

Dibaginjigaadeg Anishinaabe Ezhitwaad

Doing something based on the Anishinaabe way

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Introduction: A Tribal Climate Adaptation Menu

- The need for additional perspectives and voices
 - Adaptation menus have been reflective of western science and a resource- centric perspective
 - Needed to create a menu reflective of Traditional and Indigenous knowledge and perspectives

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.

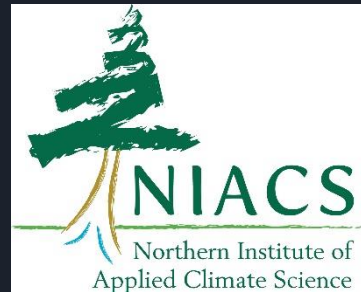
Tribal Adaptation Menu:

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.

Introduction: A Tribal Climate Adaptation Menu

- Was developed by a diverse group of collaborators representing tribal, academic, intertribal and government entities in Minnesota, Wisconsin and Michigan



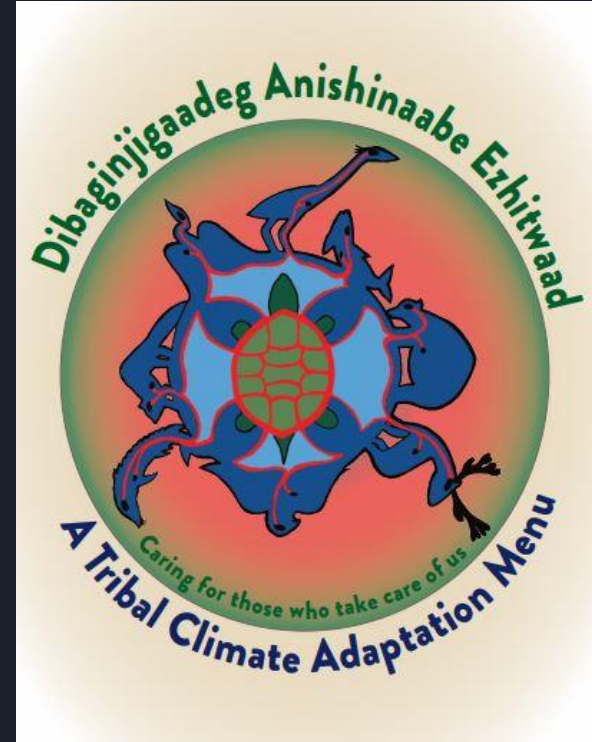


Introduction: A Tribal Climate Adaptation Menu

- Primarily developed for the use of indigenous communities, tribal natural resource agencies and their non-indigenous partners
- Helping to bridge communication barriers for non-tribal persons or organizations interested in indigenous approaches to climate adaptation and the needs and values of tribal communities
- Designed to be used across a diversity of ecosystems, scales, management contexts, and values

Introduction: A Tribal Climate Adaptation Menu

- This is the first version of the Menu
 - Based on Ojibwe and Menominee perspectives, languages, concepts and values
 - Was intentionally designed to be adaptable to other indigenous communities, allowing for the incorporation of their language, knowledge and culture



Guiding Principles

- Provides a framework to integrate indigenous and traditional knowledge, culture, language and history into the climate adaptation planning process
- These guiding principles can be adapted and edited by individual Tribal communities based on their values, culture, and language

Guiding Principles for Interacting with Tribes

How to Develop Culturally Appropriate Climate Adaptation Actions



Offering asemaalnāēqemaw (tobacco). (Photo by Charlie Rasmussen, GLIFWC.)

This document is intended to empower tribal governments, federal and state agencies, non-governmental organizations (NGOs), individual landowners and others to incorporate Anishinaabeg perspectives, specifically from the Great Lakes region, into a climate adaptation framework. We recognize the shortcomings of this document in our attempt to incorporate indigenous concepts, language, and cultural practices; a single document written in English can't fully capture what we intend to express. We hope that the perspectives given here offer users an additional lens with which to view the environment and facilitate a more culturally appropriate approach to working with tribal nations.

While the intent of this document is to give specific examples from one group of people, we encourage other tribes to edit these according to the needs of their individual community by adding language, words, and

concepts unique to that community. We should stress that the editing process be undertaken first, before initiating any project, as the intent behind this document is to ground climate change adaptation planning in knowledge that is unique to the perspective of each indigenous community.

Guiding Principles

- The guiding principles document describes detailed considerations for working with tribal communities
 - Importance of Human/Non-Human Relationships
 - Cultural Paradigms
 - Community Engagement and decision making
 - Ending a project and disseminating information

Guiding Principles for Interacting with Tribes

How to Develop Culturally Appropriate Climate Adaptation Actions



Offering asemaalnāēqemaw (tobacco). (Photo by Charlie Rasmussen, GLIFWC.)

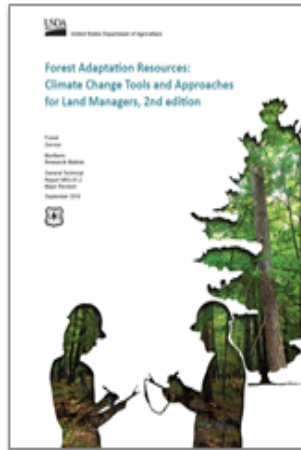
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Using the Menu: The Climate Change Response Framework

Adaptation Resources + workbook



Swanson et al. 2016 (2nd edition)
www.nrs.fs.fed.us/pubs/s2760
(First ed, 2012)

Strategies & Approaches Menus

Menu of adaptation actions

Adaptation Workbook

Structured process to integrate climate change considerations into management.

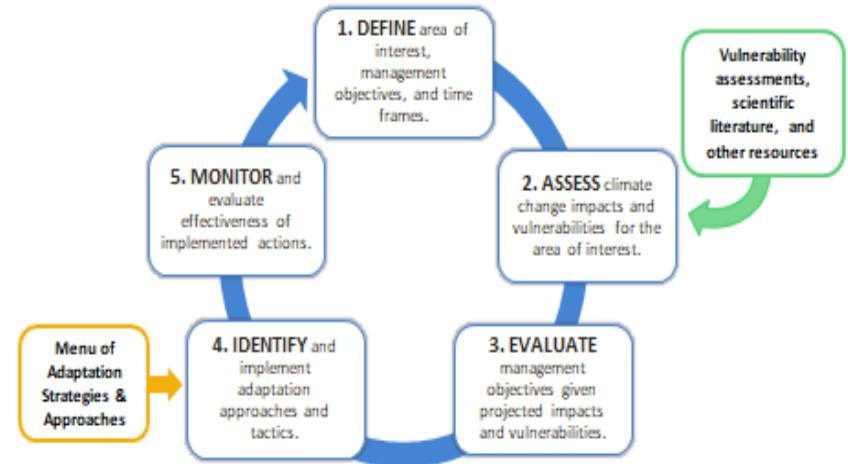
- Workbook approach

Also online: AdaptationWorkbook.org



Adaptation Workbook

Workbook provides “**structured flexibility**”



Outline of the Menu's Strategies and Approaches

Strategy 1: Consider cultural practices and seek spiritual guidance.

- 1.1. Consult cultural leaders, key community members, and elders.
- 1.2. Consider mindful practices of reciprocity.
- 1.3. Understand the human and landscape history of the community.
- 1.4. Hold respect for all of our relations, both tangible and intangible.
- 1.5. Maintain dynamic relationships in a changing landscape.

Strategy 2: Learn through careful and respectful observation (gikinawaabi).

- 2.1. Learn from beings and natural communities as they respond to changing conditions over time.

Strategy 3: Support tribal engagement in the environment.

- 3.1. Maintain and revitalize traditional relationships and uses.
- 3.2. Establish and support language revitalization programs.
- 3.3. Establish, maintain, and identify existing inventory and monitoring programs.
- 3.4. Establish and maintain cultural, environmental education, and youth programs.
- 3.5. Communicate opportunities for use of tribal and public lands.
- 3.6. Participate in local- and landscape-level management decisions with partner agencies.

Strategy 4: Sustain fundamental ecological and cultural functions.

- 4.1. Maintain or restore hydrology and soils.
- 4.2. Maintain or restore riparian areas.
- 4.3. Maintain or restore nibi (water) quality.
- 4.4. Support specific plants or plant communities with essential requirements.
- 4.5. Revitalize and maintain Anishinaabe/cultural use of ishkode (fire) as a stewardship tool.
- 4.6. Maintain and revitalize cultural approaches to harvesting and caretaking.

Strategy 5: Reduce the impact of biological and anthropogenic stressors.

- 5.1. Maintain or improve the ability of communities to balance the effects of manidoonsag (little spirits).
- 5.2. Maintain or improve the ability of communities to balance the effects of bakaan ingoi ga-ondaadag (non-local beings).
- 5.3. Manage herbivory to promote regeneration of impacted beings.
- 5.4. Reduce negative impacts from anthropogenic disturbances.
- 5.5. Monitor and reduce ambient air pollution.

Strategy 6: Reduce the risk and long-term impacts of disturbances.

- 6.1. Alter community structure or composition to reduce risk or severity of major disturbances.
- 6.2. Promptly revegetate sites after natural disturbance.
- 6.3. Care for cultural sites after a severe disturbance.
- 6.4. Plan harvesting, gathering, and collecting opportunities to reduce the risk and impacts of disturbances.



Adaptation menus:

- Follow a tiered process of strategies, approaches and tactics.
- Are designed so that the practitioner can choose options based on their specific needs, goals and objectives.
- Avoid a “one size fits all” solution.



Scenario: Manoomin & That Lake



- That Lake historically supported a significant manoomin (wild rice) crop.
- Water levels are now higher and invasive species (European cattails) have moved in, both impacting historic rice beds.
- Management agencies want to manage the lake to increase diversity (resilience) and expand manoomin harvest opportunities.

Assessment

Manoomin (Wild rice) Vulnerability

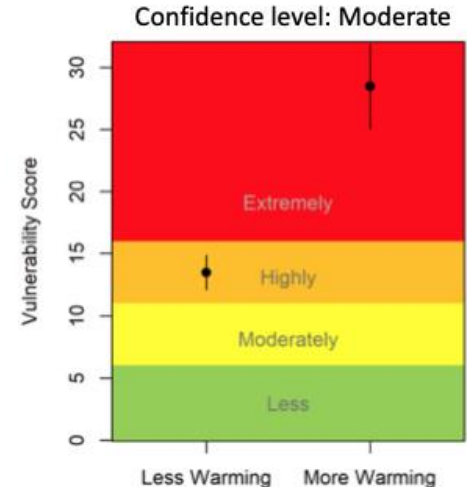


“According to the little bit I know about wild rice, you have to have the water, its gotta be just right in order for, otherwise you're gonna drown it.”

– Tom Maulson Sr., Lac du Flambeau

Manoomin (Wild rice) Vulnerability

- Natural barriers
- Human land use changes
- Dispersal
- Thermal niche
- Hydrological niche
- Disturbance regime
- Dependence on ice/snow
- Pathogens or natural enemies
- Competition
- Genetic variation
- Documented response to climate change



Community Engagement

Strategies: 1 & 3

- 1.1 Consult tribal leaders (rice chiefs) to better understand That Lake and its history.
- 3.6 Coordinate with contacts from tribal communities and tribal natural resource departments early in the project. Determine who owns and controls TEK and how it will be used.
- 1.3 Document historical rice camps by working with THPO's, elders and GLIFWC.
- 1.4 Come together with the communities at a ceremony at That Lake honoring the local manidoog and the manoomin and asking for their help and guidance.
- 3.4 Host presentations within the communities sharing history, vulnerability data and project goals and brainstorming adaptation options.

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.



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

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.

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/nāqemaw (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/nāqemaw (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 community.

Adaptation Actions



4.1 & 4.2 Maintain or restore hydrology & soils and riparian areas

- Assess existing culverts (up and downstream) and replace where necessary.
- Reconnect wetlands, meadows and riparian areas.

4.4 Support specific plants/communities

- Modify existing infrastructure to control water levels during rice lifestages to maintain optimum growth.

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 GLEWC 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.

Adaptation Actions

5.2 Control the impact of bakaan ingoji ga-ondaadag

- Remove European cattails after communicating with other local beings to explain intended actions.
- Offer cattails and other culturally important plants to community members.
- Encourage the growth of native cattails.
- Promote harvest of cattails in areas where they remain to limit their spread into areas where rice is to be restored.

Finalizing the project: it never really ends!



Cultural use and respectful harvest = monitoring and adaptive management.

- 1.2 Consider mindful practices of reciprocity - harvest based on traditional practices, offering asemaa and taking only what you need.
- 3.3 Maintain a monitoring program - involve the community by using citizens science tools such as Nature's Notebook.
- 3.4 Cultural and environmental education - youth and harvest camps sharing traditional teaching, stories and practices.

Want to know more?

Join us for the second TAM workshop in Bay Mills, MI June 3-5, 2019!

Bring a project to evaluate using the Tribal Climate Adaptation Menu, work with your own team or join another team to work through their project.

Climate Change Adaptation for Tribes and Tribal Partners



Training Opportunity
June 3-5, 2019

Join us for an interactive training using the Tribal Adaptation Menu

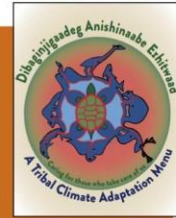
Learn more and register:
www.forestadaptation.org/learn/bay-mills-2019

Reflecting Indigenous Perspectives in Climate Adaptation

Traditional and indigenous knowledges and perspectives have not often been recognized in climate adaptation planning efforts focused on natural and cultural resources. This training will use the new Tribal Adaptation Menu along with the Northern Institute of Applied Climate Science Adaptation Workbook to integrate tribal and traditional values with climate adaptation planning.

Workshop Goals

- Identify priorities and set goals for tribal natural resources management.
- Evaluate challenges and opportunities to meeting goals under climate change.
- Develop actions to help adapt natural resources to changing conditions.
- Develop plans to engage tribal community members in adaptation decisions.



Is this training for me?

This training is designed for tribal natural resource managers, along with partner organizations and key collaborators.

We encourage individuals and small teams to participate and to bring a project that is relevant to you and your work.

Important Information

Location: Bay Mills Community College, Lower Level Auditorium 1, Bay Mills MI.

Registration: <https://forms.gle/7WKmRLruPGbp2gDU9> (Deadline May 16) Workshop will be capped at 35 people.

Cost: Free! (includes lunch and refreshments)

Lodging: Participants are responsible for their own lodging.

Questions: Contact Stephen Handler (stephen_handler@usda.gov) or Robin Clark (rclark@itcmi.org) for more information.

Get the Tribal Adaptation Menu:
www.gllfwc.org/ClimateChange

Example project ideas:

- Wild rice restoration in a lake
- Protecting cultural sites from storm damage
- Planning for future community needs for hunting and gathering



*May your
planning be
carried out in a
good way!*

Miigwech!

The TAM Team

Authors

