

Can the Adaptation to Climate Change by Indigenous Culture Provide Insights for Today¹

Daniel J. Basta

Indigenous peoples have been adapting to climate changes for time immemorial. They are inexorably linked to the natural environment. Their dependence on the natural world around them and its variability has evolved a body of ecological knowledge that represents a glimpse into the way climate has affected indigenous cultures and the world around us. Their rich and detailed traditional knowledge reflects a cultural, spiritual and economic relationship with the land, water, fish and wildlife. This traditional knowledge has been passed on by elders to younger generations for thousands of years. They think about managing resources for seven generations: the three generations ahead, three generations of elders and their own generation. Elders have always possessed the greatest knowledge of how to manage local natural resources and recognize subtle shifts in nature.

However, the rapidity at which Climate change is affecting hunting and fishing practices, economic infrastructure, water and housing availability, forest and agricultural resources, and even health; has made it far more difficult for elders to pass on useful traditional knowledge about culturally important resources. Given that indigenous treaty rights are, in many cases, placed-based, when resources shift out of these areas, indigenous people no longer have the same legal rights to them. For millennia, indigenous peoples have moved from place to place based upon the seasonal availability of food and water sources. But today, they are unable to relocate or adapt in response to the shifting availability of cultural and economically important plants and animals.

¹ This short essay summarizes the key points of white papers written by the author and others that prompted and led to the creation of the National Symposium: “Coastal Peoples Address Climate Change – First Stewards,” held July 17–20, 2012 at the Smithsonian National Museum of the American Indian, Washington, D.C. The Symposium is perhaps more relevant today than in 2012. (More can be found on-line @ First Stewards Symposium: Coastal Peoples Address Climate Change)

As climate change continues, societal conflicts over natural resources become inevitable for indigenous peoples, and eventually for everyone else.

Consequently, indigenous peoples can no longer depend solely upon traditional knowledge to adapt to the climate effects that are occurring much faster than in the past. Indigenous peoples must now also use modern technology to monitor climate impacts in ways that supplement and enhance their traditional ecological knowledge. Taken collectively, such information can represent an unprecedented glimpse into the way climate change has affected indigenous cultures in the past and may affect them and all communities in the future. There are lessons to be learned, shared, and passed along. Not the least of these lessons is how indigenous people think about their connection(s) to the world around them.

Coastal indigenous people have always viewed the land and sea as a connected entity that must be managed as a whole. Their traditional understanding of local and regional variability in weather, rainfall patterns, food and water availability, when coupled with current research information, can provide an extensive, community-based record of climate impacts on local and regional environments. Bringing together western science with traditional knowledge and indigenous expertise can add directly to land use planning and adaptation strategies at many levels, and be shared with other communities, municipalities, county governments and other jurisdictions where impacts will be most immediately felt.

Ultimately, traditional knowledge can play a role to help better understand and mitigate the effects of climate change related phenomena. For example, what can traditional stories and knowledge about a place reveal about past, present and future climate impacts. What adaptations have indigenous peoples made to ensure habitat and food availability across generations. What insights into cultural identity and sacred values are revealed by traditional stories and the ecological knowledge they impart. What do traditional stories and knowledge about the past reveal about the uncertainties of the future of both indigenous peoples and everyone else in a time of increasing climate change.

The 2012 four-day National Symposium provided a fresh perspective from the nation's indigenous communities on their views on priority domestic and international issues regarding

climate change impacts. It also served to build new relationships and increase public awareness of the causes and impacts of climate change. However, so many years later it remains to be seen if there were lasting impacts of the Symposium. Unfortunately, Aldo Leopold's long-ago insights still prevail today: "There is yet no ethic dealing with man's relationship to the land and the plants and animals which live upon it. The land relation-relationship is still strictly economic, entailing privileges but no obligations, A Sand County Almanac, 1949.

About the Author. Daniel J. Basta was the Director of the Office of National Marine Sanctuaries in the National Oceanic and Atmospheric Administration (NOAA), within the U.S. Department of Commerce from 1999 to 2016 when he retired after 37 years of government service as an engineer, scientist, and administrator. He was a member of the Senior Executive Service (SES) for more than two decades and had an extraordinary career both inside and outside of government.

