



Fact Sheet

The Denali Region of Interior Alaska

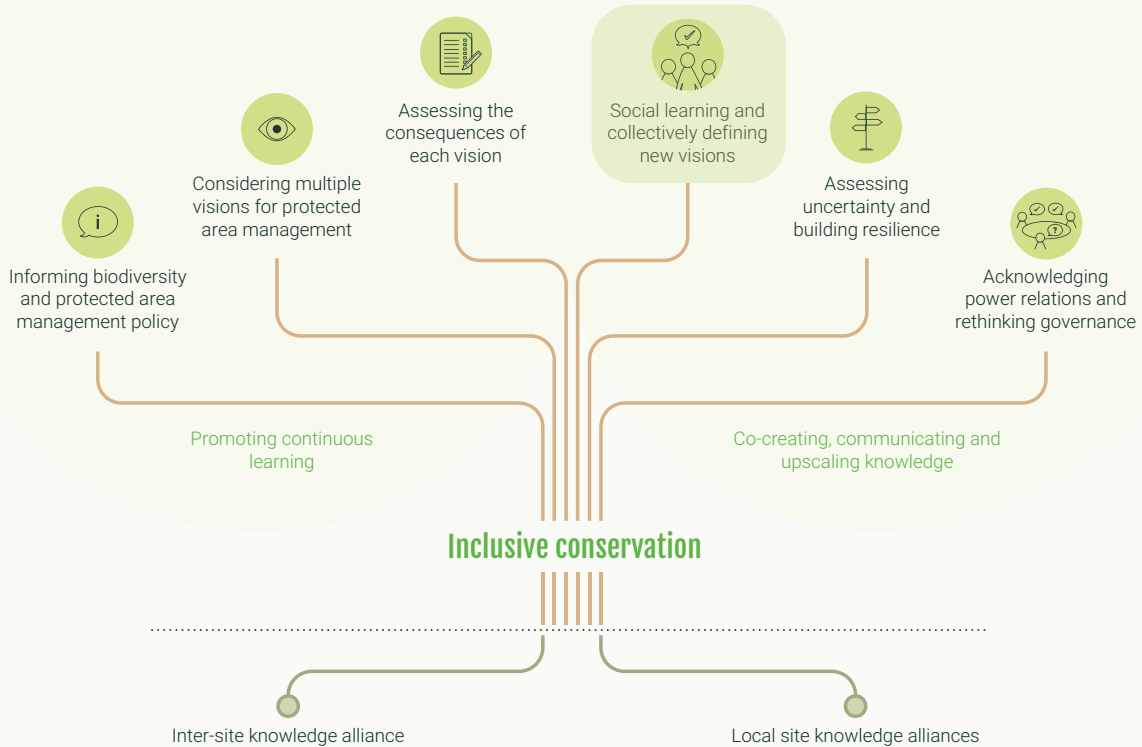
Building a place-based understanding of social-ecological dynamics and their consequences for landscape change in the Denali region of Interior Alaska

Fall 2020



Our inclusive approach to conservation

Transforming visions into integrated protected area management strategies; improving biodiversity and human well-being



Defining collective visions

The ENVISION project team in the Denali region is working with community partners and residents to develop an understanding of collective visions for the future of protected areas in Interior Alaska. Although there is a strong sense of social cohesion within individual communities, decision-making rarely engages communities across a regional scale. This research explores various community perspectives on landscape change through participatory processes, including one-on-one discussions, focus groups, surveys, and learning forums. In particular, the Denali case study is facilitating discussions with residents to support deliberation on topics related to public land management. This case study thus aims to build knowledge of how residents can learn from and adapt with one another in response to landscape change, as well as identify the most effective pathways for rural communities to preserve the desired character of places.





Protected areas in Interior Alaska

This research is being conducted in communities around protected areas in Interior Alaska, including Denali National Park and Preserve and Denali State Park. This landscape is valued by local communities for a variety of reasons that vary across stakeholder groups. Though the primary industry of the region is broadly characterized as mass tourism, residents have built a strong sense of community through other industries (e.g., coal mining), conservation, subsistence use, education, and other activities. This research site highlights the importance of defining these collective understandings of regional landscape change that is managed at various scales that span individuals, community, borough, state, and federal organizations.

Ecosystems – Boreal Forest/Taiga and Tundra

Denali is located in the northern boreal forest biome. Denali's lowland zone includes black spruce (*Picea mariana*) forests and woodlands in areas underlain by permafrost and white spruce (*Picea glauca*), as well as paper birch (*Betula neoalaskana*) forests in well-drained upland areas and river corridors. Lowlands host plant species adapted to bogs and marsh. Highlands have tundra and tundra alpine species. The higher elevations have greater biodiversity in plants, whereas the lowlands have fewer species. Natural disturbances in the biome typically include landslides, avalanches, freeze-thaw conditions (slumps, gelifluction, thermokarst), fires, and erosion/deposition from large braided glacial rivers. As a landscape, Denali is known for its mountains: the Alaska Range, a massif of rock, glacial ice and permanent snows run from southwest to northeast across the region. The Range separates climates: to the south, a warmer (avg. -10C lows) and wetter climate while Arctic high pressure on the north side creates dry, cold conditions (avg. -29C lows) and contributes to the widespread presence of permafrost.



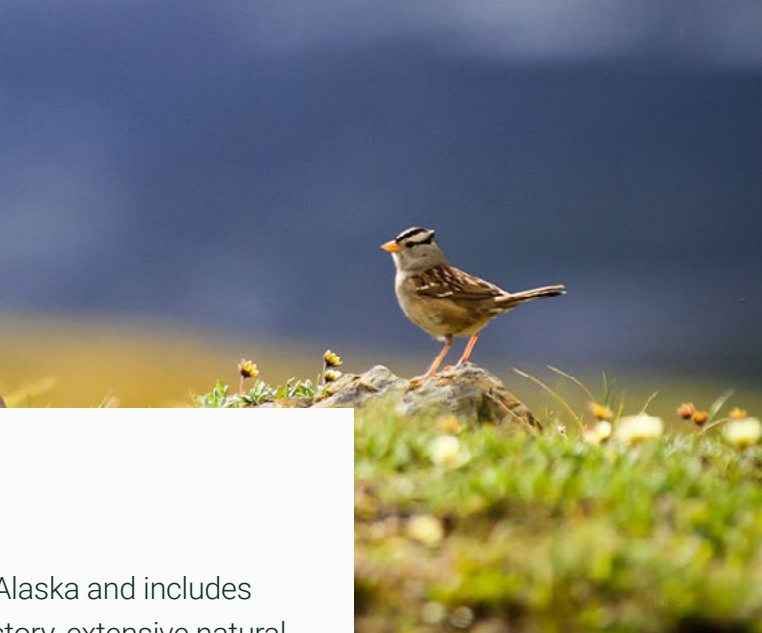
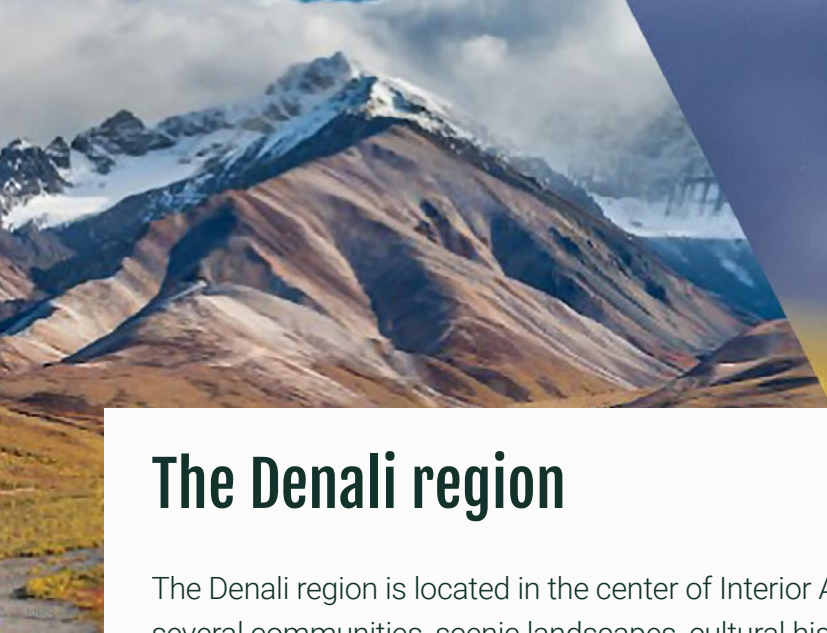
Governance Type

- **Organizations from multiple sectors** (e.g., public, private, non-profit) in the Denali region play a role in environmental governance, including community-based coalitions, boroughs, federal and state agencies, Indigenous corporations, local businesses, assembly members, lodges, local government/legislatures, churches, and energy industries. Not all organizations have the same power in decision-making.
- **Both formal and informal regulations** govern resource management in the Denali region, such as property and/or access rights to land, legislative arrangements, treaties, customary laws, and informal social norms.
- **Native Villages and Tribal Councils** are important for shaping decisions made by the National Park Service (NPS). The NPS has both a Denali based and Regional (i.e., Alaska-wide) Subsistence Coordinator to ensure outreach, engagement, and protection of traditional livelihoods. The State of Alaska government has a separate Subsistence Council, sometimes composed of differing individuals, making coordinated governance of wildlife, access, and goal setting for Native Alaskans a challenge in the region. However there continues to be issues with representation of Indigenous voices in public land decision-making. In addition, native corporations across the region hold claim to private lands.

Challenges

Issues on the future of growth and development are associated with an increase in tourism, altered weather and climate regimes, mistrust of government entities by residents, concerns about representation of voices in public land decision-making, and large-scale development proposals.



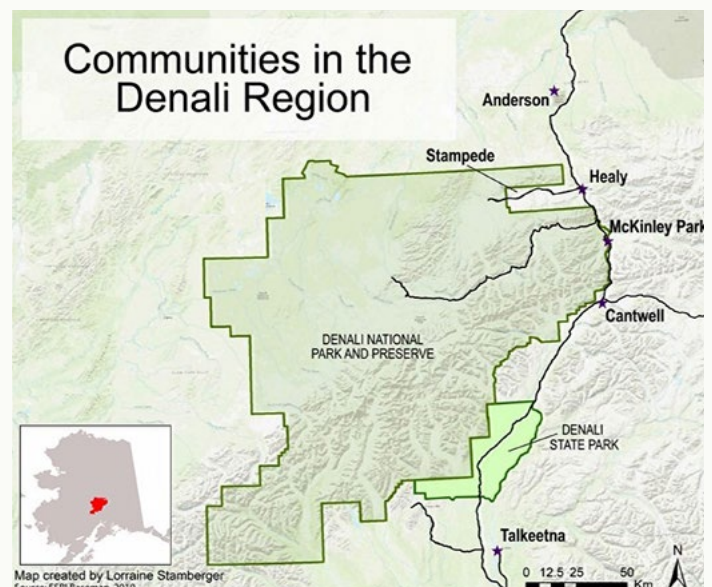


The Denali region

The Denali region is located in the center of Interior Alaska and includes several communities, scenic landscapes, cultural history, extensive natural resources, recreational opportunities, mining, and operations tied to military bases. Within this region is Denali National Park and Preserve, home to the highest peak in North America (Mt. Denali: 20,320 feet). The case study engages seven different communities in the Denali region, including Anderson, Cantwell, Healy, Lake Minchumina, McKinley Park, Stampede, and Talkeetna (Figure 1). Immediately surrounding the east side of the park's boundary is the Denali Borough, incorporated in 1990 and comprised of four recognized communities: Anderson, Healy, McKinley Park/Village, and Cantwell. The borough expands across 12,000 square miles and is home to about 1,900 year-round residents.

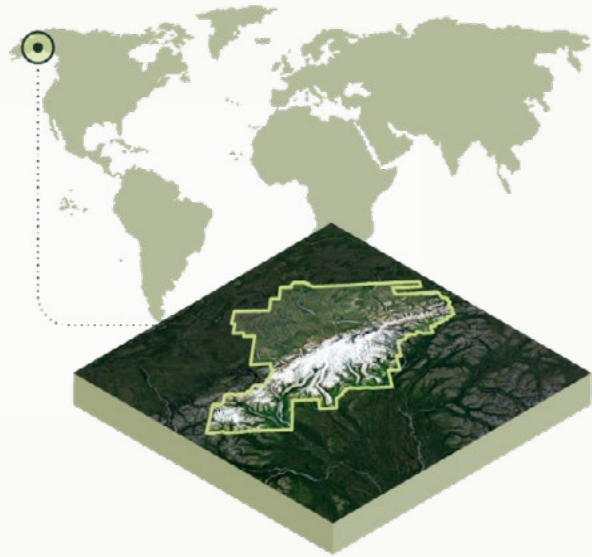
Many Indigenous and Native people reside in the Denali Region and rely on the landscape for subsistence hunting and gathering. The community of Nikolai, for example, is a Native Alaskan village comprised of people who belong to the Dina'ena Upper Kuskokwim (and broadly Athabascan) cultural group located to the west of the protected areas. Prominent legislative acts such as the Alaska Native Claims Settlement Act (ANCSA) of 1971 and the Alaska National Interests Land Conservation Act (ANILCA) of 1980 allow for rural traditional lifestyles to persist in the region. ANCSA protects native claims while ANILCA ensures that subsistence uses, traditional uses, access, and hunting and trapping persist in the park and preserve. Within the park, ANILCA added nearly 4 million acres to Denali National Park, tripling its size.

Figure 1: Communities located in the Denali region case study area.



Denali Protected Areas

- **Denali National Park and Preserve** is located in the Interior Alaska and is managed by the US Department of the Interior. Spanning over six million acres, this protected area encompasses mountains and glaciers, alpine tundra and boreal forests, wetlands, and Mt. Denali. Numerous scenic resources, intact ecosystems, high air quality, and over 300 documented cultural sites and paleontological resources are protected within the park.



Denali was the first national park established to protect wildlife and the region is home to a vast array of unique flora and fauna, including charismatic species such as *Alces alces* (moose), *Rangifer tarandus* (caribou), *Ursus arctos* (grizzly bear), *Ovis dalli* (Dall sheep), and *Canis lupus* (Wolf). Abundant wildlife in the region attracts visitors from around the globe who come to observe these species in an ecologically intact environment. If people wish to travel into the heart of the park beyond mile 15 of a 92.5-mile road, these activities require a transit service, operated by the Park's concessionaire Joint Venture (Aramark & Doyon Inc.)

- **Denali State Park** is managed by the Alaska state government. The park was established in 1970 and shares a western boundary with the Denali National Park and Preserve. Visitors to the region participate in a wide range of activities. Wilderness recreation activities such as mountaineering and backpacking are of particular importance, alongside more common activities that include hiking, camping, and viewing wildlife.





Inclusive conservation in action – Processes and (anticipated) impacts

The goal of the ENVISION project in Denali is to establish a process for advancing “inclusive conservation” that reflects multiple viewpoints on the future of protected area management in Interior Alaska, particularly through the use of social learning as a tool to connect decision-makers and local communities in discussions about landscape change.

The Denali region comprises a social-ecological landscape characterized by a heterogenous mix of landownership, management entities, and use requirements. This rapidly changing landscape is valued by various stakeholders that hold multiple visions for the future. Understanding ways in which community members enable, resist, and adjust for this changing landscape, as well as creating and maintaining their desired ‘senses of place,’ is a priority for the ENVISION team. Given the difficulties around managing landscape change across distinct interest groups, this project aims to facilitate Denali residents' understandings of regional landscape change. Through five phases of research, the Denali case study has generated different forms of knowledge regarding multiple visions for the future of the region. This information is being disseminated throughout the project, particularly during the fifth and final research phase that involves an online discussion forum. Specifically, the purpose of the Denali case study is to facilitate deliberation amongst community members to determine how discussions about the study findings shift people’s perspectives about landscape change and visions for the future.



Building Local Partnerships

The Denali case study within the ENVISION project has focused on building and maintaining partnerships with community members and stakeholder groups. These relationships are critical to ENVISION's approach to inclusive conservation aimed at co-creating research that is relevant to residents who live around protected areas. To achieve this, the Denali case study formed an Executive Committee consisting of key leaders in the region who represent sectors such as education, local government, subsistence use, local business, public land management (at the state and federal level), and mass tourism. The involved groups in the committee include The National Park Service, Alaska Department of Natural Resources (Denali State Park), Alaska Department of Fish and Game, The Denali Borough, Denali Chamber of Commerce, The Native Village of Cantwell, Holland American Princess, The Denali Borough School District, and local business. Our local Executive Committee convened in person for a discussion during January 2020 and continues to be engaged remotely. The Executive Committee provides an opportunity to receive feedback on our research direction and identify ways that our findings could be used by residents.



Understanding residents' connections to place

This project has focused on deepening understanding of distinct perspectives found in the Denali region. The Denali case study has learned about people's histories, knowledge, and connections to place, as well as pressing resource management challenges and visions for the future of the Denali region. In-depth interviews with residents across the region have illustrated the importance of the area and unique challenges faced by people living there. A tight-knit, supportive community atmosphere and a strong sense of attachment to iconic Denali wildlife have also been observed. Regulations to preserve both the self-reliant character of the region and the integrity of its vast, unique natural environs have received attention during data collection, as have perceived relationships with resource management agencies and sensitivity to how power dynamics shape residents' interactions with places. This phase of the project was instrumental in building trust and a shared understanding of how to focus subsequent research in response to community needs.



Characterizing the region and identifying drivers of change

The Denali case study has explored community understandings of the identity of the Denali region and drivers of change through a series of focus groups. These meetings have included discussion and individual mapping exercises that outlined participants' views of the future. Findings from these mapping exercises have further characterized the Denali region and identified potential "drivers of change" that are playing the biggest role in shaping the landscape. These findings have shed light on the features that should be most carefully considered by decision-makers. Results showed a complex representation of social-ecological features at a regional scale, and distinguishable patterns for each community. There are three primary insights from this work. First, tourism, sense of community, subsistence, and wilderness characterize the Denali region. Second, multiple land uses in the region (e.g., natural resource extraction, land ownership, public land management agencies) are concerns given their influence on sustaining both social and ecological resources. Finally, rural lifestyles, recreation, and healthy ecosystems are perceived as especially vulnerable to change.



Modeling visions for the future

Diverse visions for the future of the region are being estimated by the Denali case study. Building on previous phases of research, quantitative models are being estimated from survey data to understand preferences for attributes including wildlife populations, off-season tourism, and fire management, as well as the cost of maintaining current conditions of these attributes. Results are showing that trade-offs are being made across these interconnected attributes that are influencing landscape change. Additionally, results from survey research are showing that multiple types of values can be used to predict engagement in behaviors that benefit the environment, and trust is instrumental in shaping residents' perceptions of inclusivity in decision-making processes.



Measuring multi-level value shifts in response to community deliberation

Engaging residents in participatory research processes can link decision-making to local perspectives and facilitate shifts in values, attitudes, and preferences for the future of protected areas. The final phase of this project is aimed at documenting changes in understanding among individuals and groups that occur through interactions – a process known as social learning (Figure 2). Specifically, we define social learning as a change in understanding among individuals and groups that occurs through the interactions between actors within social networks. Social learning can result in cognitive changes (i.e., knowledge of other perspectives), relational changes (i.e., community building), and normative changes (i.e., standards or expectations). Although social learning can arise from a variety of interactions, the Denali case study is focused on understanding social learning through the group-based process of social exchange and reflection from deliberation.

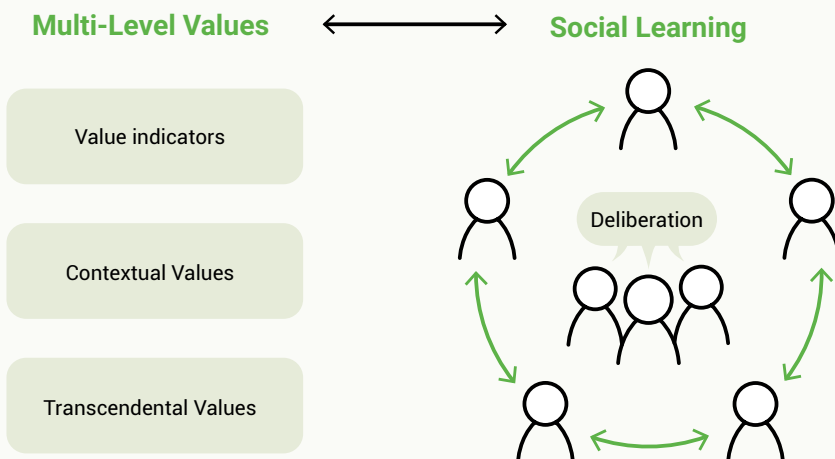


Figure 2: We are measuring the effects of social learning on shifts in multi-level values through community deliberation.

Public engagement as a participatory process, such as community deliberation around a topic, has been linked to social learning. However, social learning can occur without reciprocal shifts in values, attitudes, or preferences. A pre-post treatment experimental design is being used in the Denali region to determine: 1) how community deliberation in online discussion forums facilitates social learning, and 2) the relationship between social learning and multi-level value shifts.



The process of social learning is being measured through participant reflection on the cognitive, relational, and normative dimensions of the discussion. The effects of social learning are being measured across different value levels using a pre-test, post-test design. Here, the measured changes will encompass transcendental values (i.e., fundamental goals that act as guiding principles), contextual values (i.e., values assigned to specific features of the landscape), and value indicators (i.e., attitudes, and decision-making regarding trade-off scenarios) for participating community members.

Residents will participate in a community discussion in Fall 2020 to deliberate on their visions for landscape change in the Denali region. The community discussion forum will be held online through a secure website, where residents will discuss different topics related to landscape change and land management. Online participation is being used to mitigate the adverse effects of power dynamics that may occur in group discussions, providing anonymity and adapting to the challenging times from the global pandemic caused by COVID-19. Through the online forum, residents will have the opportunity to learn about the views of other community members regarding the future of the Denali region. The purpose of the discussion forum is to understand how protected areas and communities are changing in Interior Alaska and to better understand the learning processes and outcomes that occur as a result of these discussions. Residents will exchange ideas to learn from other members of their community over a two-month period and build a shared knowledge base. Through our work with community partners, we hope the development of this shared knowledge base associated with future visions for growth facilitates adjustments to landscape change. This is not to say that social learning resolves tensions and conflicts, but to more clearly delineate the points of disagreement— and, alternatively—expand the range of issues in which there is agreement.





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Partners



Funders



For more information

For more information about the Denali case study and the ENVISION project in general please visit our website: <https://inclusive-conservation.org/> for periodic updates on news and project outputs.

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