

**NATIONAL TRIBAL RISK ASSESSMENT FORUM: DEFINING TRIBAL APPROACHES IN
ENVIRONMENTAL RISK ASSESSMENT INDIGENOUS PEOPLES PERSPECTIVES CONCERNING
RADIOACTIVE WASTE MANAGEMENT**

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ABSTRACT

Conventional risk assessments typically focus solely on reducing human exposure with minimal attention given to environmental and ecological goals and none given to values-based indigenous cultural goals. Thus, risk measurements for ecological and cultural impacts are almost totally ignored. The Nez Perce Tribe, and perhaps other tribes, identify at least three health impacts other than exposure. These include spiritual, emotional, and physical impacts. The tribal risk assessment approach usually incorporates indigenous cultural values and the holistic philosophy of the relationship between humans and the environment. The holistic approach defines human health in a broad way to mean health, environment, and culture. This holistic approach considers indirect health effects, the knowledge held by tribal elders about the significance of natural resources to the Nez Perce people, and tribal community-based knowledge on how contaminants impact cultural identity. Hence, a tribal risk model defines each living organism as connected to every other living organism. Harm caused to any living thing also harms the whole. Although the tribal risk assessment task is formidable, tribes must acknowledge and understand the concept of risk assessment in the broader context of policy and decision-making. Tribes must become technically and scientifically adept at using the risk assessment tool, and must be administratively proficient in managing risks for tribal communities.

INTRODUCTION AND BACKGROUND

The broad context of decision-making in which tribes must insert a relevant risk assessment model is politically challenging, being defined by powerful federal entities. Budget battles have been instigated by the United States Congress which is largely unresponsive or outright hostile to tribal priorities and community-building/preservation initiatives. Many federal agencies (i.e. the U.S. Department of Energy), in response to deficit reduction mandates and the resulting cuts in agency budgets, the massive task and cost of weapons complex clean-up, have embarked on a path which leads to a risk-based clean-up prioritization scheme and budgeting process.

Current human health risk models assume that 1 in 100,000 or 1 in 1 million human deaths are an acceptable risk for society as a whole. These numbers, however, could spell total elimination of the Nez Perce Tribe in a region-wide assessment considering Nez Perce consumption patterns, lifestyles and population levels. Moreover, at risk are the traditional cultural practices of the Nez Perce Tribe. Elders with extensive traditional knowledge and lifestyles are those tribal members with the highest chronic exposures. Although there are some sound risk assessment processes that are applied to derive numbers such

as those mentioned above, arbitrary criteria are also sometimes imposed, resulting in the inapplicability of those derived numbers in evaluating risks to tribal members and tribal resources.

In an effort to ensure that the Nez Perce Tribe will not be marginalized or become the "acceptable" deaths to society as a whole, the Nez Perce Tribe Environmental Restoration and Waste Management Department (ERWM) began developing its own risk assessment model. The tribe is adding significantly to a constructive dialogue based on evidence that U.S. DOE and Congress cannot ignore. Aside from the politics of making clean-up decisions, the tribal risk assessment tool can be used to build tribal infrastructure and technical expertise and can be utilized for cultural and natural resource protection. Moreover, this tool can help justify budget priorities and can enhance tribal standing in areas where scientific excellence is a requisite.

The Nez Perce Tribe became officially involved in the tribal risk assessment arena in 1993 after determining that current risk models do not account for the myriad of activities that take place when tribal people interact with the environment. For example, any given resource has nutritional, ceremonial, material and religious uses (Harris, 1993). In collaboration with other tribes that have similar lifestyles, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), with scientific guidance from Dr. Barbara Harper of the Pacific Northwest National Laboratory (PNNL), has developed a tribal approach to risk assessment (Harris, 1996; Powauke and Cruz, 1995; Conrad et. al., 1996).

The Nez Perce Tribe has also participated in DOE-sponsored research including the Consortium for Environmental Risk Evaluation (CERE) and the Consortium for Risk Evaluation with Stakeholder Participation (CRESP). In late 1995, the Nez Perce Tribe was approached by Xavier University's Center for Environmental Programs to expand the work of CERE on tribal and public involvement. In early 1996, the Shoshone-Bannock Tribes hosted the first forum. The second was hosted by the Nez Perce Tribe in October, 1996. The CTUIR and the Yakama Indian Nation have indicated interesting in hosting subsequent forums. These national forums have promoted an indigenous approach to risk-based decision-making.

THE NEZ PERCE APPROACH TO RISK ASSESSMENT & BUILDING TRIBAL EXPERTISE

The Nez Perce Tribe, through the participation of its ERWM Department staff, has been represented at workshops, training, forums and meetings that deal with risk assessment and management. Through these activities, tribal management infrastructure and technical/scientific expertise in risk related areas were enhanced. ERWM staff have presented papers and participated in developing guidance papers that demonstrate the alternative tribal approach to environmental risk assessment (Powauke, et.al., 1995; Conrad, et.al., 1996; and Shoshone-Bannock Tribes, 1996). Nez Perce representatives have also aired their concerns within the CERE process and through an alternative and more comprehensive tribal risk issues document that was delivered by the CTUIR to CERE (CTUIR, 1995).

When Xavier University approached the Nez Perce Tribe asking that the tribe work on a tribal risk assessment model, the parties immediately formulated a MOU. In collaboration with Xavier University and other affected tribes, a national risk forum working group was created and the national tribal risk forums emerged. It was envisioned that through these forums tribal policy makers and technical staff could become conversant with risk assessment and gain knowledge of how other tribes deal with environmental risk and the approaches they take. Tribal history is full of instances where tribes have gained new technologies or approaches from different tribes and adapted them to their needs.

On the tribal risk assessment model, the Nez Perce ERWM Department's approach was to hire an assessor and a technician to work full-time in this area. Although consultants can be hired to gather the necessary information and data and to formulate models, it was decided to undertake the work internally to develop the tribe's expertise in model development and in risk management. It was envisioned that by pioneering such an effort, the Nez Perce Tribe would become competitive in the contracting arena. The tribe could provide the same service to indigenous peoples and also for mainstream society. The forums became the founding places for tribal guiding principles for risk assessment and also resulted in specific information necessary to formulate the tribal model.

BASIC PRINCIPLES OF THE NEZ PERCE APPROACH

Many of the basic principles to be outlined in this section are common not only to tribes in the U.S. but also to indigenous peoples around the world. Tribes and other indigenous people are stewards of the earth and define themselves as having a perpetual responsibility to future generations. Such responsibility is upheld in their teachings, stories, traditions, values and

beliefs. Therefore, risk assessments of impacts to tribal land and resources must recognize and incorporate spiritual values, cultural values and activities, mental and economic well-being, and overall quality of life.

The Nez Perce believe that all elements of nature (soil, water, air, sky, plants, animals, etc.) are interconnected. The whole cannot survive with an absence of one element. Any ranking and tradeoffs of these elements are unacceptable to tribes. Thus, risk assessment must also incorporate and evaluate the long-term and perpetual effects of contaminants in the natural world, as opposed to the conventional practice of designating a "safe level" at which a contaminant can be introduced into the environment. In order to preserve the Nez Perce culture and traditions and to ensure the survival of the people and homeland, biological diversity must be protected. Therefore, risk and mitigating impact assessments must utilize the philosophies handed down from generation to generation, use the knowledge of plants and animals, and acknowledge the tribe's cultural relevancy.

Traditional Nez Perce values and knowledge and the contribution they make to science and technology, must be incorporated into the risk assessment process. Risk assessment must utilize a more holistic approach, acknowledge all components of the web of life and more appropriately inform risk-based decision-making, so that tribal resources are more aptly protected.

THE NATIONAL TRIBAL RISK FORUM

The first tribal forum, held in June, 1996 and hosted by the Shoshone-Bannock Tribes, set the stage for the second forum. Attendees were all tribal members or tribal staff involved in environmental management. At that meeting, discussion groups convened to develop conceptual papers on various tribal perspectives relative to risk-based decision-making, including ideas on models that are applicable to tribes. Speakers and presenters were either tribal members or staff who are scientists or risk assessment experts. The second tribal forum was held on October 8-12, 1996 and was structured in the same format as the first, but expanded the number of attendees. In addition, there was a three-hour pre-forum workshop which introduced new participants to the basics of environmental risk assessment.

In addition to the traditional ceremony that the Nez Perce routinely conduct at any important activity, the first day of the Nez Perce forum was highlighted by a keynote speech from Jaime Pinkham, a Nez Perce Tribal Executive Committee member who has in-depth knowledge of natural resources. He has experience as a forestry scientist. The keynote speech was followed by a summary of the result of the first forum and an overview of risk assessment in the National Environmental Protection Act (NEPA) process. Jeannette Wolfley of the Shoshone-Bannock Tribes presented this. A slide presentation on the wildlife of the Hanford site was presented during the lunch break by ERWM's wildlife biologist. The afternoon was highlighted by a panel of Nez Perce elders named Circle of Elders. Each elder talked about past environmental activities, voiced concerns about current environmental degradation, and discussed how abundant and diverse the natural resources were. Traditional philosophies, as alluded to earlier, will be salient components in risk assessment and in the mitigating activities involved in environmental management. Finally, according to the traditional notion of hospitality, the day was capped off with a traditional Nez Perce dinner consisting of salmon, elk, fry bread, wild berry pies, and other customary food.

The second day of the forum was highlighted by the sharing of tribal experiences with different risk assessment and management models. A Native American exposure scenario and a tribal risk model was presented by Stuart Harris of the Confederated Tribes of the Umatilla Indian Reservation. His presentation was unique and pioneered an exposure scenario that encompasses the guiding principles previously mentioned. The main thrust of such an endeavor is to impart to other tribal people the expertise that is needed to participate in technical and policy debates and discussions as equal and respected partners. Aside from conventional human exposure and toxicity the preliminary tribal risk model included both ecological and cultural exposure/toxicity in the risk characterization area. Another pioneering work presented was the Native American Exposure Scenario that detailed a more suitable exposure assessment with a single species. The subsistence exposure scenario encompasses the following: a) is based on actual lifestyle; b) reflects traditional activities and diets; c) includes a sweat lodge exposure route; d) suited for hot, arid climates; and e) versatile to specific situations. The approach presented can provide practical solutions that maximize protection and benefits to the indigenous people.

The Colville Confederated Tribes also presented their holistic resource management approach and experience. The holistic process acknowledges the importance of human resources as a vital link in achieving sustainable resource management. Enhancing human potential and creativity is the greatest asset of any entity. Tribal members are the experts in managing their resources. Involving the tribe's culture, values, and traditions in every phase of resource management is crucial.

A tribal scientist from Northern Arizona University discussed the Environmental Protection Agency (EPA) proposed guidelines for ecological risk assessment (EPA, 1996.) The guidelines include three primary phases: Problem formulation, analysis, and risk assessment. The guidelines describe principles and provide examples to show how ecological risk assessment can be applied to a wide range of systems, stressors, and biological, spatial, or temporal scales. The guidelines are structured such that risk assessment results can be used to support management decisions. Ensuring success of decision outcomes relies on the communication and cooperation between the risk assessors and the environmental managers.

A tribal risk assessment model developed by Dr. Vietchau Nguyen was also presented. The model is capable of addressing the native cultural value system, consisting of a physical submodel and a holistic submodel. The model can be used as a dynamic framework to identify and address relevant issues arising from cultural, technological, and institutional entities. Specific legal interpretation based on results of a tribal risk model can assist in the incorporation of a tribal value system and treaty rights in the context sensitive risk assessment/management process. In the afternoon, tribal commonalities and methodological approaches were scooped out and discussed.

The day culminated with a pow-wow at the reservation in honor of J. Herman Reuben, who was a respected elder, a Nez Perce cultural scientist, and the pioneer who first involved the Nez Perce Tribe in environmental management activities at the Hanford site.

The third day of the forum was devoted to working sessions to determine next steps. Comments, suggestions and other input was solicited from the attendees. Suggestions for the next tribal risk forum were also solicited. Lessons learned and commonalities were documented.

CONCLUSION

The National Tribal Risk Assessment Forum provides an excellent basis for promoting a more sensible approach to tribal risk assessment. It is critical that any person working in risk assessment and risk management have a holistic view of tribal use of resources, exposure and the resulting risks. By acknowledging and protecting tribal traditional values, cultures, philosophies, beliefs, lifestyles and teachings, indigenous peoples will survive and be more adequately protected from environmental contaminants and hazards imposed on the web of life by humans.

The forum also succeeded in building Nez Perce expertise in hosting activities of this caliber. The forum gathered different tribes and tribal experts from around the country and was the second national/ international activity that the Nez Perce have had the privilege of hosting.

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