Integrated Environmental Assessment and Management — Volume 1, Number 1—pp.83–85

Protecting Native Americans Through the Risk Assessment Process: A Commentary on "An Examination of U.S. EPA Risk Assessment Principles and Practices"

*Pamela Bridgen**

Environment International, 5505 34th Avenue NE, Seattle, Washington 98105, USA

(Received 8 July 2004; Accepted 23 July 2004)

Keywords: Contamination Cultural Native American Risk Subsistence

INTRODUCTION

The recent United States Environmental Protection Agency (U.S. EPA) staff document "An Examination of EPA Risk Assessment Principles and Practices" (Examination) is a good first step in improving the quality of risk characterization to human health and the environment (USEPA 2004). As with every first step, however, there is room for improvement. The Examination acknowledges that protection of subgroups of the national population, such as Native Americans who rely upon subsistence and cultural practices, is not considered under the current risk assessment process (USEPA 2004). Despite this admission, regrettably, the Examination does not provide clear direction concerning how future risk assessment policies and practices will protect Native Americans and their culture.

Until the U.S. EPA incorporates the protection of the health of Native American communities and the ecology that is inextricably linked to the many cultures that comprise this stakeholder group into its risk assessment principles and practices, Native Americans will be forced to negotiate appropriate levels of protection on their own behalf, requiring considerable transaction costs and unflagging diligence, with few assurances or guarantees that these protections will be met by federal and state agencies.

The U.S. EPA has a duty to protect all segments of the population, including Native Americans who rely upon fish, wildlife, and plants for cultural and subsistence purposes. In addition, treaties with the federal government protect Native American rights in the use of these resources. The National Congress of American Indians recently passed a resolution calling upon the U.S. EPA to uphold statutory, treaty, and trust responsibilities when making decisions that affect tribes (NCAI 2004). With 562 federally recognized tribes exercising their subsistence and cultural rights across 55.7 million acres of tribal trust lands in the United States, in addition to regular and accustomed regions, permitting actions and hazardous cleanups that fall under the jurisdiction of the U.S. EPA and other federal and state agencies will continue to impact Native Americans (see, e.g., http://www.doi.gov/bureau-indian-affairs.html).

The purpose of this commentary is to provide a better understanding of how Native American rights and cultural practices should be accounted for by the U.S. EPA's risk assessment process to ensure the requisite level of protection of the health and way of life of this unique group of citizens. Following a brief discussion on tribal culture and how that culture needs to be incorporated into the risk assessment process, this commentary outlines the necessary steps that must be implemented to provide adequate protection to tribal peoples. This commentary is based on my previous work assisting Native American tribes in the Pacific Northwest region of the United States with hazardous waste cleanups, water quality criteria issues, and water discharge permits that affect their lands and culture.

* To whom correspondence may be addressed pj.bridgen@eiltd.net

TRIBES AT UNIQUE RISK

Level of protection

As stated in the Examination, there are many views on what "adequate" protection is, and some may consider the risk assessment that supports a particular protection level to be "too conservative" (i.e., it overestimates risk) (USEPA 2004). Risk assessment practices applied to the average American are by no means overly protective or conservative. In general, the U.S. EPA takes a reasonable approach to address uncertainty and variability by striving to protect the normal distribution of sensitivities within the population (USEPA 2004). It is generally understood that avoiding or eliminating risk to all persons, including the most sensitive individuals, would produce wildly speculative and unrealistic results that would be overly burdensome to enforce, severely limit almost any permitting action, and very likely lead to impossible cleanup standards at contaminated sites.

For Native American populations, however, it is essential to use exposure factors that represent their way of life, especially their consumption of fish and wildlife and reliance on plants for food, medicinal, and cultural purposes. Individual tribal-specific data should be used when available. The 90th or 95th percentile risk estimate should be used to protect Native American populations. These approaches are consistent with the National Research Council, which supports the use of the 95th and 99th percentile as being reasonable (NRC 1994). If tribal-specific data are not available, other relevant tribal data should be used, or data necessary to accurately represent the tribal way of life should be developed. Additionally, it should be remembered that for Native Americans, the risk assessment process not only protects their health, but also protects their culture and way of life.

From time immemorial, Native Americans have been self-reliant through hunting, fishing, and gathering. These activities, however, serve a purpose beyond subsistence. Fishing,

hunting, and gathering activities support a way of life that is deeply rooted in cultural tradition and religious beliefs and practices. Plants and animals are consumed for religious and ceremonial purposes. For example, plants are burned in cultural practices such as sweat lodges, increasing the risk of inhaling toxic contaminants that may have bioaccumulated in plants that are harvested as Native American resources. Regardless of the risk that contamination poses, Native Americans continue to exercise such cultural and subsistence practices. It has been recorded in judicial proceedings that these activities are no less important to Native Americans than the air they breathe (*United States v. Winans*, 1905, 198 U.S. 371, 381, 1905).

The Examination states that where data gaps exist it is reasonable to utilize default values (USEPA 2004). The default values must, however, be relevant to the individual, community, or population that requires protection. Where Native Americans are concerned, defaults based on the average American are not reasonable. For example, the 1994 Columbia River Intertribal Fish Commission (CRITFC) study cited by the U.S. EPA (USEPA 2004) in the Examination shows that Native Americans in the Columbia River basin of Oregon have a high fish consumption rate of 389 g of fish/d, with rates ranging as high as 972 g of fish/d. In contrast, the high-end consumption rate of the entire American population is 142.4 g of fish/d (CRITFC 1994). Other resources relied upon by Native Americans in the United States include plants and animals such as pond lilies, sweet grass, caribou, moose, and deer. It is likely, based on knowledge of tribal practices, that the consumption of these natural resources differs from and exceeds average consumption rates in the American population. In summary, Native Americans are likely exposed to contaminants in the environment at rates disproportionate to those of the general population.

Incorporation of policy decisions

Policy decisions to protect Native American culture should be incorporated into the risk assessment process or, at a minimum, include an explanation of why such decisions concerning the protection of Native American peoples have been excluded. According to the U.S. EPA (USEPA 2004), important policy decisions should not be intermingled with the risk assessment process. Yet the intersection between science and policy is unavoidable, which is acknowledged in the Examination. In order for a risk assessment to provide useful information, certain policy decisions must be made before the risk assessment is conducted. This intersection is apparent throughout the Examination, encompassing aspects ranging from whom the risk assessment is designed to protect to the design of the risk assessment itself. Bias from policy decisions can be accounted for by presenting them clearly and transparently.

In the face of diminishing natural resources and increasing environmental contamination, Native American cultures across the United States continue to maintain subsistence and cultural practices. Sadly, however, some Native Americans are no longer able to consume natural resources because of high levels of environmental contaminants or the absence of wild populations of animals. For instance, at present the Penobscot Tribe in Maine is unable to eat the fish to which they have enforceable treaty rights because contamination of state waters has rendered the fish unsafe for consumption (see http://www.penobscotnation.org/DNR/DNRII/contamination.htm).

It should be an obligation of the U.S. EPA that risk assessments not only protect current subsistence and cultural practices among Native Americans, but also promote and enhance the restoration of those tribal practices and values that are protected by treaties between tribes and the United States. Such an approach would likely send a positive message to Native Americans, many of whom are working to return to subsistence practices and reinvigorate their cultural heritage. For example, the Klamath Tribe in Northern California is taking steps to restore tribal lands to sustain subsistence populations of fish and wildlife (see http://www.klamathtribes.org/tribal-lands-restoration.htm, as well as http://eesc.oregonstate.edu/agcomwebfile/edmat/html/sr/sr1037/sr1037.html), and in the Midwestern United States, the Great Plains Indians are working to restore bison populations to subsistence levels (Chadwick 1998).

RECOMMENDATIONS

The Examination recognizes that an overarching policy is "needed to improve the ease and consistency of risk assessment for susceptible populations and life-stages" (USEPA 2004). Consistent with this statement, the U.S. EPA should be encouraged to develop guidance that (1) establishes a process to investigate and identify when contamination on or off tribal lands may impact Native Americans, (2) develops adequate default assumptions for use in exposure assessments where site-specific data are absent, (3) enhances cooperation with tribal governments and tribal members to ensure that adequate protective measures are implemented, and (4) ensures that risk assessments provide appropriate protection of aquatic and terrestrial wildlife and plant populations that, in turn, protect tribal subsistence and cultural practices.

The Examination acknowledges Executive Order 21898, which prohibits discrimination against minority groups such as Native Americans (Executive Order 12898 1994). To further this mandate, the U.S. EPA has been directed "whenever practicable and appropriate to...collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence" (Executive Order 12898 1994). Until resources are available to address data gaps, studies such as the CRITFC (1994) fish consumption study should be used to provide default values in risk assessments for all Native American populations.

Native Americans, like all persons in the United States, are guaranteed the full protection of the laws of the United States. In addition, the federal government holds a unique responsibility and fiduciary duty toward Native Americans established through statutes, treaties, executive orders, and court precedent. Since as early as 1831, the U.S. Supreme Court has recognized a general trust duty toward Native Americans and identified tribes as wards of the United States (*Cherokee Nation v. Georgia*, 5 Pet. 1, 16, 30 U.S. 1, 1831). Only by more careful consideration of Native American populations in its risk assessment principles and practices will the U.S. EPA's risk assessment process begin to truly serve its purpose of protecting all citizens from environmental harms, whether it be through the issuance of a water discharge permit, the creation or approval of water quality standards, or determining cleanup levels at contaminated sites.

REFERENCES

Chadwick D. 1998. Rebirth on the Great Plains—Bison on Native American lands restores cultural outlook. *Natl Wildl* 36(3):20–29.

[CRITFC] Columbia River Inter-Tribal Fish Commission. 1994. A fish consumption survey of the Umatilla, Nez Perce, Yakama, and Warm Springs Tribes of the Columbia River Basin. Portland (OR), USA: CRITFC. Technical Report 94-3.

Executive Order 12898. 1994. Federal actions to address environmental justice in minority populations and low-income populations. 59 FR 7629. *Fed Reg* 59:7629–7633.

[NCAI] National Congress of American Indians. 2004. Use of tribal fish consumption rates by EPA. Resolution MOH-04-023. June 21.

[NRC] National Research Council. 1994. Science and judgment in risk assessment. Washington DC: National Academies.

[USEPA] U.S. Environmental Protection Agency. 2004. An examination of EPA risk assessment principles and practices. Washington DC: Office of the Science Advisor. EPA 100/B-04/001.