Indian Tribal Community is a Coast Salish fishing tribe of the Pacific Northwest.

⁷A complete discussion of the complexities of tribal environmental regulatory authority requires far greater detail than we are able to provide here. For a discussion of the sources of tribal environmental regulatory authority, see Felix Cohen, *Handbook of Federal Indian Law* (1982); see, generally, Judith A. Royster and Michael C. Blumm, *Native American Natural Resources Law: Cases and Materials* (2d ed. 2008), 193–297.

⁸See *U.S. v. Washington*, 384 F. Supp. 312 (W.D. Wash. 1974).

⁹See, e.g., James M. Grijalva, *Closing the Circle: Environmental Justice in Indian Country* (Carolina Academic Press, 2008), 4 (observing that “tribes’ status as sovereign governments under federal law and their strong cultural and spiritual connections with the natural environment uniquely distinguishes them” among groups affected by environmental injustice and arguing that the harms experienced by tribes and their members “may derive more from jurisdictional uncertainties hampering effective regulatory control” and that the “solution may lie in tribes’ inherent powers over their territories.”).

shortcomings of these non-Indian management approaches have led to numerous harms. For example, environmental standards set by non-Indian governments have permitted depletion and contamination of tribal resources, with grave consequences for tribal members' health and for tribes' exercise of their collective rights to their resources.

To some extent, the harms of non-tribal management have been recognized, and some progress made. For example, there has been some effort among federal environmental managers to acknowledge the fact that exposure assumptions used in quantitative risk assessments (QRA) need to be more responsive to the ways in which American Indians actually access and use resources.¹⁰ As well, there has been recognition of the role of tribes as one of three sovereigns within the tripartite environmental management system embraced by a number of federal statutes and implemented via the Treatment in the Same Manner as a State (TAS) regime.¹¹ The resulting accomplishments on the ground have been no small matters: water quality standards in some places come closer to protecting tribal members who would consume fish in accordance with their traditional practices;¹² cleanup standards at some sites incorporate tribal uses and reflect exposures related to subsistence activities

and traditional practices;¹³ tribal standards set to ensure tribal uses of water, including ceremonial uses, have been approved by the U.S. Environmental Protection Agency (EPA) and defended against upstream states;¹⁴ holistic approaches that protect traditional foods in aquatic environments by understanding their relationship to contaminants, in the air, such as mercury, have similarly been approved and defended.¹⁵

But while this progress has been important—and may address some very immediate concerns for the health of the resources at issue—it has also been limited in the extent to which it can ensure tribal health and well-being. A particular concern stems from the fact that the environmental regulatory structures in place reflect

¹⁰For example, the five federally recognized tribes in Maine, the Aroostook Band of Micmacs, the Penobscot Indian Nation, the Passamaquoddy Tribe at Indian Township, the Passamaquoddy Tribe at Pleasant Point, and the Houlton Band of Maliseet Indians, through a cooperative agreement with the U.S. Environmental Protection Agency (EPA), produced the *Wabanaki Traditional Cultural Lifeways Exposure Scenario*, which documents these tribes' traditional cultural lifeways and uses of natural resources, presenting the data in a form that can be used by EPA and other government entities when setting or approving water quality and other environmental standards. Darren J. Ranco and Barbara Harper, "Wabanaki Traditional Cultural Lifeways Exposure Scenario," Environmental Protection Agency, <<http://www.epa.gov/region1/govt/tribes/pdfs/DITCA.pdf>> (accessed Sept. 29, 2010). See discussion in Part III, *infra*.

¹¹See, e.g., Clean Water Act, 33 U.S.C. § 1377(e) (1987); see also Jill Elise Grant, "The Navajo Nation EPA's Experience with 'Treatment as a State' and Primacy," *Natural Resources & Environment* 21 (2007): 9–15.

¹²For example, Oregon's Environmental Quality Commission recently adopted a fish consumption rate of 175 grams/day for use in the state's water quality standards, a figure that represents a tenfold increase over the current standard of 17.5 grams/day (the default value suggested by EPA for the general U.S. population). Oregon adopted the new fish consumption rate after a multi-year process, led jointly by the state, the EPA, and the Confederated Tribes of the Umatilla Indian Reservation, to revisit the 17.5 grams/day rate—which had been sharply criticized for its failure to protect tribes' rights, including treaty-secured rights, to catch and consume fish. Oregon Department of Environmental Quality, *Oregon Fish Consumption Rate Project* (2008); see also, Catherine A. O'Neill, "Protecting the Tribal Harvest: The Right to Catch and Consume Fish," *Journal of Environmental Law & Litigation* 22 (2007): 131–151. The new, 175 gram/day figure, however, falls short of historical or heritage rates consonant with the Columbia River Basin tribes' practices at treaty time; these rates have been documented to be as high as 1,000 grams/day. Jamie Donatuto and Barbara Harper, "Issues in Evaluating Fish Consumption Rates for Native American Tribes," *Risk Analysis* 28 (2008): 1497–1506.

¹³For example, at the Midnite Mine Superfund Site, located within the Spokane Indian Reservation, the U.S. Environmental Protection Agency recognized among the current and "reasonably anticipated future uses" at the site tribal "traditional subsistence" uses and "wildlife management." The resulting cleanup standards are based on exposure assumptions that were developed "in consultation with the Spokane Tribe" and "reflect exposures related to subsistence activities and diet (using plant and animal resources for the Site) and traditional sweat lodge practices." U.S. Environmental Protection Agency: Office of Environmental Cleanup, Region 10, "Midnite Mine Superfund Site Spokane Indian Reservation: Record of Decision," <[http://yosemite.epa.gov/r10/CLEANUP.NSF/738cdf3a6d72acce88256feb0074f9f4/25f296f579940d8b88256744000327a5/\\$FILE/ROD-Midnite06.pdf](http://yosemite.epa.gov/r10/CLEANUP.NSF/738cdf3a6d72acce88256feb0074f9f4/25f296f579940d8b88256744000327a5/$FILE/ROD-Midnite06.pdf)> (accessed Sept. 29, 2010).

¹⁴For example, the Pueblo of Isleta Indian Reservation set water quality standards applicable to the Rio Grande River flowing through the Pueblo that provided, among other things, for protection of "primary contact ceremonial use" of the water. These standards were approved by the U.S. Environmental Protection Agency under the rubric of the TAS provisions in the Clean Water Act. Pueblo of Isleta, "Surface Water Quality Standards (adopted 1992, amended 2002)," <http://www.epa.gov/waterscience/standards/wqslibrary/tribes/isleta_6_wqs.pdf> (accessed September 29, 2010). The enforcement of these tribal standards was challenged by the city of Albuquerque, which operated a wastewater treatment plant five miles upstream and complained that the tribe's water quality standards were more stringent than those adopted by the state of New Mexico. Albuquerque's challenge, lodged against then EPA Administrator Carol Browner, was unsuccessful in court. *City of Albuquerque v. Browner*, 97 F.3d 415 (10th Cir. 1996).

¹⁵For example, the Forest County Potawatomi Community (FCPC), as a sovereign entity, petitioned the U.S. Environmental Protection Agency in 1993 for redesignation of the reservation as a Class I area under the Clean Air Act. The EPA granted Class I status, which invokes the most stringent level of protections for various conventional pollutants and requires consideration of the tribe's air quality related values (AQRVs). Among the AQRVs identified by the tribe are "acidic and mercury deposition," given the importance of fish and other aquatic resources to the tribe. The EPA's redesignation was upheld in the face of challenges by the states of Wisconsin (which was resolved by agreement between the tribe and the state) and Michigan (which was decided against the state in court); the states had argued that redesignation would "significantly infringe upon the ability of our state governments to manage the natural resources of our states." U.S. Environmental Protection Agency, "Redesignation of the Forest County Potawatomi Community Reservation to a PSD Class I Area; Dispute Resolution with the State of Michigan," 73 Fed. Reg. 23107 (Apr. 29, 2008); *State of Michigan v. Environmental Protection Agency and Forest County Potawatomi Community*, 581 F.3d 524 (7th Cir. 2009).

non-Indian environmental management approaches, values, knowledges, and methods.¹⁶

Each modern-day tribe, of course, has its own particular history and understandings of the natural world and its role in that world. An analysis of various Native communities' histories and understandings, if indeed possible, is well beyond the scope of this article. It is nonetheless useful to sketch, by way of example, some of the features of Pacific Northwest Native peoples' understandings of the relationship between natural resources and their lifeways. Because these understandings include a host of activities that might fall into the category of "environmental management," this discussion also implicates Native peoples' conceptions of governance and sovereignty.

Lakota scholar Vine Deloria, Jr. once observed: "The problem with America is that it is a 'rights' society, and not a 'responsibilities' society."¹⁷ By contrast, tribal people throughout the Pacific Northwest long ago made a covenant with the salmon and the other first foods.¹⁸ These first peoples promised the salmon that they would take care of the salmon and its home. The salmon, for their part, promised to return every year to provide food for and take care of the fishing peoples. Not only rights, but also responsibilities, flow from this covenant.

Furthermore, the fishing peoples of the Pacific Northwest have a relationship of mutuality and reciprocity with the salmon.¹⁹ Tribal people are able to take the fish, but they are also obligated to tend to the fish. Tribal people devised and established systems long ago to allocate among themselves and their neighbors rights to harvest the resource, and they also devised mechanisms to share the responsibilities for protecting the resource. These systems enforced appropriate restraints on individual harvest, and also managed for collective abundance.²⁰ The First Salmon ceremony provides an apt example wherein annual tribal gatherings give offerings and thanks to the spirits of the salmon and the natural resources that have sustained the people. The blessed offering also asks for the fishers' protection during the fishing season and for plentiful harvests. Although the timing and expression of the ceremony varies from group

to group among the peoples of the Salish Sea, the overall meaning and importance of the ceremony as reverence to the natural resources is the same.²¹

We understand this set of relations, cultural engagements, and management institutions around the salmon in the Pacific Northwest as exemplary to the connections we are making in this article between the quality and access to cultural resources and the need for Native institutions to take the lead in ensuring this access and quality. In the fishing peoples' view, management of the fishery resource is half of the rights/responsibilities equation: if the fishing peoples are to keep their prior promises to salmon, they need to ensure that they can continue to uphold their responsibilities to take care of it.²²

Moreover, the institutional arrangements and management systems these peoples have developed were and are an important component of tribes' conception of their inherent sovereignty and political identity. The relationship to the salmon, and the practices that revolve around it, exemplify what formed the basis for aspects of indigenous peoples' political organization prior to contact. As Ed Goodman has observed, whereas European sovereignty theorists at the time of contact were preoccupied with a territorial notion of sovereignty characterized by enclosed, sharply delineated boundaries and individualist private property ownership; in contrast, indigenous conceptions of "sovereignty" were organized around a functional notion of governance concerned with "the exercise, management, and protection of usufructuary practices."²³ While "usufructuary" is a particularly Western legal way of conceiving indigenous land practices,²⁴ it makes a key distinction and possibility for indigenous

²¹Erma Gunther, "An Analysis of the First Salmon Ceremony," *American Anthropologist* (1926): 605-617.

²²For a contemporary recognition of this sense of obligation, see, e.g., Columbia River Inter-Tribal Fish Commission, *Wy-Kan-Ush-Mi Wa-Kish-Wit (Spirit of the Salmon)*, available at <<http://www.critfc.org/text/trp.html>> ("The salmon...are a gift from the Creator that we must preserve, protect and enhance, passing them down as we found them from generation to generation. To do otherwise...would be a disgrace to ourselves and an insult to our children.").

²³Ed Goodman, "Protecting Habitat for Off-Reservation Tribal Hunting and Fishing Rights: Tribal Cocomanagement as a Reserved Right," *Environmental Law* 30 (2000): 308.

²⁴The term "usufruct" is a concept from property law of Western origin. While it is, as a consequence, imprecise in this context, it has been used by courts and commentators (along with other property law terms, such as "profits" and "easements") to attempt to convey relevant facets of tribes' rights, e.g., the enduring nature of such rights, which are understood to run with the "burdened parcel" in perpetuity without requiring title to the underlying land itself. Perhaps Bill Rodgers' use of the more general terms "Indian ownerships" and "Indian properties" more appropriately recognizes the point that these rights are in the nature of "property rights," as this term is understood in U.S. law, without defining the contours of those rights by reference to particular property law interests that may be an imperfect fit. See, e.g., William H. Rodgers, Jr., "Tribal Government Roles in Environmental Federalism," *Natural Resources & Environment* 21 (2007): 3-8; William H. Rodgers, Jr., *Environmental Law in Indian Country* (Thomson/West, 2005).

¹⁶See, e.g., Rebecca Tsosie, "Tribal Environmental Policy in an Era of Self-Determination: The Role of Ethics, Economics, and Traditional Ecological Knowledge," *Vermont Law Review* 21 (1996): 225-333.

¹⁷Vine Deloria, Jr., interview in documentary film, *In the Light of Reverence: Protecting America's Sacred Lands*, (Christopher McLeod, producer and director, 2001).

¹⁸First foods, also known as traditional foods or cultural foods, are natural resources that tribal members have depended on since time immemorial. These foods do more than satisfy caloric needs, they are considered "cultural keystone" species, with significant meaning and identity in tribal values and practices. See Ann Giribaldi and Nancy Turner, "Cultural Keystone Species: Implications for Ecological Conservation and Restoration," *Ecology and Society* 9(3) (2004): 1. Available at <<http://ecologyandsociety.org/vol9/iss3/art1>> (last accessed Oct. 2007).

¹⁹See, e.g., Ronald L. Trosper, *Resilience, Reciprocity and Ecological Economics: Northwest Coast sustainability* (2009).

²⁰*Id.*

management philosophies and structures of environmental management.

In sum, we envision a more robust and nuanced recognition of tribes' role as managers over tribal resources, including when those resources and the impacts of management decisions regarding those resources are not confined within reservation boundaries. Once this role is recognized, tribes might more freely pursue productive inquiries alongside non-tribal managers in the forms of shared and overlapping responsibilities, unbundled and functional authorities, and innovative approaches that "follow the resource."

II. THE CULTURAL DILEMMA

When interacting with federal and state regulatory structures, tribes face a cultural dilemma. On the one hand, tribes are forced to represent themselves within the current structures in a way that is recognizable to non-Indians.²⁵ For example, in order to have tribal health and well-being protected when non-tribal agencies set standards, they must be translated and reduced so that they can form an "input" into the current system of scientific environmental management.²⁶ In order to have tribal regulatory authority recognized within the federal system via the TAS process, it behooves tribes to present their programs so as to resemble state and federal programs.²⁷ On the other hand, tribes must maintain and prove their distinct cultures, or risk challenges to their authority to self-govern. Indeed, this second requirement may become even more pressing if, as Sam Deloria has argued, the rationale for the federal policy recognizing tribes' separate political existence comes increasingly to depend on "the cultural distinctiveness of the Indian tribes from the larger American society."²⁸

In *Braid of Feathers*, Frank Pommersheim discusses what he terms the "dilemma of difference" faced by tribes and institutions of tribal governance. He observes that tribal courts "do not exist solely to reproduce or replicate the dominant canon appearing in state and federal courts. If they did, the process of colonization would be complete."²⁹

As tribes have undertaken the task of rebuilding their nations, the most fruitful approach has often been one in

which a separate space is created and defended that enables tribes to chart their own paths.³⁰ The federal role under this approach is largely (a) to facilitate tribes' own efforts to strengthen their governance capacities; and, (b) to keep the states from interfering with tribes' efforts to this end. In this way, by exercising their authority as sovereigns within the contours of the United States, tribes have been able to accomplish much while maintaining the "difference" about which Pommersheim is concerned. The wisdom (indeed, necessity) of maintaining structures that provide a sort of "protective shell"³¹ within which tribes can enact their own visions of their futures as distinct cultures has been shown time and again. Yet, an approach that calls for a wholly separate juridical space meshes imperfectly with the geophysical space at issue. That is to say, because tribes' environmental management interests and prerogatives are not coextensive with the territorial outlines of their reservations (not to mention the truism that pollution does not respect geopolitical boundaries), tribes' problems won't be solved if they are only supported in their "intermural" regulatory efforts.³² The context of environmental management may not be unique in this regard; but it does pose challenges for tribal governance.

Tribes are thus required to navigate a terrain that will necessarily include non-tribal resource managers with so non-tribal management methods and non-indigenous science. If these were largely similar, the task of navigating might be relatively easy, as seems largely to be the case of states vis-à-vis the federal government. While there are tussles along the way, and the states are nominally viewed as fifty laboratories of innovation, the differences that emerge tend to be differences of degree rather than differences in kind because of the "similarity of origin and experience."³³ Not so with tribes. As Pommersheim

³⁰See, e.g., Native Nations Institute, "Udall Foundation Scholars: Native Nation Building" (presentation, August 4, 2010, Tucson, Arizona).

³¹See, e.g., William H. Rodgers, Jr., *Environmental Law in Indian Country* (Thomson/West, 2005) 24 ("The [Stevens] treaties placed a protective property shell around what the Indians called "their places" and "their fishing.").

³²From the tribes' perspectives, tribes' sovereign prerogatives to govern their people, lands, and resources are inherent. These powers have been recognized by non-tribal entities to varying degrees. On current views in U.S. courts, assertions of tribal management authority over tribally important resources raises issues of jurisdiction both within the territorial boundaries of tribes' reservations (e.g., when management affects lands held in fee simple by non-tribal members) and outside of reservation boundaries (e.g., when management implicates rights that are limited in scope, including location). Our aim in this article is not to explore these issues and their implications for tribal governance. For recent discussions, see, e.g., Marren Sanders, "Ecosystem Co-management Agreements: A Study in Nation Building or a Lesson on Erosion of Tribal Sovereignty?," *Buffalo Environmental Law Journal* 15 (2007-08): 97-177; Marren Sanders, "Clean Water in Indian Country: The Risks (and Rewards) of Being Treated in the Same Manner as a State," *William Mitchell Law Review* 36 (2009): 533-564. Rather, our aim is to highlight the point that tribal management of tribally important resources will often bring tribes into inevitable contact with non-tribal managers and management approaches.

³³Pommersheim, *supra* note 29 at 100.

²⁵See, e.g., Darren J. Ranco, "Models of Tribal Environmental Regulation: In Pursuit of a Culturally Relevant Form of Tribal Sovereignty," *Federal Lawyer* 56 (2009): 46-49.

²⁶See, e.g., Stuart Harris and Barbara Harper, "A Native American Exposure Scenario," *Risk Analysis* 17 (1997): 789-795; Stuart Harris and Barbara Harper, "Using Eco-Cultural Dependency Webs in Risk Assessment and Characterization of Risks to Tribal Health and Cultures," *Environmental Science and Pollution Research* 2 (2000): 91-100; Donatuto and Harper, *supra* note 12 at 1498. See discussion in Part III, *infra*.

²⁷See, e.g., Darren Ranco and Dean Suagee, "Tribal Sovereignty and the Problem of Difference in Environmental Regulation: Observations on a 'Measured Separatism' in Indian Country," *Antipode* 39 (2007): 691-707; Ranco, *supra* note 25.

²⁸Sam Deloria, "New Paradigm: Indian Tribes in the Land of Unintended Consequences," *Natural Resources J.* 46 (2006): 301-315.

²⁹Frank Pommersheim, *Braid of Feathers: American Indian Law and Contemporary Tribal Life* (University of California Press, 1995), 99.

reminds, within the American federalist system, the “federal record evinces a tolerance of similarity rather than dissimilarity.”³⁴

As one of us has observed, “[t]o be protective of tribal cultural differences, tribal sovereignty cannot just mean that tribal governments are just another partner in the federal system, the dominant culture must also recognize that tribal governments can form the basis for a different civic community with a different sense of the public good.”³⁵ Yet, this idea can seem threatening to members of the dominant culture: the U.S. Supreme Court has repeatedly shown its discomfort if non-Indians are subject to tribal police powers over non-Indian residents within reservations;³⁶ the states see tribal authority as dangerous, because it may diminish their own claims to territorial sovereignty;³⁷ and, there remains a deeply assimilationist impulse among many members of the dominant society, as well as a misunderstanding that “justice” does not always mean inclusion on equal terms but sometimes requires respect for difference.³⁸ So tribes seeking to exercise management authority over tribally important resources within the current structure are faced with a cultural dilemma. On the one hand, tribes must represent themselves and their approaches to environmental management in a way that is recognizable to non-Indians and their institutions. On the other hand, tribes must maintain and prove distinct cultures, or risk challenges to their authority to self-govern.

Indeed, as we alluded to above, Sam Deloria has argued that the need for tribes to maintain themselves as culturally distinct polities will become even more important to the future recognition of tribal sovereignty by the American public, Congress, and the courts. That is, Deloria observes that while tribes see themselves as sovereign, “a complete and effective assertion of sovereignty—by any nation, not just an Indian tribe—also requires recognition outside the sovereign entity by other governments.”³⁹ Historically, he posits, a recognition of tribes’ separate political existence within the American system has been justified by three “pillars:” by tribes’ cultural distinctness (even as the federal government supported efforts to eradicate this distinctness and to assimilate Indian people); by tribal members’ material poverty; and, finally, by the inherent right of indigenous peoples to govern themselves, as articulated by Justice John Marshall.⁴⁰ As tribes, it is to be hoped, now climb out of circumstances of material poverty, the survival of tribes’ right to self-govern, and the continuing federal policy of giving force and effect to tribal governmental acts, may come to depend more heavily on Deloria’s two

remaining “pillars.” And tribal sovereigns, of course, must resolve this dilemma in a way that remains true to their own citizens’ aspirations for their future as a people and for what might be called cultural self-determination.

Part of the way forward, it seems to us, is to grapple with the first horn of the cultural dilemma by exploring ways in which non-tribal governments might increase their tolerance for tribal models of environmental regulation. By both exploring the barriers to maintaining cultural distinctiveness in tribal environmental management and looking at the ways in which some tribal programs have in some ways “resolved” the cultural dilemma, we hope to lay the groundwork for dismantling these barriers to cultural distinctiveness.⁴¹ Although it is beyond the scope of this short piece fully to support this claim, it is our contention that the federal government, in particular, has an obligation to enlarge its understanding of and support for tribally developed environmental management approaches. (In addition to arguments rooted in tribes’ inherent sovereignty, tribal reserved rights and the interpretive posture of U.S. courts toward instruments securing those rights, and the federal trust responsibility, support for this claim might also come from arguments for environmental justice in a tribal context). By this means, tribes that enlist culturally distinct methods will nonetheless be recognized as legitimate environmental managers, and tribal governments can chart their own, culturally appropriate path without having to consider how to package that path for dominant society consumption.⁴²

This, to be fair, is easier said than done. However, tribes are working, at times alongside their counterparts in federal and state resource-management agencies, to address the cultural dilemma, enlarge understanding, and move toward a regime that recognizes the place for tribal environmental management over tribally important resources.

III. AN EXAMPLE OF THE CULTURAL DILEMMA IN ENVIRONMENTAL MANAGEMENT: QUANTITATIVE RISK ASSESSMENT

When tribes are placed in the sort of difficult position presented by the cultural dilemma that we have described, it is often those working “on the ground” in the tribes that lead the way. Tribes’ work on environmental

³⁴*Id.*

³⁵Ranco, *supra* note 25 at 49.

³⁶*Id.*

³⁷*Id.*

³⁸See, James Anaya, “On Justifying Special Ethnic Group Rights,” *Ethnicity and Group Rights*, NOMOS XXXIX (Ian Shapiro and Wil Kymlicka eds., 1997).

³⁹Deloria, *supra* note 28 at 307.

⁴⁰*Id.* at 303.

⁴¹We are not attempting to imply or prove in any direct way that tribes are being actively assimilated into Western programs of environmental management, although that argument can be made, but it would be difficult the separate assimilation going on through these programs from the overall assimilationist forces that tribes face in the twenty-first century.

⁴²See, e.g., Jackie Johnson and Darren J. Ranco, “Risk Assessment and Native Americans at the Cultural Crossroads: Making Better Science or Redefining Health?,” in *Technoscience and Environmental Justice: Transforming Expert Cultures through Grassroots Engagement*, (Gwen Ottinger and Benjamin Cohen, eds, MIT Press, forthcoming, 2011) (recounting EPA’s demand that tribal programs describe selves as “holistic” in order to be included in study of tribally determined approaches).

issues that are currently dominated, under non-tribal management regimes, by quantitative risk assessment provides a case in point. Tribes have explored new horizons in environmental science in the service of tribal health and well-being and have pushed us to consider other forms of environmental management for tribes, beyond the TAS approach. We sketch tribes' experiences here for the lessons that they offer.

A. Background on quantitative risk assessment in the tribal context

In 1983, the National Research Council (NRC) first formalized the framework that defined human health risk characterization as functions of toxicity (hazard identification and dose response) and exposure. Health, by this measure, is said to exist when pre-determined thresholds of mortality or morbidity are not exceeded. To this day, this equation is the basis of all human health risk assessments performed by regulatory agencies. Quantitative in nature, the risk assessment focus is on individual, physiological cancer and non-cancer endpoints, based on exposure to a single contaminant. When tribal communities affected by chemical contamination are presented with results from such a risk assessment, it is too often the case that the question of health is left unanswered: such assessments cannot accommodate tribal definitions of health.

Working within the constructs of the current risk framework, disproportionate exposures to Native people may occur as a result of the use of inaccurate tribal data or national average data (which include non-fish consumers in fish consumption data). These data are the products of a number of methodological and analytical shortfalls, including: unclear statement of intention for the use of tribal data collected so that data are then used inappropriately; data collection methods that are incongruent with tribal community norms and protocols; and, data analysis methods that omit or obscure the highest consumers or most exposed subset of the population.⁴³

Moreover, in many Native American communities, health is defined on a community level, consisting of inseparable strands of human health, ecological health, and cultural health woven together, all equally important. Within this definition, many of the dimensions of good health are difficult to quantify, such as participation in spiritual ceremonies, intergenerational education opportunities, and traditional harvesting practices, yet they may be negatively impacted or even destroyed when resources are contaminated.⁴⁴ The conventional risk assessment of

dose and toxicity has no room to evaluate these integral components of health and well-being.

B. Tribal managers' experiences: Barriers and inroads

Stuart Harris and Barbara Harper at the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) head one group that has examined the shortcomings of QRA, but also sought out fixes, looking at the actual exposure scenarios of traditional lifestyles. Working with tribal members at CTUIR and other tribes, they have been developing lifestyle-based subsistence exposure scenarios for Native subsistence users.⁴⁵ Using in-depth interviews and other ecological information, they have evaluated risks by including "exposure factors for subsistence activities and diets as well as factors for environmental and socio-cultural quality of life."⁴⁶

Another group of researchers, from the Akwesasne Task Force on the Environment and the Haudenosaunee Task Force on the Environment, working primarily with and from within the Akwesasne Mohawk Nation, started to address these potential pollution pathways in subsistence diets during the 1990s as well. Led by Mary Arquette, Katsi Cook, Brenda LaFrance, Jim Ransom, Arlene Stairs and others, this group, much like Harris and Harper, called for "better site- and Nation-specific data" for true risk assessment to take place.⁴⁷ They called for this information to inform an indigenous decision-making process "regarding the effect of contaminants on health."⁴⁸ They were particularly concerned that, if the health effects of pollution were finally known, outside policymakers would encourage risk avoidance behavior in the tribal population, and that this, in turn, would lead to other detrimental effects to people's health and culture by discouraging them from engaging in subsistence lifestyles.⁴⁹ For the Akwesasne Task Force on the Environment, the indigenous decision-making model, which includes "the use of traditional value and political systems," counters this kind of risk avoidance strategy, and is an expression of tribal sovereignty.⁵⁰

While these researchers have called for more scientific study of the actual environmental risks faced by Native American populations, they have also each called for a change in the ways risk assessment is conceived. Calling for alternatives to the conventional risk assessment model, Arquette, et al. argue for a new paradigm "that

⁴³Donatuto and Harper, *supra* note 12 at 1498.

⁴⁴See, Harris and Harper (1997) and (2000), *supra* note 26; Stuart Harris and Barbara L. Harper, "Lifestyles, Diets, and Native American Exposure Factors to Possible Lead Exposures and Toxicity," *Environmental Research* 86 (2001): 140-148; Mary Arquette, et al., "Holistic Risk-Based Environmental Decision Making: A Native Perspective," *Environmental Health Perspectives* 110 (2000): 259-262; Jeanette Wolfley, "Ecological Risk Assessment and Management: Their Failure to Value Indigenous Traditional Ecological Knowledge and Protect Tribal Homelands," *American Indian Culture and Research Journal* 22 (1998): 152-169.

⁴⁵Harris and Harper, (1997) and (2000) *supra* note 26; Barbara L. Harper, et al., "Traditional Tribal Subsistence Exposure Scenario and Risk Assessment Guidance Manual," U.S. Environmental Protection Agency, Grant Number EPA-STAR-J1-R831046 (Oregon State University Printing and Mailing, 2007) <http://www.hhs.oregonstate.edu/ph/sites/default/files/xposure_Scenario_and_Risk_Guidance_Manual_v2.pdf>.

⁴⁶Harris and Harper (1997), *supra* note 26 at 789.

⁴⁷Arquette, et al., *supra* note 44 at 261.

⁴⁸*Id.*

⁴⁹*Id.*; see also, Catherine A. O'Neill, "Risk Avoidance, Cultural Discrimination, and Environmental Justice for Indigenous Peoples," *Ecology Law Quarterly* 30 (2003): 1-57.

⁵⁰Arquette, et al., *supra* note 44 at 261.

not only recognizes the requirement for unique and shared decision making with Native governments but that also recognizes the important role that community-based research, specialized communication strategies, and community participation play in decision making.⁵¹ This process-oriented approach to doing risk assessment is supported by culturally rooted ideas about tribal sovereignty and definitions of health—as Arquette, et al. put it, “Native people need to have opportunities to meet their own physical, mental, emotional, spiritual, social, and ecological needs using their own culturally defined paradigms.”⁵² Harris and Harper have also pursued a more culturally defined notion of human health in their work, calling for “new integrating tools” between the impacts of pollution on culture and human health.⁵³ For them, “evaluating impacts to a traditional way of life would include environmental and community quality of life in addition to personal exposures to contaminants.”⁵⁴ These kinds of impacts go far beyond the classic risk assessment model and would allow for tribal communities to define health in culturally appropriate ways, not limited to the cancer death rates caused by toxic pollutants.

The Swinomish Tribe has also been working on an evaluation tool that assesses impacts to tribal human health from contaminated natural resources. Based on work initiated with a study of bioaccumulative toxics in local shellfish,⁵⁵ the Tribe prioritized a set of non-bio-physical health indicators emphasizing community health and well-being, and a method for assessing their health status in respect to a contaminated resource. At the onset of the project, Swinomish researchers aimed to develop a tool that could be used with the current risk assessment framework. However, once the project was underway, it was obvious that the identified health indicators were non-commensurate with QRA, so it is now recommended that the evaluation tool be tailored for use in parallel with QRA. The indicators were devised based on information gathered from ethnographic records, current tribal documents, and interviews of tribal experts and elders. The indicators were also cross-referenced with published literature on key aspects of Native American health and with work by public health researchers to develop and implement health indicators for indigenous peoples around the world. The Swinomish Tribe then partnered with other Coast Salish tribes to refine the indicators such that they are representative of all Native communities in the Salish Sea area. Thus far, five indicators have been developed: community cohesion, food security, ceremonial use, knowledge transmission, and self-determination. There are several health components nested within each indicator that further describe the indicator and are used in assessing the current health status of that indicator. The

components (and their respective indicators) are: participation and cooperation, roles, familiarity (community cohesion); availability, access, and sharing (food security); ceremonies and gatherings, giving thanks, and feeding the spirit (ceremonial use); the teachings, elders, and youth (knowledge transmission); and, healing, restoration, and development (self determination).⁵⁶ The Swinomish Tribe is working with the other tribes to assess the status of these health and well-being indicators for the first foods of the Salish Sea.

The examples above demonstrate where the proverbial rubber meets the road in the context of the cultural dilemma that tribes face. Providing fixes to the uses of QRA in tribal contexts transforms a technical question of “to how much of a pollutant is someone living a subsistence lifestyle exposed?” into a multi-layered question about proper institutions (e.g., the use of traditional political systems), kinds of knowledge to be used (community-based and/or Traditional Ecological Knowledge (TEK)), and definition(s) of health to employ (e.g., physical, mental, emotional, spiritual, social, and ecological). Harris, Harper, Arquette, Cook, and others thus show us that cooperative federalism approaches, which usually rely on federal and state institutional processes and knowledges, fail in the tribal context because they dismiss or exclude other institutions and bases of knowledge that are relevant to protecting tribal health, cultures, and resources. Yet when tribes call for an alternative approach, a common reply is that it is too expensive and time-consuming to take into account each tribe’s unique history and lifeways in relation to the natural resources in question.⁵⁷ However, protection is impossible if what is meant to be protected is not correctly defined and prioritized.

Interestingly, the limitations of a purely quantitative, non-tribally defined approach have been pointed out by authoritative bodies within the dominant society. In 1996, the National Research Council (NRC) published *Understanding Risk: Informing Decision in a Democratic Society*.⁵⁸ While issues specific to tribes were not discussed, the report was explicit that more than a numeric risk-based framework is necessary in order to accurately depict

⁵¹*Id.* at 262.

⁵²*Id.*

⁵³Harris and Harper (2000), *supra* note 26 at 92.

⁵⁴Harris and Harper (1997), *supra* note 26 at 793.

⁵⁵Swinomish Indian Tribal Community, “Bioaccumulative Toxics in Native American Shellfish,” U.S. Environmental Protection Agency, STAR grant #R-82946701, 2002–2006.

⁵⁶The four original health indicators developed by the Swinomish Tribe are described in: Jamie Donatuto, Terre Satterfield, and Robin Gregory, “Poisoning the body to nourish the soul: Prioritizing health risks and impacts in a Native American community,” *Health, Risk, and Society* 13 (2011): 103–127. The addition of the fifth health indicator and further refinement of the indicators is an on-going process by a group of Coast Salish representatives.

⁵⁷By contrast, federal and state agencies are frequently willing to undertake highly individualized analyses of polluting sources’ particularized circumstances, e.g., by engaging in site-specific or source-specific determinations; by entertaining requests for variances from generally applicable standards; by “subcategorizing” within source categories set forth by statute; and by offering extensions of compliance deadlines.

⁵⁸Paul C. Stern and Harvey Fineberg, eds., *Understanding Risk: Informing Decisions in a Democratic Society* (Washington D.C.: National Academy Press, 1996).

health risks. The NRC recognized that one of the fundamental requirements in an effective risk assessment is a clear understanding of the risks and impacts prioritized by the group in question, along with incorporation of the group's knowledge base from which these priorities originate.⁵⁹ This reasoning is what tribes have been arguing for and working toward; yet tribes frequently encounter resistance from federal and state regulators to changes that seek to move beyond tinkering at the margins.⁶⁰

Federal and state resource management agencies are not generally required by the terms of their authorizing legislation to employ numeric frameworks and narrow understandings of health. "Risk" is not inherently a quantitative concept; "health" is not necessarily limited to one or a few human physiological "endpoints." In fact, there is often ample authority for these agencies to contemplate more holistic conceptions of human and ecological health and well-being. And, beyond this, where tribes and tribal resources are affected by non-tribal agencies' decisions, the non-tribal entities not only may, but must, contemplate these enlarged conceptions if their decisions are to be scientifically and legally defensible. Yet federal and state regulators sometimes claim to be constrained by agency guidance and policies.

⁵⁹Critiques of the conventional risk assessment framework are neither new nor isolated. Numerous critics cite uncertainty and human inter-individual variability as prime faults (e.g., see Adam M. Finkel, "Is Risk Assessment Really too Conservative?: Revisiting the Revisionists," *Columbia Journal of Environmental Law*, 14 (1989): 427-467; M. Russell and M. Gruber, "Risk assessment in environmental policy-making," *Science*, 236 (1987): 286-290; and, A.C. Upton, "Science and judgment in risk assessment: Needs and opportunities," *Environmental Health Perspectives* 102 (1994): 908). Social scientists have critiqued the framework for its failure to address social and psychological determinants of risk, as well as locally experienced social consequences of harm (e.g., see James Flynn, Paul Slovic, and C.K. Mertz, "Race, gender, and perception of environmental health risks," *Risk Analysis*, 14 (1994): 1101-1108; Terre Satterfield, "Risk, remediation, and the stigma of a technological accident in an African-American community," *Human Ecology Review*, 7 (2000): 1-11; and, Paul Slovic, "Perception of risk: Reflections on the psychometric paradigm," in *Social Theories of Risk*: 117-152 (1992), New York: Praeger, (S. Krimsky and D. Golding, eds.)). Environmental justice advocates have long voiced objections to agencies' reliance on QRA, given its numerous shortcomings. See, e.g., National Environmental Justice Advisory Council, *Ensuring Risk Reduction in Communities with Multiple Stressors: Environmental Justice and Cumulative Risk/Impacts* (2004). For background on QRA and environmental justice, see chapter 6, "Risk and Health," in Clifford Rechtschaffen, et al., *Environmental Justice: Law, Policy & Regulation* (2d ed. 2009).

⁶⁰See, e.g., U.S. Environmental Protection Agency, Region X, "Framework for Selecting and Using Tribal Fish and Shellfish Consumption Rates for Risk-Based Decision Making at CERCLA and RCRA Cleanup Sites in Puget Sound and the Strait of Georgia" (August 2007) at 5 (recognizing that "the quantitative nature of the risk assessment process inadequately addresses the impacts" of chemical contamination on tribal culture and life-ways; inviting tribes "to provide a qualitative discussion of their perceptions as to how fish and shellfish chemical contamination has affected them;" and indicating that "[t]his information would be forwarded to EPA risk managers along with the quantitative risk assessment.").

Ultimately, policy makers in both tribal and non-tribal contexts need to be able to address the shortcomings of not only the "technical" issues that arise when dealing with tribal natural and cultural resources, but the potential managerial and cultural biases within the decision-making authorities that they manage.

CONCLUSION

The health and well-being of tribes and their members depends on the health of tribally important natural resources. For thousands of years, Native peoples have managed their resources, ensuring the strength of their people and shaping their distinctive cultural identities in the process. Today, however, it is often the case that these resources are managed by non-tribal governments. These non-Indian management regimes have led to numerous harms, including the depletion and contamination of tribal resources, with grave consequences for tribal members' health and for tribes' exercise of their collective rights to their resources. To some degree, these harms have come to be recognized as environmental injustices. Yet tribal health and well-being depend not only on protecting the resources themselves, but also on ensuring tribes' ability to manage these resources and to apply tribally-derived regulatory-cultural approaches to this task. In this paper, we have attempted to focus attention on this facet of environmental justice in the tribal context.

Tribes' roles as environmental managers or "co-managers" have been acknowledged, under various rubrics and to varying degrees, by the larger society. Yet the relationship between tribal and non-tribal managers has generally been structured by a regulatory framework that presents barriers for tribal environmental managers seeking to apply Native management approaches, values, and knowledge. One consequence is that tribes are faced with a cultural dilemma: on the one hand, tribes are forced to present themselves within the current structures in a way that is recognizable to non-Indians; on the other hand, tribes must maintain and prove their distinct cultures, or risk challenges to their authority to self-govern. We have argued that the resolution of this dilemma requires an increasing tolerance among non-tribal governments for tribal models of regulation.

In this article, we have explored, by way of example, tribes' efforts to address the cultural dilemma in one environmental regulatory sphere—that dominated at present by quantitative risk assessment. We observed that a resolution of the dilemma here transforms a technical question into a question about the legitimacy and authority of institutions and knowledges and, ultimately, the very definition of "health." Although the shortcomings of QRA having been widely recognized, there has nonetheless been a resistance among non-tribal environmental managers to entertain alternative approaches. Regardless whether this is appropriate as a general matter, we have argued

that it is inappropriate when tribally important resources are affected by the relevant decisions. Instead, we need to move toward a regime that is tolerant of tribally derived regulatory-cultural approaches, and that recognizes the place for tribal management of tribally important resources. In this way, we can ensure tribal health and well-being and, so, environmental justice for Native peoples.

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