Essay

Biodiversity Conservation and Indigenous Land Management in the Era of Self-Determination

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Abstract: *Indigenous people inhabit approximately 85% of areas designated for biodiversity conservation worldwide. They also continue to struggle for recognition and preservation of cultural identities, lifestyles, and livelihoods—a struggle contingent on control and protection of traditional lands and associated natural resources (hereafter, self-determination). Indigenous lands and the biodiversity they support are increasingly threatened because of human population growth and per capita consumption. Application of the Endangered Species Act (ESA) to tribal lands in the United States provides a rich example of the articulation between biodiversity conservation and indigenous peoples' struggle for self-determination. We found a paradoxical relationship whereby tribal governments are simultaneously and contradictorily sovereign nations; yet their communities depend on the U.S. government for protection through the federal-trust doctrine. The unique legal status of tribal lands, their importance for conserving federally protected species, and federal environmental regulations' failure to define applicability to tribal lands creates conflict between tribal sovereignty, self-determination, and constitutional authority. We reviewed Secretarial Order 3206, the U.S. policy on "American Indian tribal rights, federal–tribal trust responsibilities, and the ESA," and evaluated how it influences ESA implementation on tribal lands. We found improved biodiversity conservation and tribal self-determination requires revision of the fiduciary relationship between the federal government and the tribes to establish clear, legal definitions regarding land rights, applicability of environmental laws, and financial responsibilities. Such actions will allow provision of adequate funding and training to tribal leaders and resource managers, government agency personnel responsible for biodiversity conservation and land management, and environmental policy makers. Increased capacity, cooperation, and knowledge transfer among tribes and conservationists will improve biodiversity conservation and indigenous self-determination.*

Keywords: biodiversity conservation, Endangered Species Act, federal–tribal trust responsibilities, indigenous lands, indigenous peoples, Secretarial Order 3206

Conservación de la Biodiversidad y Manejo de Tierras Indígenas en la Era de la Autodeterminación

Resumen: *A nivel mundial, comunidades indígenas habitan aproximadamente 85% de las áreas designadas para la conservación. También continúan luchando por el reconocimiento y preservación de sus identidades culturales, estilos y formas de vida – una lucha contingente sobre el control de tierras tradicionales y los recursos naturales asociados (en lo sucesivo, autodeterminación). Los terrenos indígenas y la biodiversidad que sostienen están amenazados por el crecimiento de la población humana y el consumo per cápita. La aplicación del Acta de Especies en Peligro (AEP) a tierras indígenas en los Estados Unidos es un buen ejemplo de la articulación entre la conservación de la biodiversidad y la lucha de los pueblos indígenas por su autodeterminación. Encontramos una relación paradójica por medio de la cual los gobiernos tribales son naciones soberanas simultánea y contradictoriamente, no obstante sus comunidades dependen del gobierno de E. U. A. para protección mediante la doctrina de la coalición federal. El estatus legal único de las tierras tribales, su importancia para la conservación de especies protegidas federalmente, el fracaso de las regulaciones ambientales federales para definir su aplicabilidad a tierras tribales crea un conflicto entre la soberanía tribal, la autodeterminación y la autoridad constitucional. Revisamos la Orden Secretarial 3206,*

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la política de E. U. A. sobre "los Derechos Tribales de Indígenas Americanos, las responsabilidades de la coalición federal-tribal y el AEP," y evaluamos cómo influye en la implementación de AEP en tierras tribales. Encontramos que la mejoría en la conservación de la biodiversidad y la autodeterminación tribal requiere la revisión de las relaciones fiduciarias entre el gobierno federal y las tribus para el establecimiento de definiciones claras y legales en relación con los derechos territoriales, la aplicabilidad de las leyes ambientales y las responsabilidades financieras. Tales acciones permitirán la asignación de financiamiento adecuado y capacitación para líderes tribales, manejadores de recursos, personal de agencias de gobierno responsables de la conservación de la biodiversidad y la gestión de tierras y políticos. La mayor capacitación, cooperación y transferencia de conocimiento entre tribus y conservacionistas mejorará la conservación de la biodiversidad y la autodeterminación indígena.

Palabras Clave: acta de Especies en Peligro, conservación de la biodiversidad, indígenas, Orden Secretarial 3206, tierras indígenas, responsabilidades de la coalición federal-tribal

Introduction

More than 370 million indigenous people in 70 nations have "retained social, cultural, economic and political characteristics that are distinct from those of the dominant societies in which they live" (UN Permanent Forum on Indigenous Issues http://www.un.org/esa/socdev/unpfii/en/history.html). Although this represents only about 5% of Earth's human population, indigenous people inhabit approximately 85% of Earth's protected areas (Alcorn 2000). Moreover, "the great majority of world's relatively pristine habitats are inhabited by Indigenous Peoples," with the extent of indigenous lands rivaling areas protected as national parks or biodiversity reserves (Colchester 2001). Indigenous people continue to struggle for recognition and preservation of cultural identities, lifestyles, and livelihoods—a struggle contingent on protection and control of traditional land bases and associated natural resources (hereafter, self-determination). Recognition of indigenous peoples as among the most vulnerable segments of humanity led to several international human rights initiatives (e.g., UN Permanent Forum on Indigenous Issues) and two International Decades of the World's Indigenous People (1995–2004, 2005–2015). Exponential growth in both human numbers and per capita consumption threaten the lands of indigenous peoples, the considerable biodiversity these lands support, and the cultural identities, lifestyles, and livelihoods of indigenous peoples.

Previously, global initiatives to alleviate poverty or to protect the rights of indigenous people remained distinct from efforts to slow biodiversity loss. Biodiversity conservation initially took a wilderness or colonial-conservation approach, in which national parks and reserves were established and human occupants, including indigenous groups, were often forcibly expelled (Colchester 2000, 2004). Subsequently, the role of indigenous people in biodiversity conservation has been highly debated (Chicchón 2000; Schwartzman et al. 2000*a*, 2000*b*; Terborgh 2000). Environmental policy makers are now nearing a consensus that conservation approaches that violate the rights of indigenous people to control their traditional lands and related natural resources exacerbates poverty and threatens indigenous peoples' viability as distinct cultural groups. The right of indigenous peoples to maintain control of their lands is now legally established and recognized internationally (Colchester 2004). Furthermore, conservation strategies that disregard the rights and needs of indigenous peoples typically also are detrimental to biodiversity conservation because indigenous occupants serve numerous important roles in protecting and maintaining natural areas (e.g., Delcourt 1987; Saleh 1998; Schwartzman & Zimmerman 2005; Xu et al. 2005; Nepstadt et al. 2006).

Most major international conservation organizations recognize that indigenous self-determination is critical for biodiversity conservation and indigenous cultures (e.g., Conservation International, The Nature Conservancy, and World Wildlife Fund [WWF]) and are implementing long-term, cooperative strategies that recognize indigenous groups as unique stakeholders in biodiversity conservation. For example, the International Union for Conservation of Nature (IUCN) and WWF (2008) issued a joint policy statement acknowledging indigenous groups' rights to control traditional lands and outlined guidelines to ensure conservation strategies and establishment of protected areas are congruent with indigenous groups' rights and needs. Such a priori evaluation of the potential effects of biodiversity-conservation strategies on indigenous peoples is a major shift from prior approaches that largely ignored indigenous people.

Indigenous peoples and their lands in the United States provide an excellent opportunity to evaluate the relationship among self-determination by indigenous peoples, biodiversity conservation, and governmental statutes, regulations, and policies. We use the term *American Indian tribes* to refer to the >500 federally recognized and unrecognized tribes descended from the indigenous inhabitants of the lower 48 United States and Alaska Native peoples (Alaska Native Claims Settlement Act [43 U.S.C. 1601–1629h]). Although Alaska Native peoples do not refer to themselves as tribes, most U.S. statutes and

regulations define *tribes* to include them, so we complied with this convention for simplicity and refer to lands occupied and controlled by these groups as tribal lands.

In the contiguous 48 states, federally recognized American Indian tribes control nearly three times more land than does the National Wildlife Refuge System (21 vs. 8 million ha; Native American Fish & Wildlife Society 2007). Tribal lands represent "a fairly comprehensive cross-section of American ecosystems" (Czech 1995), and they are critical to the cultural, social, and economic well-being of the tribes and to biodiversity conservation in the United States. For these reasons, the long history of interactions among the tribes and the U.S. government regarding tribal self-determination and biodiversity conservation is informative.

In most nations indigenous peoples' right to recognition and self-determination has been recognized only recently, whereas in the United States American Indian tribes were recognized as sovereign governments during treaty signings with the federal government beginning in the 18th century. Legislation promulgated under President Nixon further established and defined the tribes' right to self-determination via the Indian Self-Determination and Education Assistance Act of 1975 (ISDEAA; 25 U.S.C. 450). Concurrent with recognition of tribal rights to self-determination, Nixon and the U.S. Congress also initiated a new era of biodiversity conservation by passing the Endangered Species Act (ESA) of 1973 (ESA; 16 U.S.C. 1531–1544). Application of the ESA to lands controlled by tribes provides a rich example of the articulation between biodiversity conservation and the struggle of indigenous peoples to retain or regain control of traditional lands and resources. Our objective was to summarize and critique the U.S.–tribal relationship and the implications of this relationship for tribal land management and biodiversity conservation in the era of self-determination. We reviewed and analyzed Secretarial Order 3206, the U.S. policy on "American Indian tribal rights, federal–tribal trust responsibilities, and the ESA" and evaluated the impact of this order on implementation of the ESA on tribal lands.

U.S.–Tribal Relationships

Western expansion policies during the 18th and 19th centuries placed increasing pressure on the U.S. government to remove tribal members from lands desired by European Americans. Removal methods included treaties, statutory changes, military force, and systematic violence (Zinn 2003). The U.S. Supreme Court has recognized the antiquity of tribal sovereignty (Laurence 1993), and interpretation of treaties defines current legal relationships between tribes and the United States. The protection and management of tribal lands is an historic obligation of the U.S. government and is the culmination of centuries of U.S.–tribal interactions. Tribal sovereignty and the federal trust responsibility to tribes were first described by Chief Justice Marshall in *Cherokee Nation v. Georgia* (30 U.S. 1 [1831]). In his majority opinion, Marshal held that the Cherokee Nation had always been recognized and treated as a quasi-state, not as a foreign nation; therefore, tribes were considered "domestic, dependent nations" requiring oversight and protection (Allen 1989; Aufrecht & Case 2005). This trust obligation includes management of tribal lands, individual land-allotment holdings, and protection of natural resources, including treaty hunting and fishing rights on ceded lands. Oversight and protection afforded by the trust obligation does not alter tribal sovereignty. In sum, tribal governments are simultaneously and contradictorily sovereign nations, yet communities dependent on the U.S. government for protection, a paradoxical relationship that guarantees conflict among tribal sovereignty, self-determination, and Constitutional authority (Deloria 2006).

In the United States tribal lands are "any lands title to which is either: (1) held in trust by the United States for the benefit of any Indian tribe or individual; or (2) held by any Indian tribe or individual subject to restrictions by the United States against alienation" (Secretarial Order 3206, Section 3[c]). The General Allotment Act of 1887, or Dawes Act (24 Stat. 688), which remained in effect until 1934, was a major factor in reducing tribal land holdings from 56 to 21 million ha through allocation of tribal lands via allotments to individual tribal members (Leeds 2006). Tribal lands not allocated to individual members were deemed surplus and made available to European Americans, thus permanently removing them from the tribal land base. Typically, remaining tribal lands were spared the degree of development and commercial exploitation seen on nontribal lands throughout the United States (e.g., Wilkinson 1997; Zellmer 1998; Albert 2002). The reduction and fragmentation of the tribal land base and the undeveloped nature of remaining holdings renders protection of tribal lands critically important for the long-term viability of tribal societies and biodiversity conservation.

The relationship among the United States and tribal governments, particularly regarding tribal lands and their management, is characterized by "inconsistency, confusion and novelty" (Allen 1989; Czech 1995). This should come as no surprise given the paradox entailed in the tribes being both sovereign, yet dependent nations. The inability of the federal government to fulfill its trust obligations to the tribes culminated in the modern self-determination era of federal Indian law and policy initiated by the ISDEAA (Allen 1989). Self-determination policies were reaffirmed in 2000 when President Clinton issued Executive Order 13175, which recognized tribal governments as sovereigns and proclaimed

federal agencies shall conduct business with tribes on a government-to-government basis, a marked divergence from the federal–tribal trust relationship. Promotion of tribal self-determination, however, does not abrogate the historic U.S. trust obligation to the tribes, their lands, and the natural resources these lands support. Furthermore, it is unclear whether there is any consensus among the branches of the federal government regarding their interpretation of U.S. Indian law, the federal trust responsibility, or the meaning of tribal self-determination. To confuse this issue further, executive and secretarial orders do not have the legal stature of statutes or regulations promulgated pursuant to statutes. Moreover, the relationship between the federal and tribal governments may be altered at any time by the executive and legislative branches or reinterpreted by the judicial branch.

Further exacerbating inconsistencies in U.S.–tribal relationships is the difficultly non-Indians have accepting American Indian law, particularly the unique and paradoxical legal status afforded tribal governments and their members (Aufrecht & Case 2005). Interpretation of the historical context for federal Indian law by non-Indians influences how lawmakers write statutes, agencies draft regulations implementing these statutes, and courts interpret statutes and regulations. Moreover, each federally recognized tribe is culturally distinct and has a unique history of legal interactions resulting in heterogeneity among tribes in how they perceive their relationship with the federal government. In sum, the unique legal status of tribal lands and their importance for conserving federally protected species require those working for federal regulatory agencies to have a clear understanding of the applicability of federal environmental statutes and regulations on tribal lands and the federal–tribal trust responsibility (Allen 1989; Wilkinson 1997).

The ESA and Tribal Lands

The ESA was enacted to prevent the extinction of species and to protect species' habitats. The Department of the Interior's U.S. Fish and Wildlife Service (USFWS) and the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) Fisheries Service [hereafter, the department(s) and service(s)] are responsible for implementation of the ESA. The NOAA Fisheries Service handles marine species and the USFWS administers all other species.

The ESA does not delineate whether it applies to tribal lands. Regardless, as currently implemented, all aspects of the ESA, including listings, recovery plans, habitat conservation plans, incidental take permits, law enforcement, and designation of critical habitat potentially affect tribal lands and resources—and thus tribal self-determination—by limiting the tribes' ability to use land and resources for cultural or economic purposes. In the current era of self-determination, many tribal governments are expanding economic development initiatives on tribal lands to maintain their cultural, social, and economic viability (Cornell & Kalt 1998). This sometimes results in conflicts when development may influence listed species or their habitats (Zellmer 1998). Tribes often bear a disproportionate burden for conservation of species and habitats because centuries of development on non-Indian lands typically results in tribal lands being refugia for species at risk and thus central to recovery objectives (Wood 1995; Zellmer 1998; Albert 2002).

The services consider the accumulation of prior human actions on listed species when considering the potential impact of proposed projects or actions. They then issue a jeopardy opinion if data suggest a proposed action is likely to result in unacceptable harm to a listed species. Proposed activities that may lead to jeopardy determinations are "almost pre-ordained to fall more heavily on activities on Indian lands" due to the greater level of development elsewhere (Zellmer 1998). In addition, tribal lands included in critical habitat designations may experience a higher level of federal regulation than private lands because proposed actions on private lands designated as critical habitat are not regulated by the ESA (e.g., Section 7 consultation) unless federal permits are required or federal funding is received (Zellmer 1998; Albert 2002). Tribes receiving federal funds in partial fulfillment of the federal trust obligation thus may be subject to federal oversight for environmental compliance, including the ESA. Tribes also use revenue from economic development initiatives to purchase lands lost through the Dawes Act, often with the express purpose of biodiversity conservation (Shenfeld 2008), which could in turn result in increased federal environmental regulation and oversight. Increased federal regulations and funding would appear to support biodiversity conservation on tribal lands but could be detrimental to both conservation and tribal self-determination if this process severs the connection between tribal communities and the resources on which they depend.

The status of tribal governments as sovereigns places them in a unique position relative to private citizens and U.S. state governments regarding the ESA. Constitutionally, private and state lands are subordinate to federal conservation statutes and regulations. Conversely, federal conservation statutes and regulations cannot conflict with or subordinate federal trust responsibilities to tribes (Wood 1995). The acceptance of federal funding via the federal trust responsibility does not necessarily make tribes subject to federal regulations and oversight because this directly conflicts with tribal self-determination. Thus, when federal conservation statutes, regulations, policies, or competing interests (i.e., public lands, private lands) conflict with the federal trust responsibility to the tribes, the courts have maintained the priority of tribal property rights because agencies lack authority to abrogate

treaties. This has not always been the case in practice, however. For example, in 1994 the NOAA Fisheries Service proposed limiting tribal treaty fishing of endangered salmon and steelhead in the Columbia River Basin but did not limit harvest by nontribal fishers or curtail the primary cause of mortality—hydroelectric dams. Thus, the Service failed to protect a federally protected species, and it failed to fulfill its trust responsibility to protect species important for treaty hunting and fishing rights. This is not the only example of restrictions being placed on tribal use of traditional and culturally significant resources that were threatened with extinction owing to non-Indian activities (e.g., Bald Eagle Protection Act of 1940 [16 U.S.C. 668–668d]). Such failures can only lead to further breakdown in trust between tribal governments and the services, increased litigation, inadequate protection of federally protected species, and threats to tribal lands, resources, and cultures.

Era of Self-Determination, Secretarial Order 3206, and the ESA

Spurred on by these problems and pending legislative proposals to reauthorize the ESA, tribal resource managers, attorneys, and leaders initiated actions to develop a Secretarial Order reflective of tribal concerns in 1996 (Wilkinson 1997). Tribal leaders presented this idea to Bruce Babbitt, secretary of the interior, who committed to a bilateral process between tribal leaders and representatives from both departments to craft an order that would help minimize conflict regarding implementation of the ESA on tribal lands.

In 1997 Secretaries Babbitt and William Daley (Department of Commerce) issued Secretarial Order 3206 (hereafter, the order), which pertained to "American Indian Tribal Rights, Federal–Tribal Trust Responsibilities, and the Endangered Species Act." The order clarifies responsibilities of the departments when implementing the ESA in situations where such actions affect or may affect tribal lands, trust resources, or sovereignty. The order "further acknowledges the trust responsibility and treaty obligations of the United States toward Indian tribes." It also calls on the agencies to carry out their ESA responsibilities in a manner that harmonizes the federal–tribal trust responsibility, tribal sovereignty, and statutory missions of the departments while simultaneously striving to ensure that the tribes do not bear a disproportionate burden for the conservation of listed species.

Responses to Secretarial Order 3206

Most U.S. environmental statutes, regulations, and policies were drafted, passed, and enforced without tribal participation or regard for their impacts on tribal lands. The bilateral process initiated by tribal representatives that resulted in the order was a major improvement in government-to-government relations and represents a rare example of consensus among tribal groups that directly influenced national environmental policy and the collective exercise of self-determination (Wilkinson 1997). As a result, tribal representatives were generally pleased with the bilateral process followed to create the order but still raised five concerns. First, federal negotiators refused to acknowledge the federal trust responsibility to restore degraded tribal lands, apparently at the behest of the Bureau of Land Management (BLM) and Bureau of Reclamation—both unofficially represented by shadow negotiators—because affirmation of the trust relationship would raise recovery standards above those already set by the ESA. Second, the order failed to explicitly include Alaskan Native peoples. Third, tribal representatives were concerned that the "conservation principles" established by the order to evaluate whether restrictions on tribal activities were warranted applied to incidental take of listed species (ESA, Section 10a) but were not comprehensively applied to the entire ESA (e.g., take, Section 7 consultation). Fourth, the order limited tribal rights to trust lands under the jurisdiction of federally recognized tribes and did not include the more expansive "Indian country" definition that includes ceded lands, individual allotments, and fee title lands. Last, a loophole allowed federal law enforcement officials to access tribal lands without permission from tribal authorities.

Because the order fails to recognize the need to restore degraded tribal lands as an integral part of the federal trust responsibility (Zellmer 1998), the "disproportionate burden" of conservation placed on tribal lands was not alleviated. The order does state in Principle 3 (p. 5) that "the departments shall take affirmative steps to assist Indian tribes in developing and expanding tribal programs that promote healthy ecosystems and shall support tribal measures that preclude the need for conservation restrictions." The order does not detail specific actions that should be taken to achieve this goal or delineate a reasonable and sufficient target for determining when conservation measures would no longer be necessary. For example, if the departments determine conservation measures on tribal lands are required to conserve a species, the order states agencies should include analyses to determine whether the following "conservation standards" have been met (Principle 3, Section (c)):

> (i) the restriction is reasonable and necessary for conservation of the species . . . ; (ii) the conservation purpose of the restriction cannot be achieved by reasonable regulation of non-Indian activities; (iii) the measure is the least restrictive alternative available to achieve the required conservation purpose; (iv) the restriction does not discriminate against Indian activities, either as stated or applied; and, (v) voluntary tribal measures are not adequate to achieve the necessary conservation purpose.

This conservation standard, if applied consistently, should alleviate the conservation burden placed on tribal lands and create a de facto mechanism for the services to fulfill their trust obligation by ensuring regulatory measures are first taken on nontribal lands and only initiated on tribal lands if absolutely necessary. Another inconsistency is that the standards do not allow voluntary restrictions by tribal governments in place of regulatory standards imposed by the department, as allowed for U.S. states.

Additional tribal criticisms of the order were that it failed to address the fundamental questions of whether the ESA or other federal statutes apply to tribal lands (Zellmer 1998). Nevertheless, Section 2(c) (p. 1) states, "this Order does not preempt or modify the Departments' statutory authorities or the authorities of Indian tribes or the states." In a rather circular argument, Principle 2 (p. 4) states that

> [t]he Departments recognize that Indian lands, whether held in trust by the United States for the use and benefit of Indians or owned exclusively by an Indian tribe, are not subject to the controls or restrictions set forth in federal public land laws. Indian lands are not federal public lands or part of the public domain, but are rather retained by tribes or set aside for tribal use pursuant to treaties, statutes, court orders, executive orders, judicial decisions, or agreements. Accordingly, Indian tribes manage Indian lands in accordance with tribal goals and objectives, within the framework of applicable laws.

Although the order does not state that federal laws do not apply to tribal lands, it does acknowledge tribal sovereignty, the federal–tribal trust responsibility, and the right to tribal self-determination (Wilkinson 1997). Perhaps, the order's circular argument—that tribal lands are not subject to public land laws, yet are to be managed by tribal governments "within the framework of applicable laws"—is an attempt to pay lip service to the long-standing battle for recognition of tribal sovereignty without compromising federal control over tribal lands and resources. In addition, the order could be construed to imply that acceptance of federal funding for programs and services traditionally managed by federal agencies (e.g., Bureau of Indian Affairs) would trigger federal regulation and oversight on tribal lands (e.g., ESA, Section 7; Albert 2002).

The U.S. Senate vehemently opposed the order and included language in appropriation bills from 1999 through 2001 disputing the order on the basis that it "purports to change the administration of the ESA in ways that are flatly inconsistent with the statute" (Senate Appropriations Bill, 105th Congress, report 105–156:24). The strength of the Senate's reaction is due to the belief that applying the ESA on tribal lands should be no different from other lands because the statute did not provide a framework for treating tribal lands differently. Therefore, the order's attempt to change how the ESA is implemented on tribal lands was largely ignored by the Senate committee because executive orders do not have the force of statutes. Thus, the Senate refused to appropriate funds to implement the order largely on the basis of Principle 3(c)ii of the order's conservation standards that states, "the conservation purpose of the restriction cannot be achieved by reasonable regulation of non-Indian activities" (Senate Appropriations Bill, 105th Congress, report 105–156:24). Essentially, the Senate believed the order placed a disproportionate regulatory burden on nontribal land and activities.

A decade since issuance of the order, the Department of the Interior has improved fulfillment of its federal trust obligation and recognition of tribal sovereignty but not without controversy. Since 1988 the ISDEAA has been amended numerous times to improve and expand tribal governance of programs and funds administered by the department; the amendments emphasize the Bureau of Indian Affairs, and Indian Health Services. This process is considered a resounding success (U.S. House. Committee on Natural Resources. Hearing on HR 3994, Statement by U.S. Rep. Nick J. Rahall, II, Chairman. 110th Congress, 1st session, 8 November 2007). Amendments to the ISDEAA in 1994 allowed tribes to enter into compacts with the federal government to manage lands of special significance to the tribes. Under this amendment, the Confederated Salish and Kootenai tribes (CSKT) accepted management of the National Bison Range (NBR) in Montana from the USFWS in 2004. The initial draft of the annual funding agreement was open for public review and strongly criticized by the National Wildlife Refuge Association. They argued the agreement would diminish the service's authority over the NBR, would only benefit the CKST, and failed to justify costs associated with the agreement (20 August 2004, letter from Evan Hirsche, president National Wildlife Refuge Association).

The department chose not to renew its compact with the CSKT in 2006, citing mismanagement of the bison herd (Peters 2007). Conversely, the CSKT argued that anti-Indian sentiment tainted the service's assessment. Mismanagement of the bison herd could have occurred either because of negligence by the CSKT or because the service failed to fulfill its trust responsibility to ensure the tribe had the funds and capacity necessary to successfully manage the NBR. Associate Deputy Secretary James Cason argued that this controversy was the impetus for House Resolution (HR) 3994, a bill that would have amended and expanded the ISDEAA to give tribes the ability to control all programs and associated funds now administered by the department (U.S. House. Committee on Natural Resources. Hearing on HR 3994, 110th Congress, 1st session). Thus, if the resolution passed, responsibility for compliance with the ESA on tribal lands would transfer to tribal governments. Not

surprisingly, the department vehemently opposed HR 3994. Among other things, Cason argued that federal agencies should retain their ability to negotiate disposition of funds to tribal governments, citing BLM fuel-management monies as an example of this need (Reynolds 2007).

The justification for Cason's response to HR 3994 is questionable. Rasmussen et al. (2007) found that tribes with a wildland fire-management program would benefit from income generation, cultural development projects, and improved ecosystem health (e.g., increased biodiversity and decreased risk of catastrophic wildfires). Fire management is critically important to biodiversity conservation because 168 species protected under the ESA are either threatened by fire or by disruption of fire regimes (Wilcove et al. 1998). Ironically, Rasmussen et al. (2007) suggest successful fire-program development would be limited by the need to increase tribal capacity to fulfill these services. Furthermore, lack of adequate fire management on tribal lands increases risk of catastrophic wildfires occurring in both tribal and nontribal communities. Disallowing tribal control of land-management activities, such as fire management, by withholding funding limits tribes' abilities to protect and manage habitats important for federally protected species and directly conflicts with the ISDEAA.

In contrast with the NBR example, the Nez Perce Tribe took a lead role in the Idaho Wolf Recovery Program by sharing recovery responsibility and monitoring with the USFWS. The relationship between the Nez Perce and the service, although not perfect, has been lauded as a tremendous success by many tribal members and service employees (Wilson 1999; Ohlson et al. 2008). The service did not divest its regulatory authority under the ESA for the gray wolf (*Canis lupus*) recovery, so both the tribe and the service perceived the tribe's status somewhat differently, a situation Ohlson et al. (2008) thought impeded tribal self-determination and weakened the federal–tribal relationship. Regardless, the Nez Perce clearly demonstrated the ability of tribal governments to effectively manage natural resources of cultural significance to both the tribe and the United States.

Discussion

Our review illustrates risks to biodiversity conservation associated with the failure of central governments to adequately support self-determination by indigenous peoples. The U.S. government failed to clarify applicability of the ESA and other environmental regulations to tribal lands. It also failed to provide adequate training and funding to tribal governments to protect and manage their natural resources. Moreover, U.S. policies such as the Dawes Act that reduced and fragmented tribal lands have not been redressed. These failures illustrate abdications of the federal–tribal trust responsibility to the detriment of tribal communities and biodiversity conservation. Although Executive Order 13175 and Secretarial Order 3206 list expectations for agency personnel dealing with tribal governments, the orders lack details for implementation, metrics for evaluation, line-item funding, congressional approval, and judicial review. Despite these shortcomings, service personnel still are ethically bound to fulfill both orders when implementing the ESA and fulfilling the federal–tribal trust responsibilities.

Based on our evaluation, we suggest conservation biologists in the United States responsible for implementing the ESA and fulfilling the federal–tribal trust responsibilities familiarize themselves with Executive Order 13175 and Secretarial Order 3206, learn the legal, historical, and cultural context for tribes residing within their area of responsibility, including actions necessary to fulfill their federal trust responsibility, and establish a relationship with tribal leaders and resource managers in advance of formal consultation procedures. In addition, the services must take action to fulfill their federal trust obligation by improving tribal capacity, restoring degraded lands within the tribal land base, including lands lost due to the Dawes Act and lands important for treaty hunting and fishing rights, and regulating non-Indian lands and activities. Similarly, the tribes must critically assess their capacity to protect land and other culturally and economically important resources in lieu of the services. Finally, environmental policy makers should continue the bilateral process initiated by the American Indian community to develop Secretarial Order 3206 to ensure that environmental legislation, such as the ESA, respects and supports tribal self-determination. Ideally, the U.S. Congress should amend the ESA to define whether it applies to tribal lands—thus clarifying congressional intent and statutory authority and enabling line-item funding. These actions would support both biodiversity conservation and tribal self-determination and would thus improve the ability of conservation biologists to fulfill objectives of the ESA and the federal-trust obligation to American Indian tribes.

The right of indigenous peoples to self-determination, including occupying and controlling their traditional lands, is now widely recognized internationally (Colchester 2000, 2004). Detrimental impacts on biodiversity conservation, indigenous communities, and the relationship between these communities and the dominant society commonly occur when dominant societies fail to allow indigenous groups self-determination and control over their natural resources (Allen 1989; Colchester 2004; Dressler 2006). Therefore, biodiversity conservation and protection of indigenous groups' rights to self-determination require a revision of the fiduciary relationship between dominant societies and indigenous groups to establish clear, legal definitions regarding land

rights, applicability of environmental laws, and financial responsibilities. It also is imperative that conservation biologists understand the historical and legal relationship between indigenous groups and the dominant society and the relationship between indigenous land management and biodiversity conservation. This understanding should include recognition of the diversity within and among indigenous cultures that results in a variety of social and ecological relationships.

Once the relationship between biodiversity conservation and indigenous peoples' land rights is defined, clear goals, and responsibilities for all parties must be determined. Central governments should then provide adequate funding and training to indigenous leaders and resource managers, government agency personnel, and environmental policy makers. They also must halt regulations and policies that further reduce the indigenous land base, prevent indigenous self-determination, or threaten biodiversity conservation of these lands. Similarly, central governments are obliged to give control of traditional lands and resources to indigenous groups that establish autonomous natural resource programs, including regulations, policies, and funding, thus improving biodiversity conservation and self-determination. Finally, the importance of indigenous lands for both biodiversity conservation and indigenous communities requires the global conservation community to recognize the uniqueness of these lands and their inhabitants and advocate for their protection. Increased capacity, cooperation, and knowledge transfer among indigenous peoples and those responsible for conservation planning and implementation can only improve biodiversity conservation while simultaneously improving indigenous peoples' right to self-determination and control of their natural resources.

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