

Dibaginjigaadeg Anishinaabe Ezhitwaad: A Tribal Climate Adaptation Menu



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What is GLIFWC?

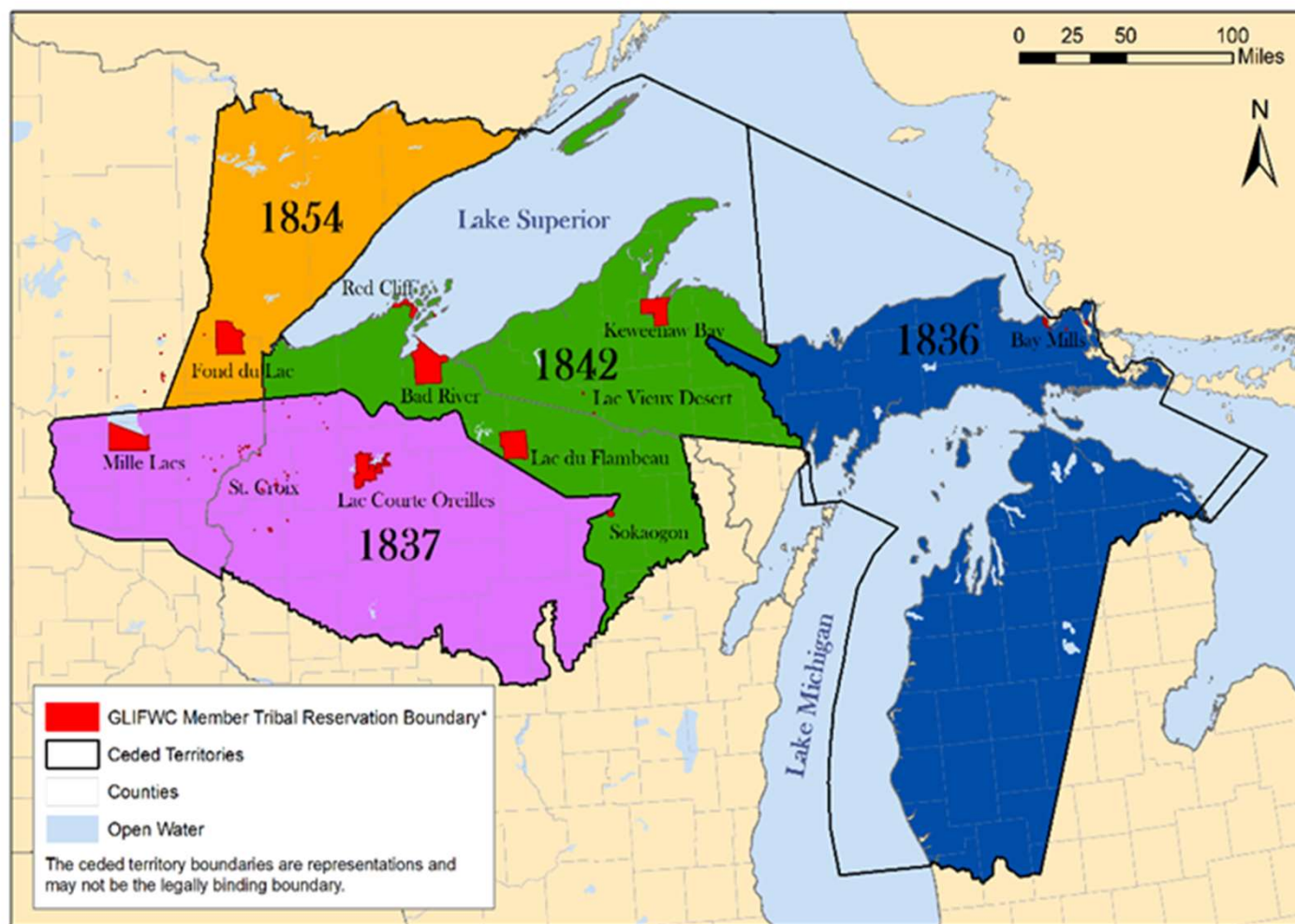
An intertribal natural resource agency exercising authority delegated by its 11 Ojibwe member tribes to implement federal court orders and interjurisdictional agreements related to their treaty rights.



- GLIFWC assists its member tribes in:

- Securing and implementing treaty guaranteed rights to hunt, fish and gather in the 1836, 1837, 1842 and 1854 Chippewa treaty ceded territories.
- Cooperatively managing, restoring and protecting ceded territory natural resources and their habitats.





Our climate is changing

Temperature



1.26°F*

Growing season



9 days*

Strong storms



42%
1958-2016



**Seasonal changes
affect watershed
hydrology:**

- Streamflow
- Water quality
- Water quantity
- Snow depth and retention

Midwest region

*(1986–2016) relative to (1901-1960)

[Read more: Climate Science Special Report \(2017\)](#)



How will climate change affect tribes?



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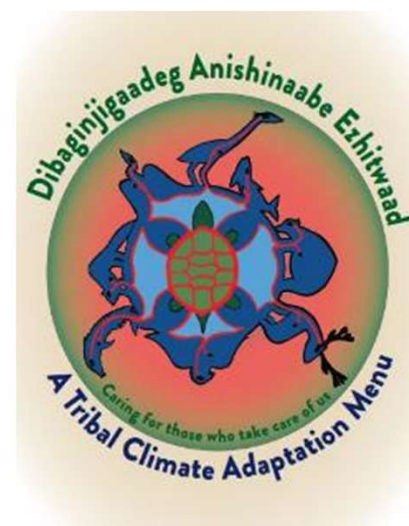


- Culturally important beings moving (shifting ranges) or disappearing due to climate change
- Seasonal indicators no longer correspond with their associated natural phenomena
- Loss of access to culturally important beings and those reciprocal relationships that have been maintained since time immemorial is an existential threat to indigenous culture and physical & emotional health
- Tribal homelands, reservations and treaty ceded territories are fixed in place
- Adaptation actions must be culturally appropriate and community supported.

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How do we create an adaptation planning tool that integrates indigenous knowledge, culture, science and perspective with western science and perspectives?

How can we facilitate culturally appropriate climate adaptation between tribes and non-tribal partners?



Michigan Tech



Why A *Tribal* Climate Adaptation Menu?



Why A *Tribal* Climate Adaptation Menu?

Perspective and language matter!

Forest Adaptation Menu:

Strategy 9: Facilitate community adjustments through species transitions.

Approach 9.7: Introduce species that are expected to be adapted to future conditions.

Tribal Adaptation Menu:

Strategy 11: Encourage community adjustments and transition while maintaining reciprocity and balance.

Approach 11.4: Seek out and share traditional and cultural knowledge of potential new beings from tribal communities where these beings are native.

Guiding Principles

Provides a framework to integrate indigenous and traditional knowledge, culture, language and history into the climate adaptation planning process

Facilitates community engagement and decolonization of scientific research and application in indigenous communities and co-management areas (ceded territories)

Provides general guidance for non-tribal partners working in indigenous communities

Written from an Ojibwe/Menominee perspective but intentionally designed to allow other tribal communities to integrate their customs and culture.

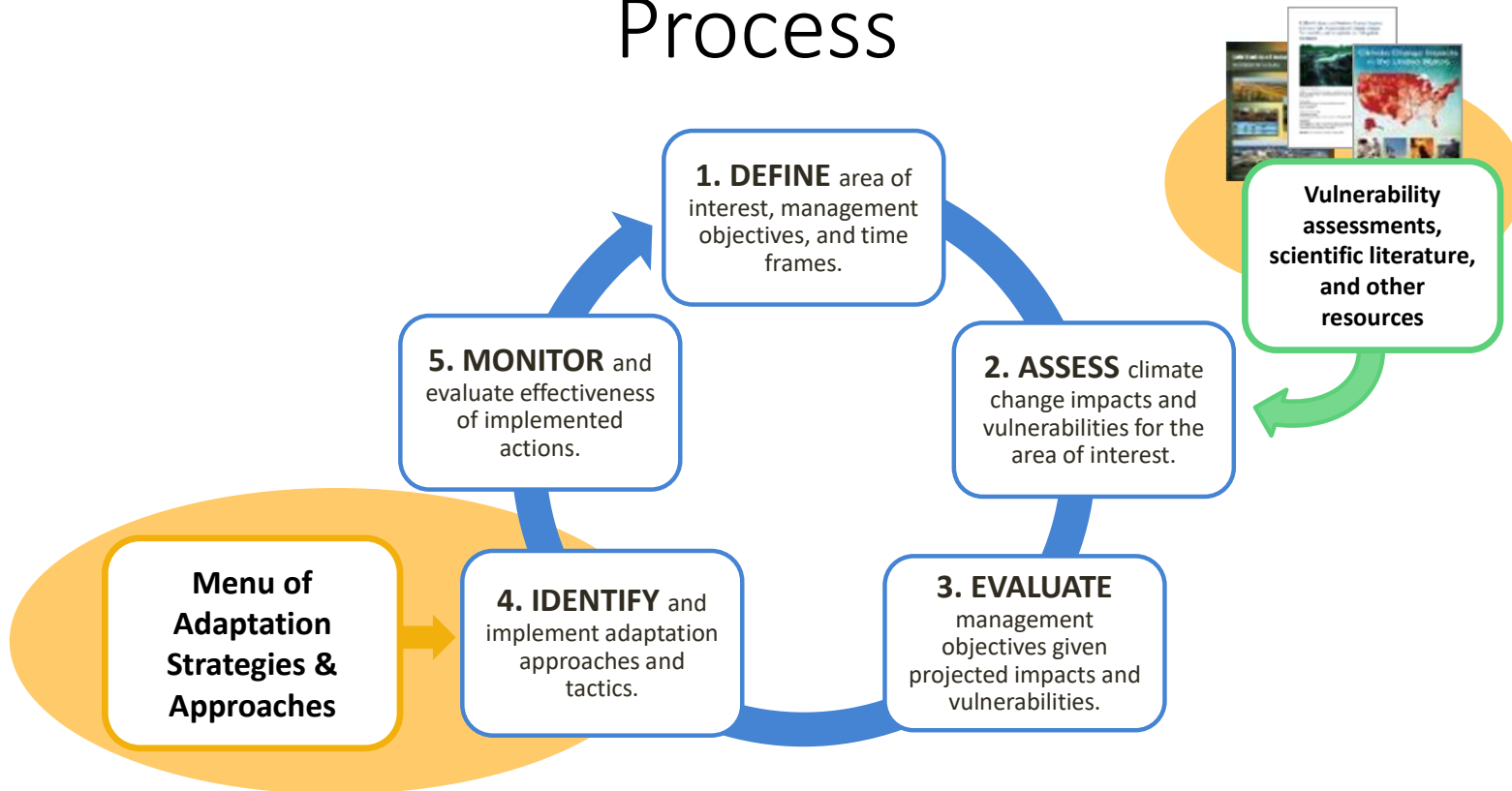


indinawemaaganidag “all my relatives”

- Decisions for use of our relatives were originally communal decisions made with recognition, acknowledgement and reciprocity throughout
- Today management and decision-making for land and the natural environment is no longer communal, but made by individuals, agencies and institutions



Adaptation Workbook Process



- Designed for use by tribal communities and their non-tribal partner agencies.
- Designed to work with other NIACS products or as a stand-alone resource.
- Maintains the strategy/approach/tactic framework.
- The first three strategies address cultural practices, community engagement and recognizing human/non-human reciprocal relationships.
- Emphasizes that sometimes not doing something may be more important than rushing headlong into an action that has not been fully considered

Menu of Adaptation Strategies and Approaches

Strategy 1: Consider cultural practices and seek spiritual guidance.

Indigenous knowledges and ways can provide the backbone for successful climate adaptation. Seeking guidance from the community on adaptation needs and actions, respecting and building on dynamic relationships, and honoring cultural responsibilities and histories may benefit both short- and long-term adaptation efforts.

1.1. Consult cultural leaders, key community members, and elders.

Cultural leaders, community members, harvesters, elders, and other key individuals have important knowledges and perspectives that can inform climate adaptation activities. Taking time to build relationships and properly consult with the broader community will result in more informed decisions and more support for adaptation actions.

Example tactics:

- ✿ Conduct community engagement workshops to learn about past changes using specific examples or important resources as discussion points.
- ✿ Interview wild rice gatherers to discuss observed impacts on wild rice from storm events or changing lake levels.
- ✿ Work with tribal leaders and members to identify knowledgeable individuals in the community, such as elders, and how to consult with them in a good way.
- ✿ Build organizational capacity by funding outreach staff who are trained to discuss climate change with the community.



Pat and Chibinesiban Jim Northrup from Fond du Lac Band of Lake Superior Chippewa. Chibinesiban Jim Northrup has since walked on. (Photo by Melanee Montana, GLIFWC.)

1.2. Consider mindful practices of reciprocity.

Healthy relationships depend on reciprocal exchanges of gifts, knowledge, and respect, among others. For example, it is appropriate to offer asemaa/nāēqemaw (tobacco) when requesting permission to use a gift (resource). This principle applies to land management as well as interpersonal relationships within the community.

Example tactics:

- ✿ Offer asemaa/nāēqemaw (tobacco) when requesting permission to use a gift (resource).
- ✿ Provide gifts when seeking guidance or knowledge from elders or community members.
- ✿ Share data and results of climate change assessments and adaptation projects with the local community.
- ✿ Ensure that teachers and contributors are credited in presentations, public documents, and materials.
- ✿ Teach harvesting in a good way, such as taking only what you need and leaving enough to sustain a population. For example, harvesters should refrain from harvesting wild rice when it is raining, because it can weaken the root system.

1.3. Understand the human and landscape history of the community.

Every place has a unique context and unique stories to tell. The history of the community and the land can inform land management decisions, and it is worth investing time and attention to cultivate a deeper understanding of a place before deciding on appropriate management actions.

Example tactics:

- ✿ Identify and meet with Tribal Historic Preservation Officers and discuss the history of the local

5.2. Maintain or improve the ability of communities to balance the effects of bakaan ingoji ga-ondaadag (non-local beings).

Bakaan ingoji ga-ondaadag is an Ojibwe term that describes non-local or invasive beings. When natural ecosystems are healthy and in balance, bakaan ingoji ga-ondaadag may not have a large or noticeable effect. As climate change continues to add stress and disturbance, there may be more opportunities for non-local beings to disrupt the normal function and health of an ecosystem. Climate adaptation may require respectful actions to minimize or prevent the establishment of non-local beings, particularly if they pose a threat to the health of the local environment.

Example tactics:

- ✿ Wash equipment before using in management activities to prevent the spread of bakaan ingoji ga-ondaadag.
- ✿ Remove existing bakaan ingoji ga-ondaadag after communicating with beings in the local area to explain intended actions.
- ✿ Consider alternative uses of bakaan ingoji ga-ondaadag, such as harvesting non-local cattail roots.
- ✿ Reduce large openings in the forest canopy and vehicle usage to minimize establishment of bakaan ingoji ga-ondaadag.
- ✿ Seek out traditional and/or cultural knowledge regarding bakaan ingoji ga-ondaadag from tribal communities where these beings are native by identifying and interviewing harvesters.
- ✿ Use a biological control method for bakaan ingoji ga-ondaadag that appear at a site, for example, using lupine to counteract growth of spotted knapweed.



Mashkisiibi Boys and Girls Club hand pulling garlic mustard along the Bad River upstream of Bad River reservation with GLIFWC staff. (Photo by Dara Unglaube.)

5.3. Manage herbivory to promote regeneration of impacted beings.



PIO caption ?? (Photo by ???)

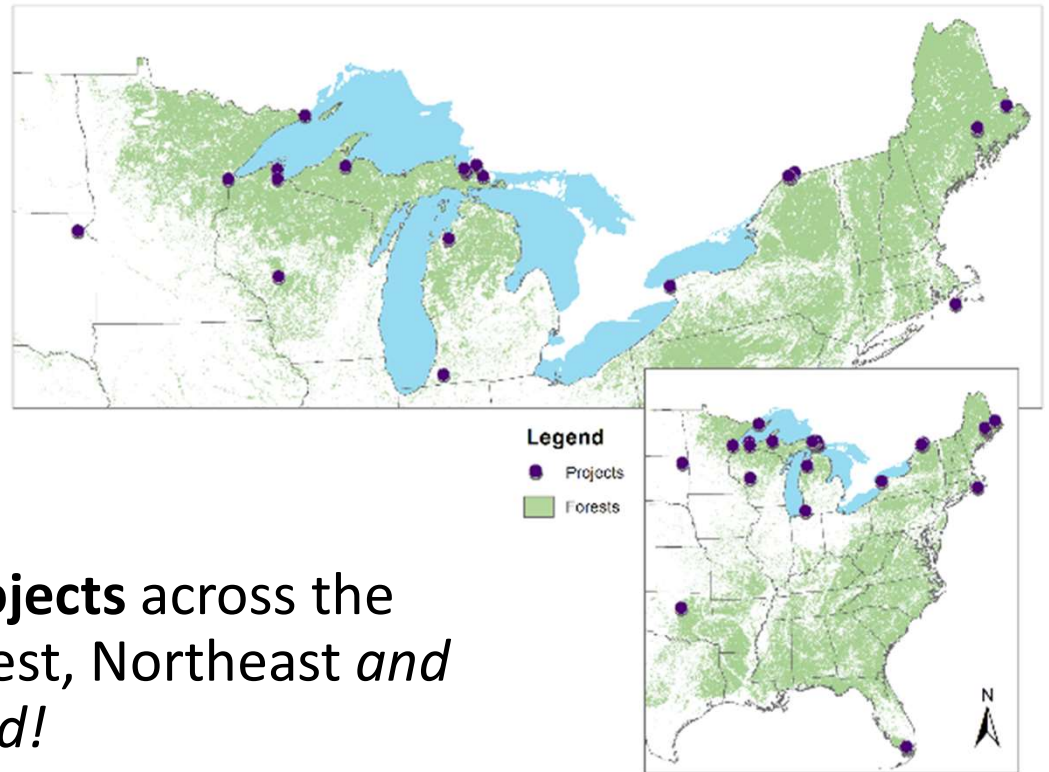
Because deer and other herbivores preferentially browse particular beings, it may be increasingly important to assist with the regeneration of desired beings. Managing herbivory alone may not promote desired beings, particularly since many deer and other herbivores are expected to increase as the climate warms. Thus, this Approach may be combined with other Approaches that encourage regeneration.

Example tactics:

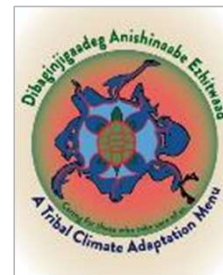
- ✿ Where possible, favor moose or elk in ungulate management rather than promoting a larger deer herd.
- ✿ Encourage tribal hunting to maintain appropriate deer populations.
- ✿ Adjust regulations to promote additional harvest by increasing number of tags issued in areas of heavy deer impacts on forest beings.
- ✿ Install deer exclosures or other physical barriers to prevent herbivory in particular areas.
- ✿ Encourage native predator populations, such as wolves, in a given area to control deer populations.

- Some strategies and tactics will look familiar, others are tailored to concepts contained in Anishinaabe/Menominee languages and worldviews and promote traditional lifeways.
- Revitalization of language and culture are important strategies for climate adaption in indigenous communities.
- Cross –sectoral – the menu has been used to plan forestry, fisheries, wildlife, wetland and infrastructure adaptation projects.

Real-world
Projects have
used the TAM
and Adaptation
Workbook in
project
planning




28 projects across the
Midwest, Northeast *and
beyond!*



“TAM” Workshops

- Paper birch habitat & restoration – GLIFWC
- Forest management/cultural fire/moose habitat – Grand Portage Band of Ojibwe
- Tribal wetland restoration – Iowa Tribe of Oklahoma
- Great Lakes coastal marsh/manoomin restoration – Sault Tribe of Chippewa
- Cedar restoration – Bay Mills Indian Community
- Road/stream crossings – Hiawatha National Forest
- Sea level rise preparation – Miccosukee Tribe of Florida
- Creating an indigenous focused master naturalist class – Ho Chunk Nation
- Culturally appropriate invasive species control – Mohawk Council of Akwesasne

Reviving Manoomin



Objectives:

1. Restore manoomin
2. Increase community involvement and access
3. Improve habitat for fish, waterfowl and secretive marsh birds

Challenges	Opportunities
<ol style="list-style-type: none"> 1. Warmer water temps 2. high streamflow in spring 3. heavy precipitation events 	<ol style="list-style-type: none"> 1. longer growing season 2. Renewed interest within community in manoomin

Adaptation Tactics:

- 1.1 Work with tribal leaders & members to identify knowledgeable individuals and consult in a respectful way.
- 1.2 Partner with outside agencies and tribes within 1836 Treaty territory
- 2.1 Identify native sources of manoomin plant in historic and suitable areas
- 2.2 Establish SOPs for seeding manoomin and harvest regulations
- 2.3 Establishing historical and cultural sites for manoomin restoration
- 2.4 Use manoomin to restore historically disturbed sites
- 2.5 Establish and maintain cultural, environmental education & youth program
- 3.1 & 3.2 Consult w/ leaders & cultural history
- 3.3 Storytelling on sign. manoomin
- 4.1 understanding enviro for growth & harvest techniques (can it be used to stabilize areas?)
- 4.2 partnerships (Forest Service), boys & girls club, drug court, Canada First Nations, Parks Unlimited
- 4.3 Examine historical maps/records
- 5.1 Bring across a greater geographical range
- 5.2 Artificial impoundments



Download a copy:

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

Miigwech!



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