

The impacts of climate change on tribal traditional foods

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Abstract American Indian and Alaska Native tribes are uniquely affected by climate change. Indigenous peoples have depended on a wide variety of native fungi, plant and animal species for food, medicine, ceremonies, community and economic health for countless generations. Climate change stands to impact the species and ecosystems that constitute

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tribal traditional foods that are vital to tribal culture, economy and traditional ways of life. This paper examines the impacts of climate change on tribal traditional foods by providing cultural context for the importance of traditional foods to tribal culture, recognizing that tribal access to traditional food resources is strongly influenced by the legal and regulatory relationship with the federal government, and examining the multi-faceted relationship that tribes have with places, ecological processes and species. Tribal participation in local, regional and national climate change adaption strategies, with a focus on food-based resources, can inform and strengthen the ability of both tribes and other governmental resource managers to address and adapt to climate change impacts.

1 Introduction

American Indian and Alaska Native tribes face unique and disproportionate challenges from climate change that are not yet widely understood in academic or policy arenas. This paper explores one of these challenges in particular—the impact of climate change on traditional foods and the reality that 1) tribal access to resources is strongly influenced by the legal and regulatory relationship that tribes have with the federal government (Whyte 2013), and 2) tribes have a unique and multi-faceted relationship with places, ecological processes, and species. These frameworks shape tribal responses to climate change.

Indigenous peoples have depended on a wide variety of native fungi, plant and animal species for food, medicine, ceremonies, community and economic health for countless generations. Water is held sacred by many indigenous peoples (Cozzetto et al., submitted for this issue), and considered by some to be a traditional food (Jones et al. 2008; Colombi 2009). In combination with other stressors, climate change may affect tribes' relationships with traditional foods, including access, availability, harvesting strategies, and ability to store, process, and use foods in traditional ways.

The availability of all types of traditional foods (hunted, fished, gathered, and cultivated) has greatly diminished as ecosystems and water resources have been exploited or converted to other uses. The productivity of remaining ecosystems may be impacted by a variety of factors including disease, pollution, invasive species and management actions. Climate change can impact ecosystems and lifecycle processes in complex ways. For example, tribal harvesters have noticed shifts in harvest times for traditional foods; if the timing of flowering plants and the presence of pollinators, such as birds and insects, become less synchronized, impacts can ripple throughout the food webs.

The relationship between tribal culture and species, habitats, and ecosystems is integral to understanding the impacts of climate change on indigenous communities. Reciprocity—respect for and responsibility to—wildlife and natural resources is embedded in indigenous cultures. Reciprocal relationships are fundamental to how tribes will respond to climate impacts (Whyte 2013). The effects of climate change on traditional foods take place in the context of a host of other changes, both the ecological stressors commonly cited in climate change literature and the rapid cultural, economic, and political changes experienced by indigenous communities globally and by tribes in the United States since the arrival of Europeans (Parrotta and Agnoletti 2012). While this article focuses on indigenous peoples within the United States, these impacts are being experienced by indigenous peoples around the world (Maldonado et al. 2013).

This article seeks to illustrate some of the ways in which climate impacts on traditional foods may affect tribal cultures and traditional ways of life. To accomplish this, the article explores the cultural context for climate change impacts on traditional foods for Alaska Native and American Indian tribes, as well as the impacts of climate change on tribes' access