

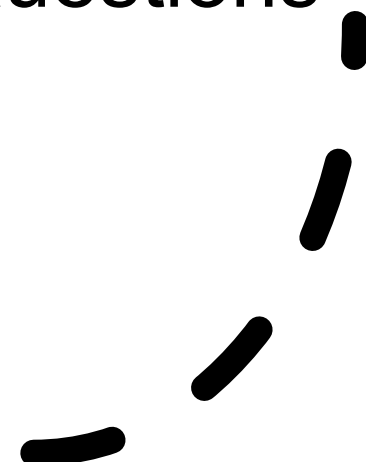
Climate Change and Impacts on Indigenous Forestland Stewardship

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Yale Forest Forum
Tribal Forestry: Understanding Current Issues and Challenges



Presentation Outline

1. Tribes and Climate Change
 2. Tribal Resilience
 3. Tribal Climate Leadership
 4. Conclusion and Questions
- 

American Indian Forestry

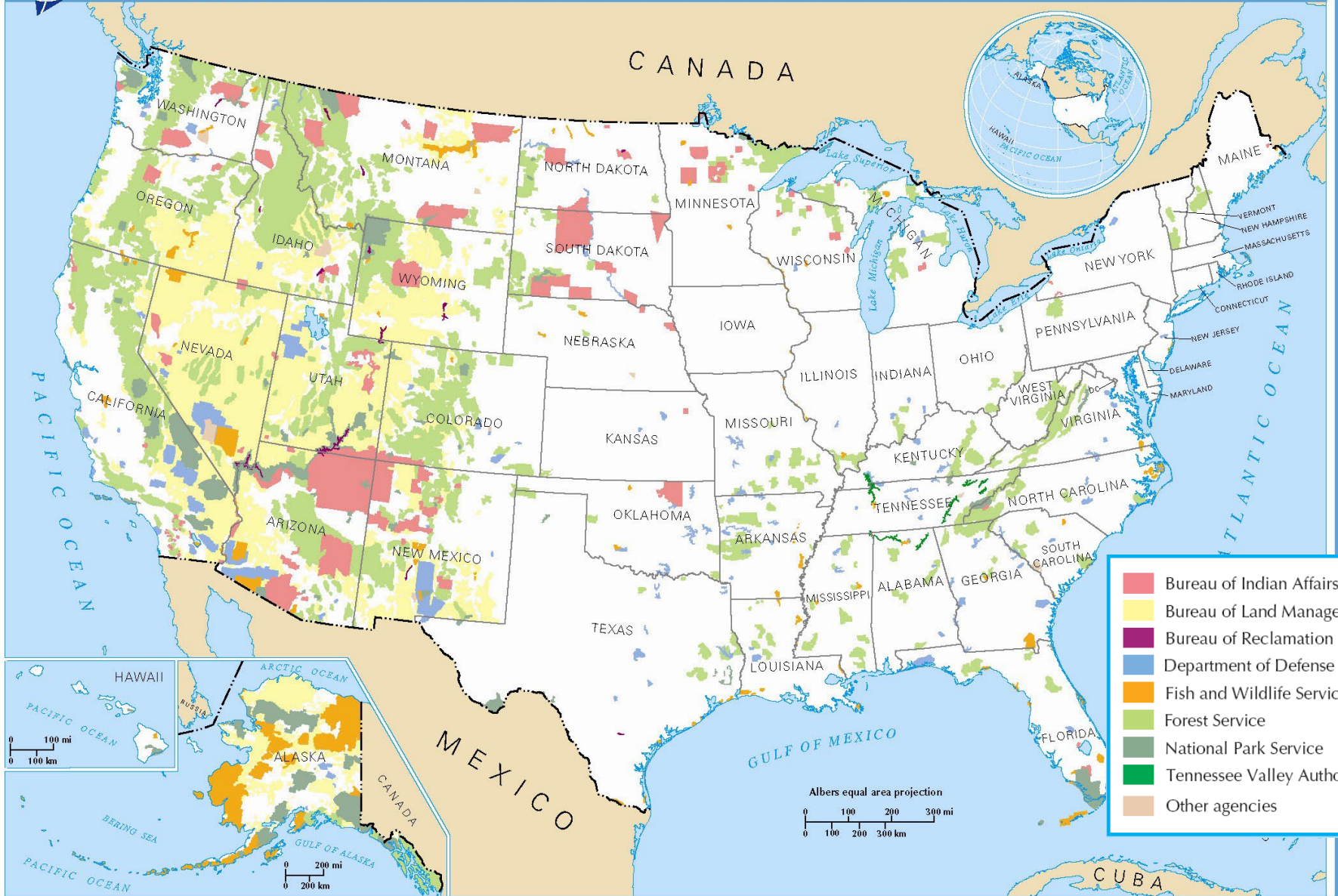
- 574 Federally Recognized Tribes
- 19 million acres
- Tribes managed their lands to meet many goals for generations
- Managed many changes
- All tribes are different: separate nations, cultures and history

Menominee Indian Mills,





FEDERAL LANDS AND INDIAN RESERVATIONS



Climate Change is a major issue for American Indian communities



5th National Climate Assessment

“Climate change continues to negatively affect the livelihoods, health, and cultural practices of Indigenous Peoples, as well as the ecological resilience of their territories. Self-determination is key to implementing effective resilience strategies that meet the needs of Indigenous communities. Indigenous Peoples are leading climate adaptation and mitigation actions guided by Indigenous Knowledge and values.”

“Tribal members feel that climate change has a direct impact on their use of tribal forest lands.”

-Finding V4

www.itcnet.org

Assessment of Indian Forests and Forest Management in the United States

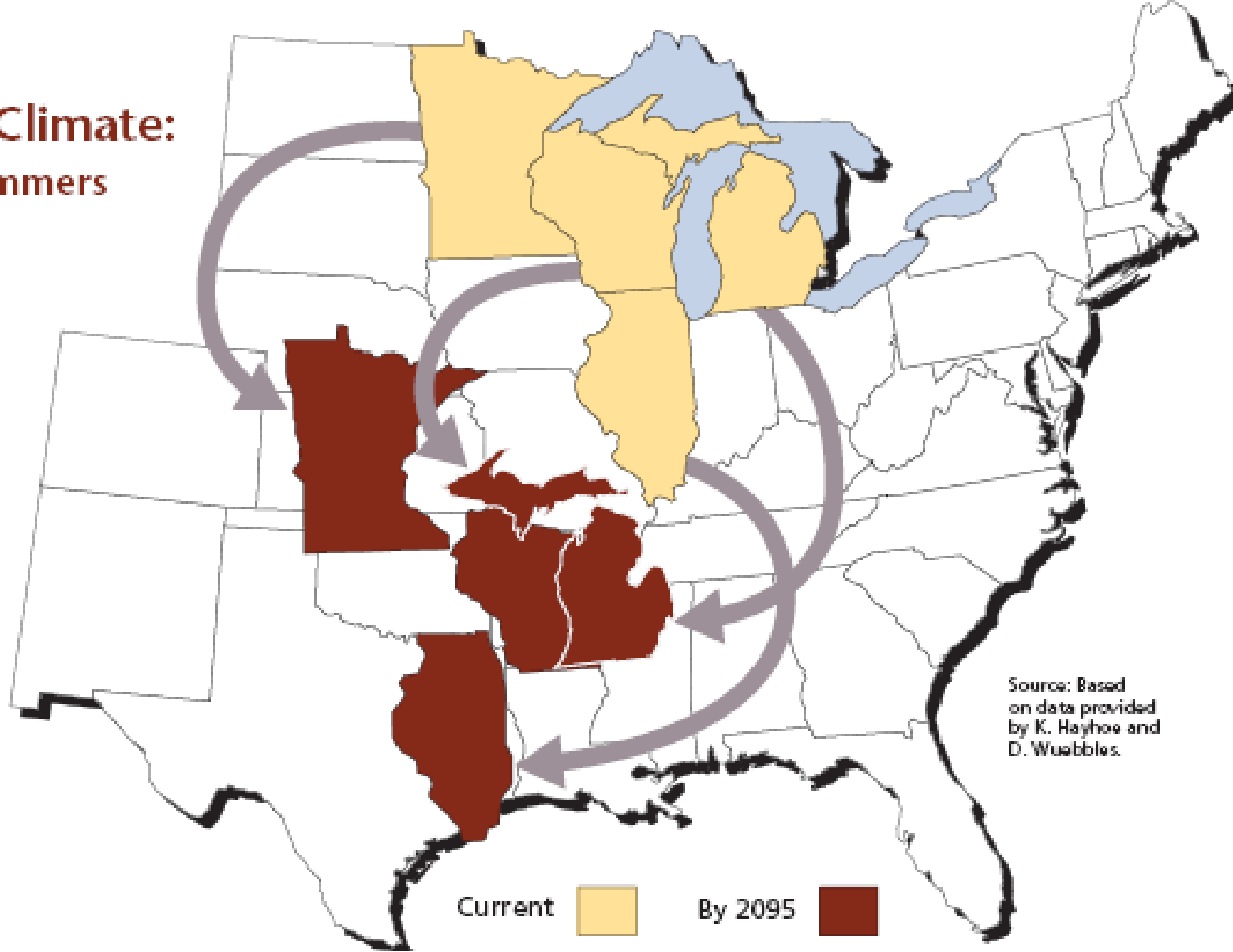
The Fourth Indian Forest Management Assessment Team
for The Intertribal Timber Council

2023



Tribal Resilience

Migrating Climate: Changing Summers in the Region



Confronting Climate Change in the Great Lakes Region (Kling et al. 2003)

Potawatomi "Trail of Death" march: Sept. - Nov. 1838



Designates 1838 Potawatomi "Trail of Death" route starting in Indiana, crossing Illinois and Missouri, and ending at present day Osawatomie, Kansas.

In September 1838 over 850 Potawatomi Indian people were rounded up and marched at gunpoint from their Indiana homeland. Many walked the 660-mile distance, which took two months. More than 40 died, mostly children, of typhoid fever and the stress of the forced removal.



○ Dots on Trail are some of the 48 places where the Potawatomi people camped one night or more on the forced removal, and certain other locations mentioned in the official journal kept by a government agent.

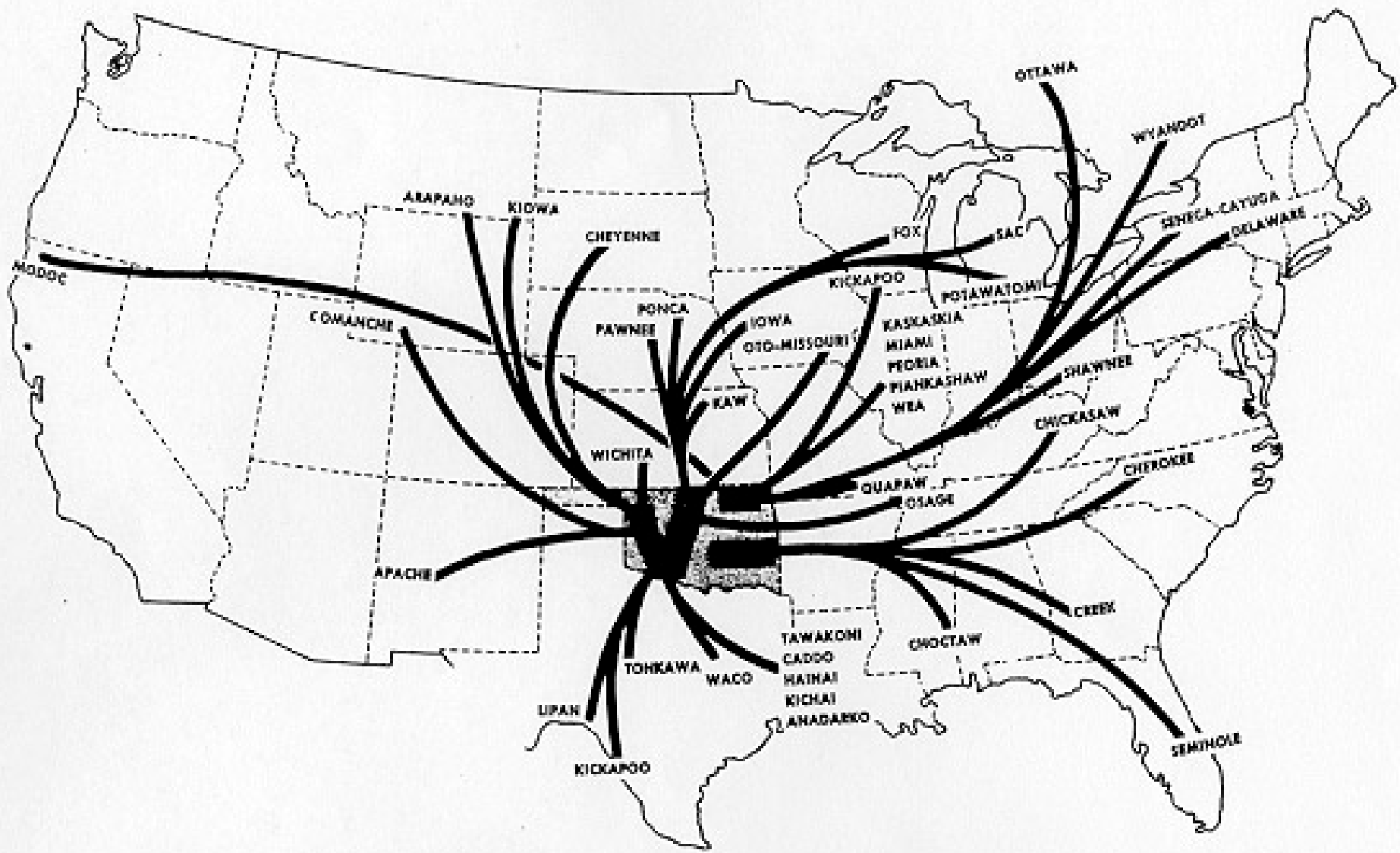


KANSAS

MISSOURI

ILLINOIS

INDIANA





What does this mean for our cultures? All our relations?

Tribal Leadership

- Partnerships
- Climate Adaptation
- On-the-Ground Projects

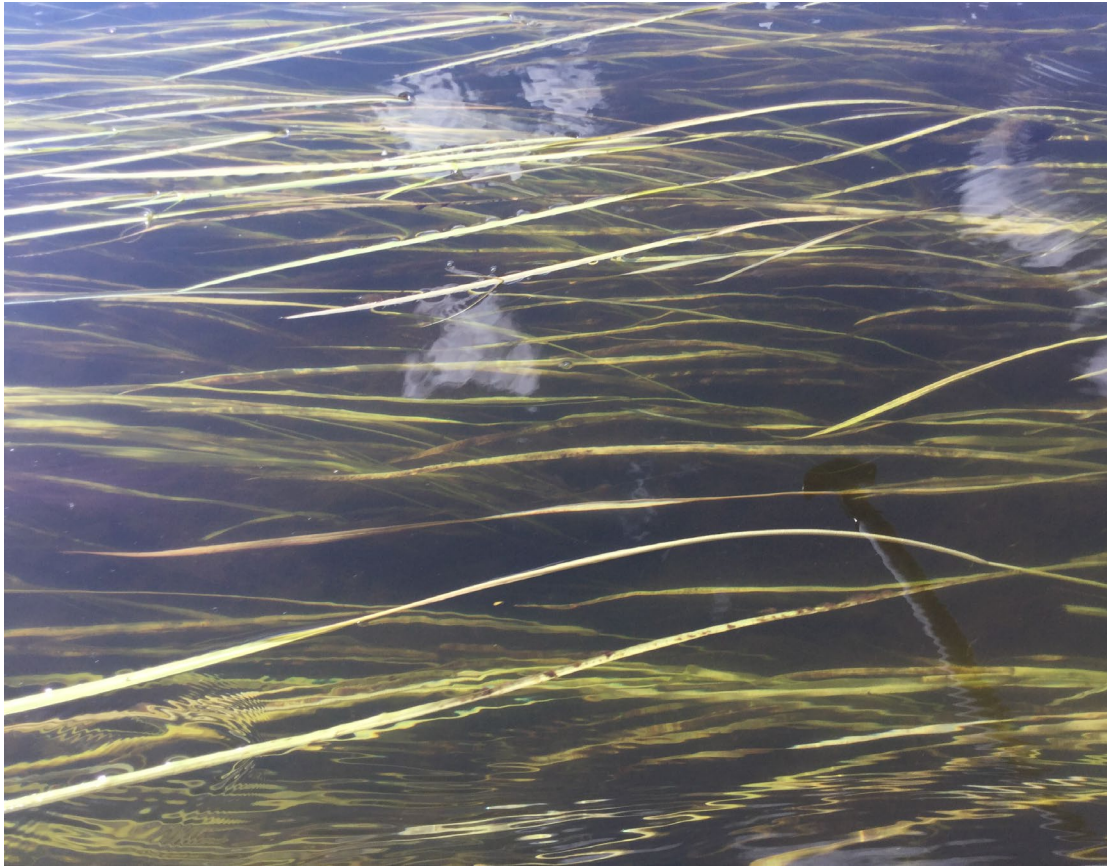


Perspectives on partnership and
collaboration from the Manoomin
Project



Partnership Building Strategy #1

Acknowledge past
and present harms



Partnership Building Strategy #2 Collaborate as equals

- Respect tribal knowledge
- Respect tribal labor
- Respect tribal goals



Partnership Building Strategy #3
Data protocols – Formal Agreements –Leadership



Partnership Building Strategy #4
Foster personal relationships



Tribally lead partnerships are the foundation of integrating Indigenous Knowledge into natural resource management and climate adaptation

-
- +
 -
 - Tribal leadership in climate adaptation

Indigenous Climate Resilience Network

HOME

ABOUT

NETWORK MEETINGS

RESOURCES

SHIFTING SEASONS

CONTACT



Indigenous peoples face a wide range of vulnerabilities and opportunities regarding the impacts of climate change. The **Indigenous Climate Resilience Network (ICRN)** convene Indigenous peoples to identify threats to Indigenous self-determination and ways of life and to formulate adaptation and mitigation strategies, and educational programs that build Indigenous capacity to address climate-related issues.

This website provides the latest tools and resources for Indigenous peoples and scientists to work together in meeting the current challenges of climate change.

<https://www.icrn.us/>

USGS Climate Adaptation Science Centers



<https://glifwc.org/ClimateChange/TribalAdaptationMenuV1.pdf>

Innovative Adaptation Strategies

- #1. Consider cultural practices and seek spiritual guidance.
 - elders, reciprocity, all our relations, both tangible and intangible
- #2. Support tribal engagement in the environment.
 - Language programs, youth, partnerships
- #11. Encourage community adjustments and transition while maintaining reciprocity and balance.
 - new mixes of local beings and/or *bakaan ingoji ga-ondaadag* (non-local beings)

NCA5 Key Message #3: Indigenous Leadership Guides Climate Change Response

Tsha' Thoñswatha' Firehouse and Community Hall



The Tsha' Thoñswatha' firehouse and community hall in the Onondaga Nation relies on renewable energy and meets a net-zero standard of energy use.

FIGURE 16.7. The firehouse was designed in collaboration with the community and reflects the Onondaga Nation's language and culture. Photo credits: © Kelsey Leonard, University of Waterloo.

On-the-ground projects

- Tribes are not going anywhere
- Tribes live closely with land management decisions
- Tribes have responsibilities for all our relations

Sustainable Forestry as continued on-the-ground innovation



MENOMINEE INDIAN RESERVATION MILLS, NEOPIT, NEAR ANTIGO, WIS.—31





Anchor Forests - PNW

“Tribes are leaders and conveners rather than stakeholders or participants”

“Joint long-term commitments to harvest and steward [landscapes] to strategically promote ecological resilience across the landscape and economic vitality of the local forest-products industry”

--Jacobson, Hajjar, Davis, and Hoagland. 2021. Learning from Tribal Leadership and the Anchor Forest Concept for Implementing Cross-Boundary Forest Management, *Journal of Forestry*, 119(6).



Fire/Fuels Management





Special Issue

INTRODUCTION

A Special Issue of the *Journal of Forestry*—Tribal Forest Management: Innovations for Sustainable Forest Management

RESEARCH ARTICLES

The Perceived Value of Native American Wooden Gift Products with or without a Certification Label by Groups of Potential Customers

Native American Student Perspectives of Challenges in Natural Resource Higher Education

Working across Cultures to Protect Native American Natural and Cultural Resources from Invasive Species in California

Relationship between Tree Value, Diameter, and Age in High Quality Sugar Maple (*Acer saccharum*) on the Menominee Reservation, Wisconsin

PRACTICE OF FORESTRY

Tribal Lands Provide Forest Management Laboratory for Mainstream University Students

Managing California Black Oak for Tribal Eocultural Restoration

Klamath Tribes: Managing Their Homeland Forests in Partnership with the USDA Forest Service

Dwarf Mistletoe Control on the Mesquero Apache Indian Reservation, New Mexico

Prioritizing Young Western White Pine Stands for Blister Rust Pruning on the Warm Springs Reservation

Group Opening Outcomes, Sustainable Forest Management, and the Menominee Nation Lands

Lessons from a Programmatic Agreement and Heritage-Based Consultations between Tribes and the National Forests of Arkansas and Oklahoma

A Nutrition-Based Approach for Elk Habitat Management on Intensively Managed Forestlands



Dockry and Hoagland (eds.).
Tribal Forest Management
[Special Issue].
Journal of Forestry
2017. 115(5) 339-501



Is climate
change the
main issue for
tribes?

Research Article - policy

An Assessment of American Indian Forestry Research, Information Needs, and Priorities

**Michael J Dockry,^{1,*} Serra J. Hoagland,² Adrian D Leighton,³
James R Durglo,⁴ and Amit Pradhananga^{1,}**



z.umn.edu/tribalresearchneeds

Results: Top 10 Overall Research Needs

1. Forest health
2. Silviculture
3. Water quality
4. Workforce development/training
5. Fish and wildlife responses to treatments
6. Fuels management
7. Planting/reforestation
8. Planning
9. Growth and yield
10. Invasive species

Most Important Themes

- Water
- Fish and wildlife
- Traditional ecological knowledge integration



Conclusions

- Climate change is fundamentally important to tribes and tribal lands
- Change, resilience, and adaptation are tribal experiences and values
- Climate change is not new for tribal communities
- Tribals are leading climate adaptation
 - Partnerships
 - Adaptation Planning
 - On-the-ground projects
- Tribal Sovereignty and Self Determination!



Migwetch! Questions & Discussion

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