

# **What was Damaged?: Taking Sacred Ecology into Account in Environmental Impact Assessment**

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## **Which Impacts?**

How do we assess the damages done to an indigenous community by environmental disaster, by pollution, or by changes in the environment? One way is to look at the direct health impacts on members of a community, for example, the effects of uranium mining on water quality and cancer in the Navajo Nation (Robyn 2010). Another lens is the direct effects on the economic livelihoods of individuals in a community, for example how pollution impacts treaty rights to shellfish harvesting by pollution of shellfish beds (Frank Jr. 2011). A third type of impact also needs to be considered: the impact of environmental threats on the beliefs, feeling, and practices by which indigenous communities and individuals connect in sacred ways with the environment.

My argument in this paper is composed of three parts. The first point is that many indigenous groups are connected to their environment, not only through direct resource use but also through sacred beliefs and practices. The second point is that these sacred connections with the environment may remain vital parts of indigenous community life, even when these communities have experienced technological or other forms of cultural change. The third point is that these sacred connections can be severely damaged by environmental pollution. These points lead us to the inescapable conclusion that any analysis of environmental impacts on indigenous communities is probably going to be incomplete if we neglect to analyze the ways in which changes in environmental quality have harmed indigenous ways of sacredly connecting to the environment.

There are many “invisible losses” that indigenous communities may experience as a result of resource planning and land use decisions – losses that are not explicitly accounted for. Turner, et al. (2008) identifies several of these “invisible losses”, including cultural and lifestyle losses, health losses, losses of identity, losses of self-determination and influence, emotional and psychological losses, losses of order in the world, knowledge losses, and indirect economic losses and lost opportunities. Many sacred connections with the environment fall under the umbrella term of “invisible losses” to indigenous communities – the impacts on indigenous community lifeways may not be readily apparent, but may be profoundly felt. It is my hope that in writing this paper I can encourage those who make assessments of environmental impacts to consider the sacred ways in which indigenous communities relate to their landscapes, so that these will not be unaccounted-for losses. Given their centrality and persistence in many indigenous communities, these practices and beliefs simply cannot be left out of the equation of environmental impact assessment.

## **Sacred Connections to the Environment**

Indigenous communities are not monoliths. The ways in which indigenous individuals relate to the environment are varied. There are group beliefs and practices as well as individual sentiments and practices. These may arise out of sacred stories, family traditions, political points of view, cosmologies, and other intersecting factors, in varied and complex ways. I hope this paper is not seen as perpetuating

false ideas, either that indigenous communities across the world, or specific indigenous communities, are homogenous in their relation to the environment. Indeed, I agree with Grim (2001b:xxxiv) who points out that “there is no one “indigenous” view on religion and ecology.”

That said, many authors have noted a common tendency in indigenous communities to possess a belief in the sacredness of the environment, which Berkes calls a sacred ecology (Berkes 2008:253). Darrel Posey (2001:3) states that for many indigenous communities “all creation is sacred.” According to Berkes “traditional knowledge systems tend to have a large moral and ethical context...in many traditional cultures nature is imbued with sacredness” (Berkes 2008:11). Berkes also states, in describing traditional ecological knowledge (TEK) systems “Almost universally, one encounters an ethic of non-dominant, respectful human-nature relationships, a sacred ecology” (Berkes 2008:252-253, emphasis added). *Indigenous Traditions and Ecology* (2001) presents many case studies of, to use the words of John Grim, “the ways in which environmental values are deeply implanted in indigenous cultural life” (Grim 2001:xlvi). These values are often central to the lives of indigenous communities.

Such environmental values are manifested in both beliefs and practices of indigenous communities. Many Native nations “have specific codes and instructions for taking care of the earth” and “land-based spiritual practices...rooted in an understanding of culturally and ecologically specific creation stories and oral histories” (Garcia and Nelson 2001:498-499). We can speak of these practices as part of a lifeway, a central, unified, organizing orientation (Grim 2001:xxxiii). As Gregory Cajete writes, “Our ceremonial traditions combined with practical knowledge expressed our orientation to sacred ecology and formed the basis for a theology of place.” (Cajete 2001:634) Such orientations may center on the broader environment, while also focusing on specific sacred places which draw sacredness from their association with oral traditions, pilgrimage routes, sacred stories, observatories, areas of gathering, areas for personal vision quests, places of group ceremonies, and other factors (Gulliford 2000:66-91). Many traditions emphasize respect for these sacred sites (Posey 1999:4). Such orientations towards the environment may play important roles in the identity of indigenous communities, what Nelson and Garcia (2001:501) describe as the “critical *ecological* context of cultural identity”; they indicate that this aspect of cultural identity has been severely impacted for many groups by environmental degradation).

We can therefore conclude that many indigenous communities possess diverse forms of connecting in meaningful ways to their environment. Many groups possess a “sacred ecology” by which they conceptualize and form sacred connections with the environment, connections that are often seen by these communities as under threat by human-induced changes in the environment. There is a risk that environmental impacts statements will have a narrow focus on how environmental alterations affect an indigenous community’s direct use of resources in that environment. If such direct uses have not been damaged, it is sometimes assumed that a community or a culture has not been damaged by environmental alterations. At times, however, while the direct ways indigenous communities utilize resources may have changed, their sacred connections with the land remain. This is the case because of the simple anthropological fact that cultures can change and yet still display continuity of values and practices.

### **Culture Change and Continuity**

Speaking as a cultural anthropologist, change in certain aspects of an indigenous community, such as language (through the adoption of English) or subsistence (through the adoption of western technology) does not automatically mean a change in the sacred ecology of a group or the community’s spiritual ways of relating to the environment. In fact, to argue that communities undergoing cultural change have *de facto* lost their sacred connections with the environment would take us dangerously close to the idea that cultures are static, isolated, and mutually exclusive. This line of thinking would

lead us to the erroneous assumption that an indigenous community showing any traits from Euroamerican society has lost its indigenous culture, which has been entirely supplanted by that Euroamerican culture. Such a view would contrast sharply with much of contemporary anthropological theory, which tends to see cultures as in flux, in contact with one another, and changing and continuing in complex and unpredictable ways. Much of contemporary anthropological work seeks to document and understand the complexity of culture change; see, for example, various articles recently published *American Anthropology* and *American Ethnologist*, such as Cepek (2011), Rosenblatt (2011), and Vora (2011).

In fact, there is quite a sophisticated discussion within social science on how culture change occurs. Pieterse (2004) details three prevalent models of understanding culture change as it occurs through globalization: one view is that cultures will inevitably clash, another is that cultures will homogenize over time, but a third option is that cultures can mix and blend elements without either culture disappearing, a concept sometimes called hybridity (Pieterse 2004). In this view, cultures can blend and change and yet still retain continuity in many ways. It is easy for some to interpret indigenous communities as having lost touch with their sacred connections to the environment because of culture change, but this misses the complexity of culture as understood by much of contemporary social science.

Refusing to acknowledge contemporary scholarship on culture change is not only incorrect academically; it is destructive to our very practical attempts to assess environmental damages to indigenous groups. Subscribing to the incorrect notion that indigenous communities which have undergone any culture change (for example, changes in subsistence) are, *de facto*, no longer connected to their environment, could lead us to not look at sacred uses of the environment which persist across time in indigenous communities, despite technological change, and which are often traumatically affected by environmental change. I will use a case study from my field research, and examples from the fieldwork of others, to show how changes in environmental quality have the potential to disturb and damage these connections. It will be seen that since these beliefs and practices are often deeply dependent upon the integrity of the environment, they are vulnerable to anything seen as affecting that integrity.

### **A Navajo Example: Snowmaking on the San Francisco Peaks**

The Navajo Nation is an example of an indigenous group which, while having undergone various changes linguistically, materially, and in population size, has a tradition which connects individuals to the environment and which many individuals still adhere to. The Navajo Nation, located in northeastern Arizona, southern Utah, and New Mexico, currently has a population of over 250,000, having risen from 90,000 around 1946, and under 20,000 in 1868 (Kluckhohn and Leighton 1962:23; Navajo Nation Department of Information Technology 2011).

In 2009, I conducted ethnographic field research in a community on the Navajo Nation. My research is described in Dunstan (2010), and here I will give only a brief overview of it. As an ethnographer, I detailed beliefs about the San Francisco Peaks, which is one of four sacred mountains—one for each cardinal direction—which play a prominent role in Navajo sacred stories, artwork, and ceremony. The San Francisco Peaks is the western of these four mountains, known also as *Dook'o'oosliíd*. I used semi-structured and open-ended interviews with consultants located in Leupp, Arizona, a community near this mountain. I studied ways that individuals conceptualized prospective environmental pollution on the San Francisco Peaks, and the ways in which they felt that such pollution would affect their practices and relationship with the mountain.

There seemed to be a common sentiment among my research sample that the San Francisco Peaks were important to the culture of the Navajo. Various beliefs were expressed about this mountain,

and though there was diversity among individuals there were also some salient common elements. Consultants (individuals I interviewed) expressed the view that the mountain was like a pillar, holding up the sky, and that the four sacred mountains demarcate the Navajo homeland within which Navajo are protected. A very common concept was that the San Francisco Peaks “are literally alive – a living, breathing being which can feel pain or joy”, and, as such, can be hurt by development like a human being is hurt by physical harm to his body (Dunstan 2010:19). The San Francisco Peaks were seen, as well, by some, as home to Deities or powerful spirits, as well as the home of sacred wildlife. Thus, the mountain plays an important role in the belief structure of many Navajo in Leupp, Arizona (Dunstan 2010:16-19). The San Francisco Peaks are also critical to ceremony and practice as described by some of my consultants. The mountain was compared by some to a church and is regarded as a place of worship. Consultants expressed that they go there to pray over their flocks and for whatever good things they need, and that it was a place of prayer and offerings (Dunstan 2010:16-19). These sacred connections of beliefs and practice are to some degree cultural, but also deeply personal, especially for residents of Leupp, AZ who live in close proximity to the mountain.

For many Navajo, when asked what makes something sacred, the answer was “life”, naturalness itself, and that all “nature” was sacred, yet it was clear that the Peaks were prominent in their lives. I was told multiple times that it was important to “respect” this mountain and that to respect it, it needed to be left alone, in a natural state, undisturbed. Some activities were appropriate on the mountain while others were seen as intrinsically disruptive.

One activity that was seen as disruptive by almost all of my consultants was artificial snowmaking. The context of this was a proposal by a ski resort located on the mountain to expand their operations and also start using artificial snowmaking machines. The Peaks, falling outside of the Navajo Nation, are administered by the U.S. Forest Service, which leases part of the mountain to the Arizona Snowbowl Ski Resort. In response to some winters of low snowfall, in 2002 the ski resort proposed the expansion of their resort and the use of artificial snowmaking machines to augment natural snowfall. The U.S. Forest Service issued Environmental Impact Statements regarding the proposal as part of the decision process, and decided to approve the snowmaking and other expansions. An important point is that the artificial snow was going to be made out of reclaimed water, what some call “treated wastewater”.

The decision to start artificial snowmaking was contested by environmental groups as well as the Navajo Nation itself, which challenged the snowmaking legally. Multiple lawsuits have been filed to date centering on environmental concerns, as well as concerns that snowmaking violated religious freedom protections and legal protections for tribal sacred lands under the Religious Freedom Restoration Act (RFRA) of 1993 (Glowacka and Washburn 2009:548; Save the Peaks 2010). In Dunstan (2010) I outline some suggestions for why my consultants saw snowmaking as desecration, and thus as a violation of sacred land legislation. I related anti-snowmaking sentiments to my consultants’ concerns with the innately unnatural nature of artificial snow and its disruptive impacts on nature. These concerns illuminate how environmental pollution (as defined by a group) can threaten sacred connections to the environment.

There were common concerns that the former nature of the snow as wastewater was disrespectful to a place of worship and disrespectful to the Navajo generally, and it was labeled as “poop snow” (Dunstan 2010:14). There were also concerns that snowmaking would be like “throwing chemicals on a person” or “injecting them with drugs”. These specific impacts on the local community only make sense when considering their sacred ecology, which includes a conception of the mountain both as a place of worship and as a living being (Dunstan 2010-15-17).

Other impacts described by individuals in Leupp also relate to the sacred ecology espoused by my consultants. It was felt, for example, that “the animals, the Deities, will all leave”, which would of course be a significant impact on use of the site as a place of prayer. The consultant who made this statement explained that offerings need to be done in an undisturbed place, and that artificial snowmaking and development would lead to no place on the mountain remaining undisturbed. Thus, if we were assessing the impacts of snowmaking on this indigenous group, we would conclude that for some individuals it could cause a cessation or at least degradation of their ability to use the mountains for prayer, assuming my data is correct. This impact has little to do with direct economic use of the mountain, but it is nonetheless very significant. Another significant potential impact identified was contamination of medicinal plants so that they would be unusable, and thus unavailable for healing practices in this community.

These concerns are correlated with a belief in the sacred ecology of many of my consultants, which posits that the San Francisco Peaks should be respected by being left in a natural state, a state which, in the eyes of many, artificial snow was intrinsically counter to by being artificial. Taking, for a moment, the perspective of this sacred ecology, we can see why many people in my sample felt that artificial snowmaking would damage their relationship with the mountain (Dunstan 2010).

Despite some changes in the Navajo Nation through time, many individuals maintain strong connections to this sacred place, and decisions to alter the state of the environment have the potential ability to dramatically impact Navajo connections to this mountain.

### **Other Examples**

Other examples illustrate how human impacts on the environment can impact the beliefs and practices of indigenous communities towards their landscapes. Although I will be citing writings by other authors, I accept full responsibility for my conclusions and any misperceptions or misrepresentations of their work on my part.

Gonzales and Nelson (2001) outline the responses of indigenous peoples to a proposed low-level radioactive waste dump in Ward Valley, located in the Mojave Desert in California. Ward Valley is administered by the U.S. Bureau of Land Management (BLM). The Department of the Interior (DOI) (which includes the BLM) had committed to the sale of this land by 1993. In response, the Fort Mojave, Chemehuevi and Colorado River Indian Tribes sued the DOI, citing the Endangered Species Act. Various legal battles ensued which I do not have the space to cover here (Gonzales and Nelson 2001:523-525). However, an important aspect of this case is that the land is regarded as sacred ground by five local tribes who “oppose the illegal poisoning of their traditional homelands on the basis that it would violate their religious freedom, cultural heritage, and environmental health” (Gonzales and Nelson 2001:527). Resistance to the waste site was prompted by collaboration from non-native environmentalists, protestors, and cultural activists who “oppose degradation of environmental quality [because] the land has, in addition to its ecological value, spiritual and cultural significance” (Gonzales and Nelson 2001:527). Although not the only concern, the impacts on the “spiritual and cultural significance” of this land were an important element in why the waste site was opposed.

Another example is described by Laurie Anne Whitt (1999; 2009) and deals with Cherokee resistance to the construction of the Tellico dam in Tennessee. Many of the Cherokee objections were based on threats posed by the dam to Cherokee cultural heritage. (Whitt 1999:69; Whitt 2009:30) A medicine man, Ammoneta Sequoyah, explained that flooding the valley or digging up graves as part of dam construction “would destroy ‘the knowledge and beliefs of [the] people who are in the ground’...including knowledge of medicinal plants” (Whitt 1999:69; Whitt 2009:30). Not only would medicinal plants themselves be lost, Whitt (2009:30) explains, but, according to Mr. Sequoyah, the knowledge of the plants would be lost. When someone like he, with knowledge about these plants, is

buried, he returns his knowledge to the land, where said knowledge can be gained and experienced by subsequent generations. If the land is submerged, the ability to gain such knowledge is lost. This conception of knowledge transmission, wherein nature and knowledge are intertwined, differs sharply from western conceptions of knowledge/culture as distinct from nature. The Cherokee/Tellico dam example illustrates the importance of considering impacts of environmental alterations on sacred knowledge.

Climate change can also have significant impacts on indigenous communities' sacred connections with the environment, as summarized in Turner et al. (2008). Climate change and development can affect people's sense of security and well-being by altering the expected cycles of life. The Inuit of Alaska and northern Canada, as described by Turner, have for generations marked the coming of the seasons with activities and ceremonies linked to animal migrations. In recent decades, however, the timing of these activities has had to change from early June to even as early as late-April because of climactic shifts. These changes can affect the well being of a group and produce anxiety by interrupting predictable elements of life.

Finally, Lewis & Shepperd (2005) describe perceptions of forests by the Cheam First Nation in British Columbia as well as how deforestation can impact sacred relationships with the environment. They discuss traditions about the forest as still being important in contemporary Cheam life. The forest is seen as a place of both physical and spiritual sustenance, a catalyst for social relationships, a source of personal and cultural identities, and a foundation of spirituality. Clear-cutting is seen as having destroyed this source of sustenance, and having left the land in need of restoration. Cheam consultants expressed the need for "respect" for the land, as well as for respectful forestry.

These examples showcase a variety of indigenous communities across the United States and Canada that have deep connections to the environment, whether it be as a marker of the annual cycles, spiritual sustenance, or as places of spiritual and cultural significance. These connections are very real in contemporary times and can be profoundly affected by such environmental changes as climate change, nuclear waste, flooding, and deforestation. The common thread in all of these is that human-induced changes in the environment can deeply impact indigenous sacred connections with the environment.

### **Using Indigenous Frameworks in Assessment**

In this paper I have attempted to show three simple points. The first is that indigenous cultures often possess sacred beliefs, practices, and connections towards the environment. These vary, both across and within groups, but there is also a common thread of seeing the environment as sacred, respecting it as such, and using it both for material and spiritual sustenance. The second point is that such sacred connections may persist in a culture, even if certain indigenous practices have changed. This is important to realize as we conduct environmental impact analyses in 2012 and beyond, when many indigenous communities have experienced certain types of culture change. Finally, I have attempted to show by case studies among the Navajo, the Fort Mojave, Chemehuevi and Colorado River tribes, the Cherokee, the Inuit, and the Cheam First Nation, that such connections can be profoundly impacted by alteration and pollution of the environment induced by human beings.

Drawing together these points, we should arrive at the conclusion that any analysis of the impacts of a past, present, or proposed future alteration of the environment of an indigenous community, which does not analyze the effects of said alteration on the community's beliefs and practices towards the environment, will be inadequate. Directly measurable impacts on physical health and the economy of native groups are important to consider, but are not the only effects of land use decisions; we should also consider the no-less powerful impacts of environmental alterations on the practices, rituals, prayers, beliefs, and other sacred uses of the environment by a community. On both

theoretical and practical grounds, such sacred connections (and damages to them) cannot be ignored simply because outsiders perceive an indigenous community as having changed. Impacts on tribal groups' sacred relationships with their landscapes, whether blatant or subtle, are a significant part of the damage that may be done to an indigenous community by changes in the environment. To the extent that environmental managers include these impacts on sacred connections to the environment, they make positive steps towards equitable environmental justice for *all* communities. This will only be possible by incorporating multiple ecologies into our analysis, even sacred ones.

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