

## Native Americans: Understanding Climate Change Impacts

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### Abstract

Climate change is affecting the planet, societies and will continue to do so for generations to come. Differences in how regions are affected by varying degrees of warming, precipitation and changes in animal and plant species are likely to get even more extreme as climate change continues. Nowadays, Native Americans are experiencing the effects of dislocation and food shortages, which they attribute to the Climate Change.

The article aims to elaborate the impact of the Climate Change on Native American communities, particularly, the research examines the basis for Native Nations to consider how they may be affected by changes in climate and extreme measures they can take in order to proactively address those impacts.

**Keywords:** Alaska Natives, Climate Change, environment, Native Americans, weather events

### Introduction

The unique relationship of Native Americans with the nature and environment is expressed in their religious beliefs. For example, the religion of one of the largest Native American Nations - the Cherokee, was based on the principles of Zootheism, these indigenous people strongly believed in supernatural forces which according to them linked human beings to all other living things. Everything in their environment, starting from corn and tobacco to eagles, deer and snakes to fire had an intelligent and supernatural spirit. This approach occupied a central place not only in the Cherokee myths, but in their daily lives and practices as well (Raley, 1998).

They considered themselves as the part of the environment in which they existed. According to their belief, it was not necessary to rule over nature, instead they had to keep their proper place within the nature. For example, a healer might listen to the spirit of a plant to find out what disease that plant could cure, or a hunter might pray to the spirits of animals for guidance and forgiveness (Raley, 1998).

As Raley admits, the responsibility of human beings was to keep the balance within the Cherokee people themselves and between the animals, the plants and other people, in order to respect and cooperate with all of nature, the natives found ways to conserve its parts. When Cherokees gathered medicinal plants in the forest, they harvested only every fourth one they found, leaving the other three to grow undisturbed for a future use (Raley, 1998).

The main purpose of these practices was to maintain the balance of their world, the Cherokees believed that if the balance of nature was upset, everyone would have trouble.

They feared that a loss of balance could cause sickness, bad weather, failed crops, poor hunting and many other problems.

An American anthropologist and ethnographer James Mooney, who lived among the Cherokee people for several years, highlighted the Cherokee beliefs, relations between humans, animals and plants; in the old days, the animals and plants could talk, and they lived together in harmony with humans. But the humans spread over the earth, crowding the animals and the plants out of their homelands and hunting and killing too much. The animal tribes called a council to declare war on the humans. They each selected a disease to send to the humans that could cripple them, make them sick, or kill them. When the plants heard what had been done to the humans, they agreed this action was too severe and called a council of their own. They agreed to be cures for some of the diseases the animals had sent (Mooney, 1891).

Nowadays, there are 566 federally recognized Tribes in the United and an American Indian and Alaska Native population comprise 5.2 million people (Bureau, 2012).

Most of the reservations and trust lands are located in the Western part of the U.S. and more than one-half of these indigenous people live Arizona, California, New Mexico, Oklahoma and Washington. As it is known, most reservations are located in isolated areas and much of the housing lacks electricity and running water. Native American communities strive toward greater self-determination, however they face the challenges in terms of lack of economic resources to allow for self-sufficiency, contradictory federal

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policies, insufficient access to federal programs supporting state and local governments, federal and state attacks on their sovereignty and the challenge of maintaining and revitalizing cultural identity (Federation, 2011).

In general, Native Americans have high rates of poverty and unemployment. Many Tribal members live below the poverty level and the average unemployment rate among Tribes is 45 percent (Federation, 2011).

## A Native American Perspective on Climate Change

Nowadays, Native Americans experience the effects of displacement and food shortages, which they attribute to climate change. These people make up 1% of the U.S. population and occupy 4% of the land (Disparities, 2010). Though there is no national climate change polls of this diverse group, feedback from selected Native American individuals, organizations and tribes indicates that they hold the same full spectrum of opinions that exists within the rest of the country.

Jose Aguto, policy advisor on climate change, environment and natural resources for the National Congress of American Indians admits, that compared to other indigenous people of North America, who continue to practice traditional and subsistence lifestyles, the Alaska natives occupy the highest degree; according to Aguto, 80% of the diet comes from the immediate surroundings (Disparities, 2010). Del Laverdure, a member of the Crow tribe in Montana and deputy assistant secretary with the Bureau of Indian Affairs admits that Alaska population have been some of the most vocal about climate change. Other tribes, such as the Quinault Indian Nation in Washington, in the Pacific Northwest has been active on the climate change issues, particularly in response to changes in fish and forests that have already appeared (Disparities, 2010).

“For some Native Americans, traditional knowledge developed over millennia of living on specific lands has been rendered almost meaningless, with many tribes evicted from the ecosystems they historically occupied and confined to reservations, sometimes on harsh, unproductive land” (Disparities, 2010, p. 65).

In recent decades, some Native American nations have discovered that beneath their land lie economically valuable resources, such as, coal, oil and natural gas. These are major emitters of carbon dioxide and other pollutants when burned is outweighed in the minds of some members of these tribes by the immediate economic rewards (Disparities, 2010).

Pete Homer, a member of the Mojave tribe in the Southwest and president of the National Indian Business Association admits that environmental issues are at the bottom, Native Americans have encountered many other problems like poverty and unemployment, “we got to create that economic base on the reservations. We hear about climate change. But our members tell us it’s not much of a problem. They haven’t seen anything that is going to hurt them” (Disparities, 2010, p. 65).

Many Native Americans insist their rights to be recognized as sovereign nations. Despite the fact that the status of federally recognized tribes as sovereign nations has long been on the books, it has been a point of contention as well. According to Jerry Pardilla, a member of the Penobscot Nation in Maine and executive director of the National Tribal Environmental Council (formed in 1991 and now supported by about 190 tribes) this status will enable Native population to have the same access as states to financial and technological resources and to have the same standing when dealing with federal regulations (Disparities, 2010).

As Aguto emphasizes, many tribes are not provided with the organization infrastructure and capacity to address the impacts of climate change upon their natural resources and physical infrastructure, “although thirty-two states have adopted or are in the process of developing climate change action plans, only one tribe has formally done so, although additional tribes have taken some related measures. Some of these circumstances can be attributed to historical neglect and a lack of funding from the federal government. The tribes are working to change this template through the proposed climate legislation” (Disparities, 2010, p. 65).

Winona LaDuke, executive director of Honor the Earth and a member of the Ojibwa tribe in Minnesota, states that it will take several years to see how organizations such as tribes, federal agencies and Congress decide the ways how to address climate change. Meanwhile, those who are feeling the heat already likely will continue to follow their basic instincts. “I don’t have anything better to do than to try to survive” (Disparities, 2010, p. 68).

## Impact of Climate Change on Native Americans

According to the Intergovernmental Panel on Climate Change, Native Americans are disproportionately hurt by climate change. The most vulnerable industries, settlements and societies are located in coastal and river flood plains; these are the settlements whose economies are closely linked with climate-sensitive resources; we can say that, almost all tribes fit into one of those categories. As for Alaska Native communities, they fit into all three categories (Climate Change , 2016).

According to the National Congress of American Indians, Alaska Native villagers are considered to be the first climate refugees in the U.S. “temperatures in Alaska are rising at twice the rate of other parts of the world and a federal report finds that 184 out of 213 (86 percent) Alaska Native villages are susceptible to flooding and erosion, with 31 villages qualifying for permanent relocation. The Environmental Protection Agency predicts that the next 40 to 80 years will see the loss of more than half of the salmon and trout habitats throughout the United States” (Climate Change , 2016, p. 1). A large number of tribes rely on the fish for subsistence, cultural practices and economic development. It should be admitted that Native foods and fishers are declining as well, moreover, tribal access to traditional foods and medicines is often limited by reservation boundaries, “the large role of

climate change in separating tribal people from their natural resources poses a threat to Indigenous identity” (Climate Change, 2016, p. 1).

Furthermore, tribal ecological wisdom and practices which are acquired through the accumulation of centuries of practices, customs, distinct interactions with the natural world, are increasingly recognized by the larger society’s efforts to address climate change.

According to Weinmann, due to the ecological shifts and more frequent and extreme weather events, Native American communities are significantly harmed by climate change. As it is known, Native nations are heavily dependent on natural resources, “severe weather events like droughts, floods, wildfires and snowstorms make tribal communities particularly vulnerable and impact American Indians and Alaska Natives more than they impact the general population” (Weinmann, 2016, p. 1).

In 2011, the National Wildlife Federation, in collaboration with Tribal Lands Program, Institute for Tribal Environmental Professionals, National Congress of American Indians, Native American Fish and Wildlife Society, National Tribal Environmental Council, Native American Rights Fund and University of Colorado Law School released a report on Indian Tribes, *Climate-Induced Weather Extremes and the Future for Indian Country*. According to this report, climate change adversely affects Indian Tribes, whose economic, cultural and spiritual lives heavily rely on a healthy environment (Federation, 2011), “tribes are already feeling the effects of climate change. Predictions and increasing manifestations of worsening impacts, such as the continuing disappearance of roots, berries, salmon, caribou and other traditional food sources, will severely distress Tribal communities. The impacts are profound: economic and subsistence livelihoods may disappear, healthy foods may be replaced by foods known to increase the incidence of obesity and diabetes and traditional practices and ceremonies that have bound Tribal peoples and societies together for generations may begin to unravel” (Federation, 2011, p. 8).

The report highlights severe weather events such as:

- Droughts - which are considered to be the most pervasive climate-induced weather impact on Indian Tribes. As water is the foundation of many Tribal cultures’ lifestyles, economies, subsistence, treaty rights, etc., it is crucial for the sustainability of fish, wildlife and plants on which Tribes rely.

Extreme droughts weaken trees’ ability to resist pests and to curb erosion and siltation. On the nation’s 326 reservations, there are approximately 18.6 million forested acres. Droughts also lower water levels and impair agricultural productivity (Federation, 2011, p. 6). Water scarcity in the West complicates Tribes’ unresolved water rights claims (Federation, 2011, p. 6).

- Wildfires - another problem is increased frequency and intensity of large wildfires, when warmer, drier and longer fire seasons lead to more dead trees, dry grasses and other fuel sources (Baron, et al., 2008).

In recent decades, western part of the United States has suffered the frequency of large wildfires (Westerling, Hidalgo, Cayan, & Swetnam, 2006) which pose acute risks to human health, ecosystems and property. Due to warmer springs and drier summers, wildfires have increased four-fold since the mid-1980s, the fire season is 78 days longer and individual fires are 30 days longer (Westerling, Hidalgo, Cayan, & Swetnam, 2006).

- Flooding - due to the climate change, Native Americans suffer from an increasing number of heavy rainfall events (more wintertime rain instead of snow and earlier seasonal melting of snowpack). As it is admitted in the report, “floods are among the most costly kind of weather and climate disasters in the United States, with impacts including destroyed homes and infrastructure, disease outbreaks, loss of cultural sites, and lost crops. Tribes are especially vulnerable to more severe flooding because of their limited resources for recovery” (Federation, 2011, p. 11).

As for the causes of flooding, we can say that it can have multiple effects for Tribal communities, e.g., in Alaska, flooding can be caused by early snowmelt, melting permafrost, heavy rain and snowfall, melting sea ice and rising sea levels, “studies in 2003 and 2009 by the U.S. General Accountability Office found that more than 200 Native Villages were affected to some degree by flooding and erosion and 31 villages face imminent threats that are compelling them to consider permanent relocation” (Federation, 2011, p. 12).

- Snowstorm - another severe nature event suffered by the Native American communities is snowstorm. Scientists predict that the next few decades will bring more unusually warm winters and more record-breaking snowstorms to the U.S. If it gets much warmer, snowfall will become less and less common after mid-century. Meanwhile, Tribes in the northern part of the country will have to contend with increased challenges associated with heavy snowfall events (Program, 2008, p. 115).

## Conclusion

A disproportionate impact of climate change upon Native American nations requires strong and urgent action from the federal government of the U.S. This includes the need for the federal government to enforce tribal rights to natural and cultural resources, support for tribal efforts to build resilience and preserve the uniqueness and diversity of tribal cultures, moreover, it is important for the tribes to include climate impacts in their planning efforts and to use their sovereign authority and knowledge to address climate change and its impacts.

Nowadays, National Congress of American Indians continues to work with Congress and the Administration to ensure consistent inclusion of tribal interests and expertise across the array of climate-related laws, policies and programs. NCAI also seeks to assist with unifying tribal efforts to address climate change.

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