



13 November 2019

Dibaginjigaadeg Anishinaabe
Ezhitwaad: A Tribal Climate
Adaptation Menu for Indigenous-led
Climate Adaptation

ACTION TODAY FOR A BETTER TOMORROW



Welcome



Housekeeping

- Please mute
- Use the question function



CM Credits Available



Today's Speakers



Rob Croll,
Great Lakes
Indian Fish &
Wildlife
Commission



Sara Smith,
College of
Menominee Nation
Sustainable
Development
Institute



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Dibaginjigaadeg Anishinaabe Ezhitwaad: A Tribal Climate Adaptation Menu for Indigenous- led Climate Adaptation

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OUTLINE

- ❑ Introductions and the TAM Team
- ❑ Climate change and Tribal nations
- ❑ Adaptation menus and how do they work?
- ❑ TAM Introduction & Guiding Principles
- ❑ TAM strategies and approaches
- ❑ Workshops and example projects

Tribal Adaptation Menu team







Climate Change and Tribes

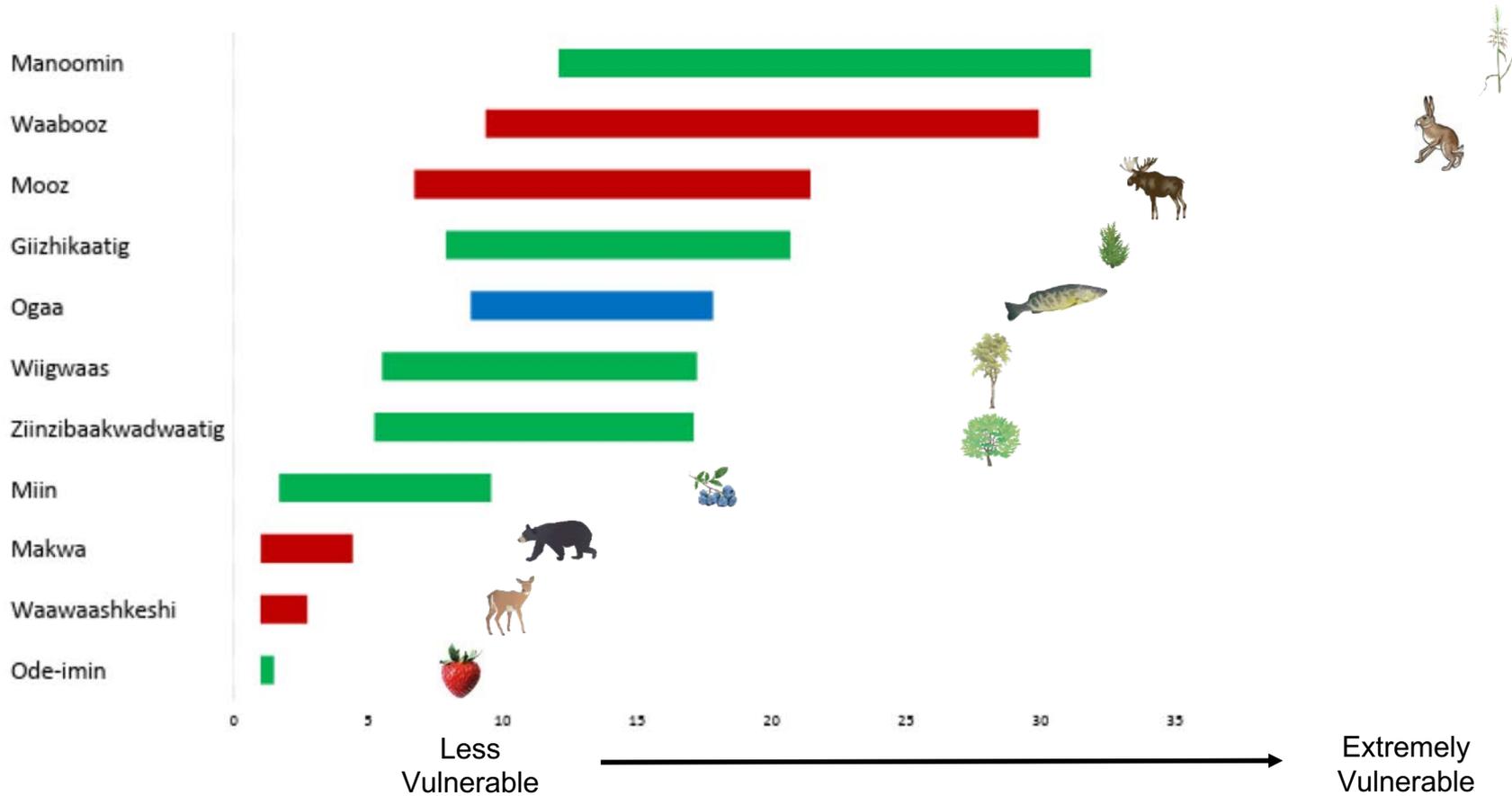
Climate Change Impacts to Tribal Nations

In the United States there are 573 federally recognized tribes and tribal groups, 60 state recognized tribes and countless tribes that have been disenfranchised by government policy and action. Each of them have their own climate change story.



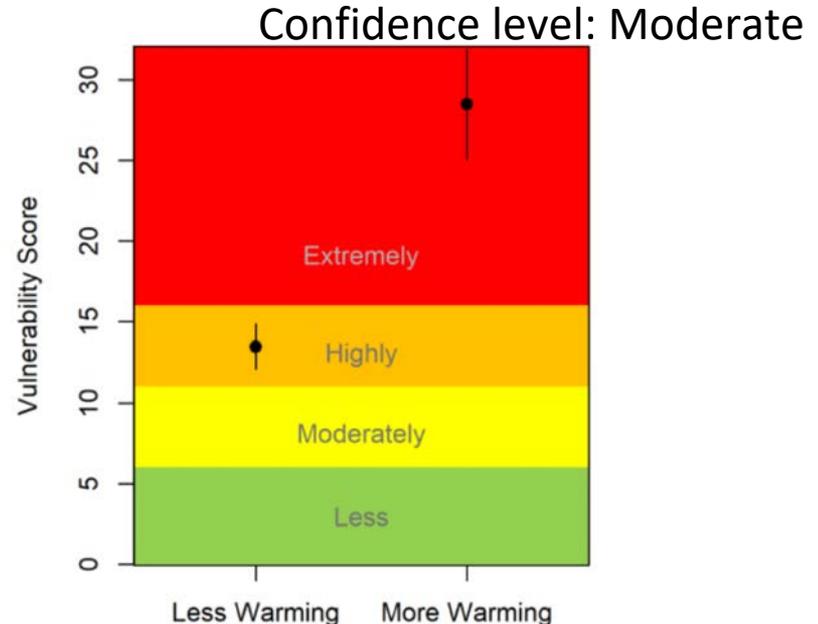
Photos: Linda Parker/ USFS

Relatives and teachers - impacts to culturally important beings



Manoomin (Wild rice)

- Affected by human land use changes
- Limited dispersal ability
- Adapted to cool environments
- Particular hydrological requirements
- Susceptible to disturbance, competition, pathogens
- Dependent on ice/snow
- Lack of genetic variation





- Culturally important beings are moving (shifting ranges) or disappearing due to climate change.
- Tribal homelands, reservations and treaty ceded territories are fixed in place.
- 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 community.
- Adaptation actions must be culturally appropriate and community supported.



Adaptation Menus and How Do They Work?

Forest Adaptation Resources

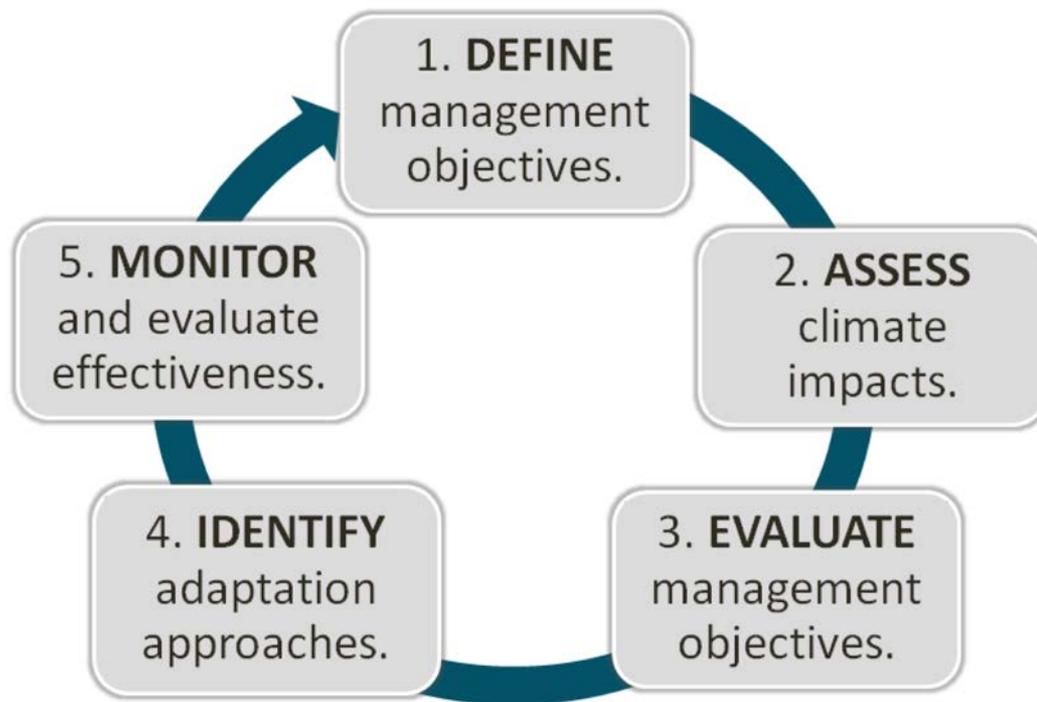
A flexible workbook to address diverse needs

- Designed for a variety of land managers with diverse goals
- Does not make recommendations
- Online version!



Adaptation Workbook

A flexible workbook to address diverse needs



Adaptation Menus

A collection of plausible adaptation actions that is:

- Specific to a discipline
- Organized into a tiered hierarchy
- Thorough and comprehensive (including opposing ideas!)

<i>Brunch Classics</i>			
Lemon Ricotta Pancakes Whipped Mascarpone, Maple, Berries	15	A's Omelet Fontal Cheese, Spinach, Mushrooms	14
Cornflake Crusted French Toast Berries, Maple Syrup	15	Eggs Florentine Spicy Capocollo, House-Made Cheddar Biscuit, Spinach	15
Bacon, Egg & Cheese Bacon, Two Eggs, Taleggio Cheese, Ciabatta	14	Porchetta Hash Poached Egg, Calabrian Chili Hollandaise	16
Avocado Toast Poached Eggs, Tomatoes, Chili Flakes, Sea Salt	15	Chia Pudding Chia Seeds, Toasted Coconut, Bananas, Strawberry	14
Chicken Parmigiana Spicy Marinara, Fresh Mozzarella	22	Farmhouse Breakfast Two Eggs, House-Made Cheddar Biscuit, Chicken Sausage	14
Squid Ink Fettuccine Vongole Little Neck Clams, Garlic, White Wine, Butter, Chili	22	Chicken Kale Caesar Chicken, Kale, Croutons	16

<i>Create Your Own Pasta</i>			
<i>Shapes</i>		<i>Sauces</i>	
Rigatoni Semolina, All-Purpose Flour, Olive Oil	14	Marinara San Marzano tomatoes, Garlic, White Wine, Basil, Chili	
Cavatelli All-Purpose Flour, Durum Flour, Eggs, Ricotta	15	Arrabiata All-Purpose Flour, Durum Flour, Eggs, Ricotta	+1
Tagliatelle All-Purpose Flour, Durum Flour, Eggs	15	Broken Meatball House Tomato Sauce with the Addition of Broken Meatballs	+4
Gluten-Free Rigatoni Gluten-Free All-Purpose Flour, Olive Oil, Eggs	16	Sunday Sauce House Tomato Sauce with Short Rib, Sausages, Veal	+4
Spaghetti Semolina, Durum Flour, Olive Oil	15	Roasted Garlic Pecorino Semolina, Durum Flour, Olive Oil	+2
Four Cheese Herb Ravioli Fontal, Ricotta, Parmesan, Pecorino	18	Carbonara Pancetta, Eggs, Peas, Pecorino	+3

<i>Sides</i>		<i>Brunch Cocktails</i>	
Pecorino Truffle Fries	8	Bloody Mary Vodka, Spiced Fresh OOP Tomato Juice, Horseradish	10/45
Potato Hash	6	Coignac Spritz Coignac, Spritz, Aperol, Crème de Pêche, Sparkling Wine	12/55
Bacon	6	Green Side Reyka Vodka, Green Juice, Lemon	12/55
Turkey Sausage	6	Morning Derby Bourbon, Grapefruit, Ginger, Carrot Juice	12/55
Field Greens	7	Sangria Red Wine, Fresh Fruit, Pisco, Crème de Pêche	10/45
Two Eggs Any Style	6	Firing Squad Mizuna, Tropicana, Cointreau, Fresh Lime, Grenadine	12/55
Beignets	8	Tall Mimosa Reyka Vodka, Cointreau, Jala's Mimosa Juice, Sparkling Wine	12/55
Baked Goods	10		



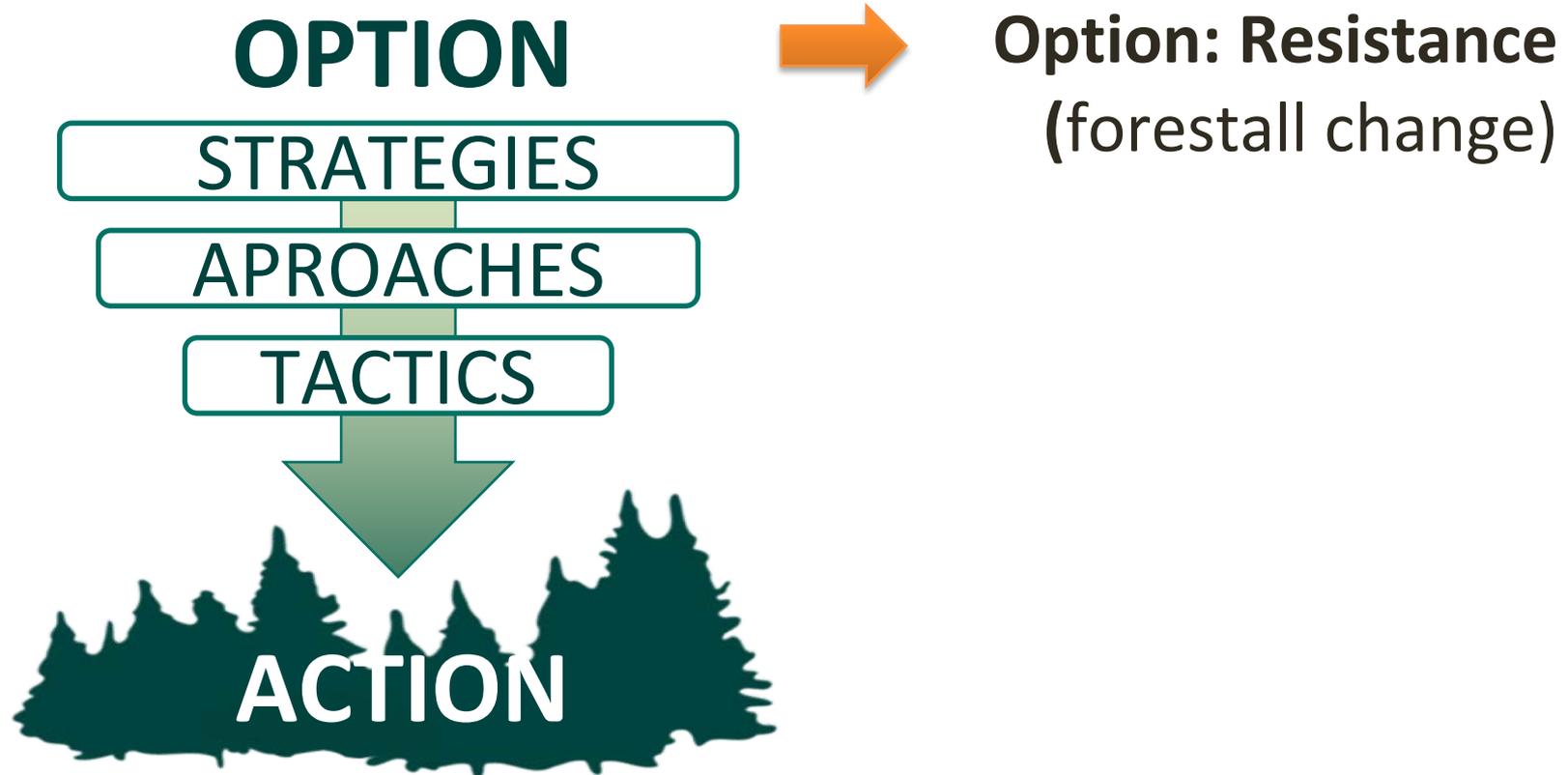
Adaptation Menu Benefits

Address challenges in implementing adaptation:

1. Connecting broad ideas to specific actions
2. Making actions intentional
3. Communicating your ideas
4. Boosting creativity

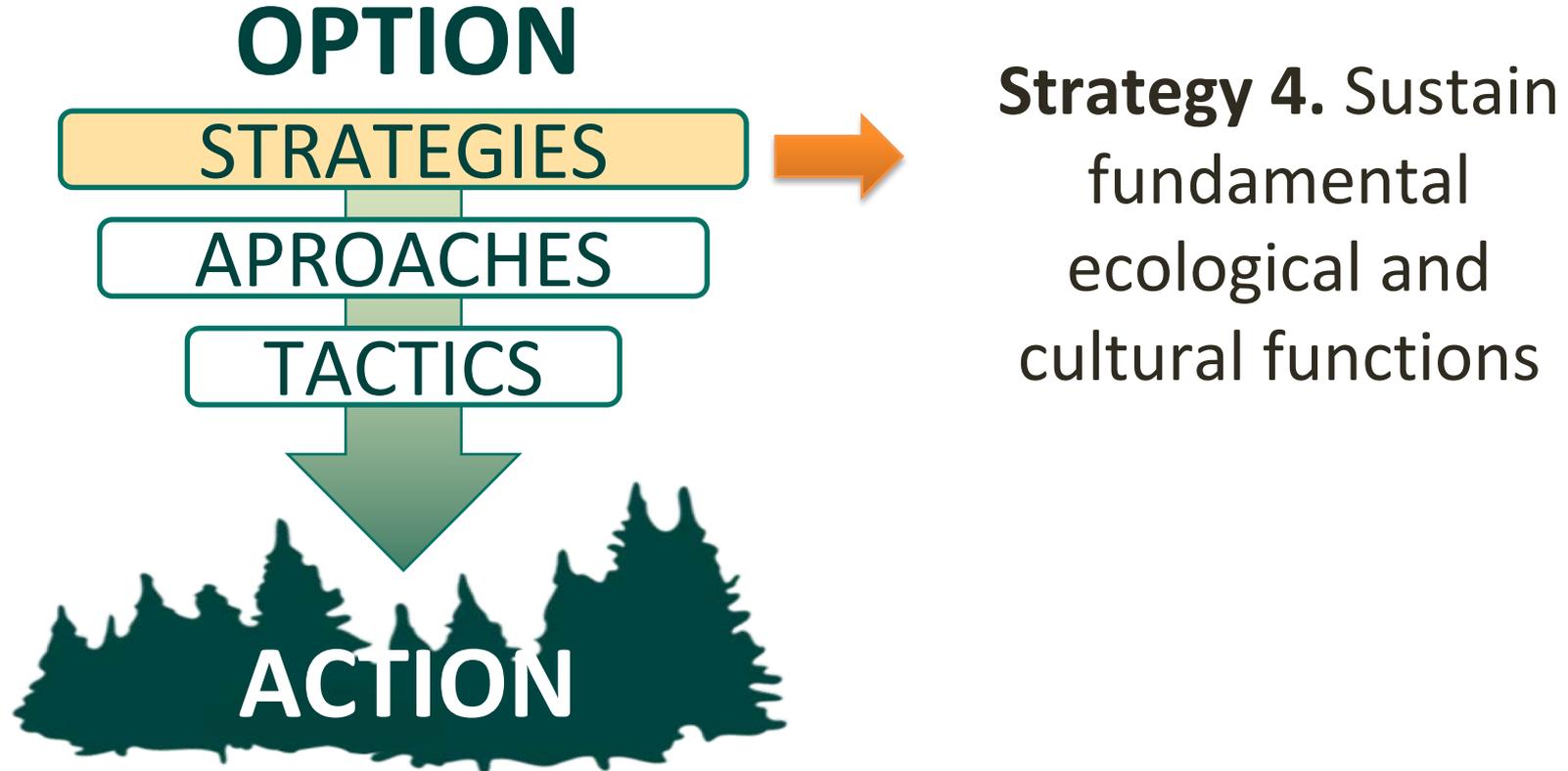
Adaptation Menus

1. Connecting Broad Ideas to Specific Actions



Adaptation Menus

1. Connecting Broad Ideas to Specific Actions



Adaptation Menus

1. Connecting Broad Ideas to Specific Actions

OPTION

STRATEGIES

APPROACHES

TACTICS

ACTION



Approach 4.5.

Revitalize and maintain Anishinaabe/cultural use of ishkode (fire) as a stewardship tool.

Adaptation Menus

1. Connecting Broad Ideas to Specific Actions

OPTION

STRATEGIES

APPROACHES

TACTICS

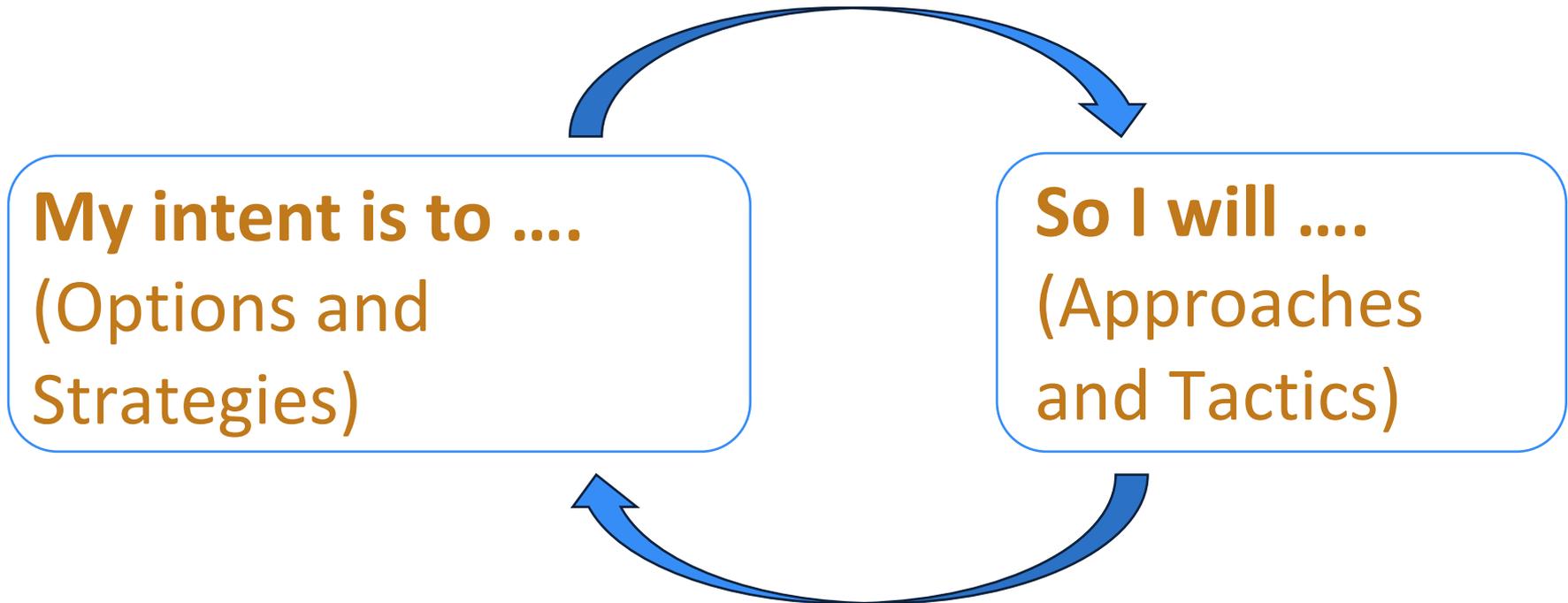
ACTION



Tactic: Use prescribed burns in marsh habitats to encourage young plant communities

Adaptation Menus

2. Making Actions Intentional



Adaptation Menus

3. Communicating your Ideas



Adaptation Menus

4. Boosting Creativity



Photos and beadwork by Josh Hudson, Gnoozhekaaning

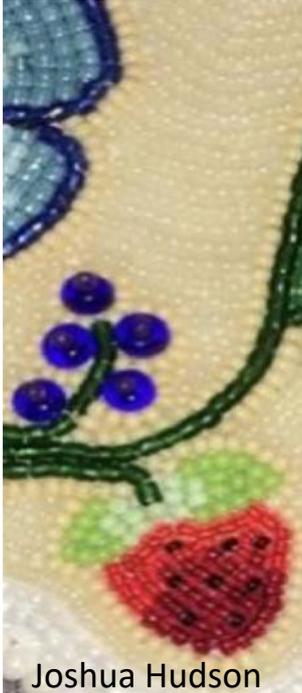


TAM Beginnings

The Need for Indigenous Perspectives



The Need for Indigenous Perspectives



- Adaptation menus have been reflective of western science and a resource- centric perspective
- Needed to create a menu reflective of Indigenous knowledge and kin-centric perspectives
- A new climate adaptation menu based on:
 - Decision-making and conduct rooted in Indigenous ways
 - Engage Indigenous sciences and knowledges
- Trend of Euro-centric science looking to Indigenous knowledge, which has been the foundations of our existence for millennia

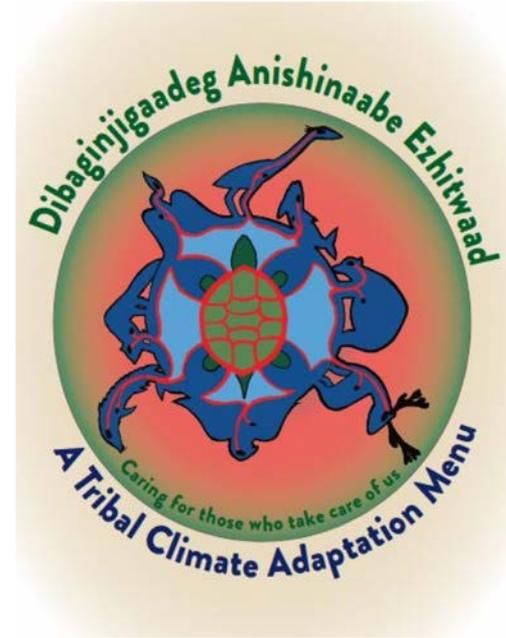
Introduction: A Tribal Climate Adaptation Menu

- o Primarily developed for the use of indigenous communities, tribal natural resource agencies and their non-indigenous partners
- o 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
- o 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 by other indigenous communities, allowing for the incorporation of their language, knowledge and culture





Guiding Principles

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)

These guiding principles can be adapted by individual Tribal communities based on their values, culture, and language



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

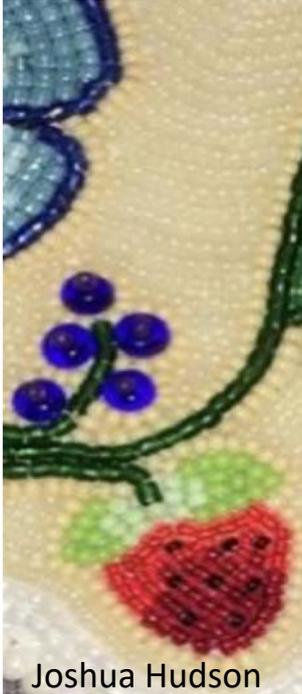


Offering asemaalnāūqemaw (tobacco). (Photo by Charlie Rasmussen, GLJFWC.)

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.

Adaptation & Natural World



Joshua Hudson

Indigenous perspectives call for observation, recognizing and learning from our first teachers, and adaptation that addresses responsibility and reciprocity to all our relations

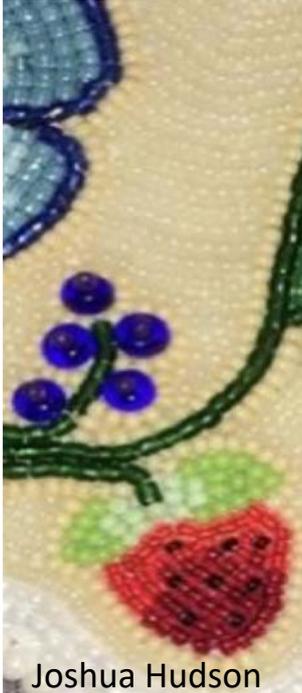
Western perspectives emphasize control and management of non-sentient resources

Abundance of adaptation options from Western perspectives

- Instead of waiting for systems to naturally establish themselves, managers are tasked with selecting and managing for specific future forest/aquatic/natural communities

The Tribal Adaptation Menu offers a different perspective on adaptation

Three R's: Respect, Reciprocity, and Relationships



- Decisions for use of our relatives were originally communal decisions made with recognition and acknowledgement throughout
- Today management and decision-making for land and the natural environment is made less as a communal decision and more as an individual or institutionalized



TAM Strategies and Approaches



Culturally Relevant Adaptation

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.



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Strategy 6: Reduce the risk and long-term impacts of disturbances	31
Strategy 7: Establish, support, and recognize opportunities for beings or sites of concern to the community to withstand climate change	33
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Strategy 11: Encourage community adjustments and transition while maintaining reciprocity and balance	40
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Strategy 13: Design and modify infrastructure and access to match future conditions and community needs.....	44
Strategy 14: Accommodate altered hydrologic processes.....	45



Strategies 1-3

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 5 - Approach 5.2

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 ingoji 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.





**Putting the TAM to
work**

Workshops



Cloquet Workshop (Minnesota)



Tribal wetland restoration - Iowa Tribe of Oklahoma

Paper birch habitat & restoration - GLIFWC

Forest management/cultural fire/moose habitat - Grand Portage Band of Lake Superior Ojibwe



Bay Mills Workshop (Michigan)

Great Lakes coastal marsh/manoomin restoration - Sault Tribe of Chippewa Indians

Cedar restoration - Bay Mills Indian Community

Road/stream crossings on Hiawatha National Forest - USDA Forest Service

Leek restoration - Bay Mills Community College

Reviving Manoomin

Objectives:

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

Challenges	Opportunities
1. Warmer water temps 2. high streamflow in spring 3. heavy precipitation events	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.
- 7.6 Partner with outside agencies and tribes within 1836 Treaty territory
- 8.1 Identify native sources of manoomin & plant in historic and suitable areas
- 8.5 Establish SOPs for seeding manoomin and harvest regulations
- 7.1 Identifying historical and cultural sites for manoomin restoration
- 2.3 Use manoomin to restore historically disturbed sites
- 8.4 Establish and maintain cultural, environmental education & youth program

1.1.1.3 Consult w/ leaders & cultural history

- Storytelling on sign. manoomin
- understanding enviro for growth & harvest techniques (can it be used to stabilize area?)
- partnerships (Forest Service) ^{Bay Mills club drug court} ^{Canada First Nations}
- Examine historical maps/records ^{Bay Mills Historical}

10.1 Beings across a greater geographical range

- Artificial impoundments



Menominee Workshop (Wisconsin)

Sea level rise preparation - Miccosukee
Tribe of Florida

Creating an indigenous focused Wisconsin
Master Naturalist Class - Ho Chunk Nation

Cranberry restoration -
Penobscot/Passamaquoddy



Akwesasne Workshop (New York)

Black ash/EAB preparation - Akwesasne
Mohawk/Passamaquoddy/Penobscot

Culturally appropriate invasive species
control - Akwesasne/St Regis Mohawk

Critical infrastructure planning - Akwesasne
Mohawk

Project Title: Okwiráksen
(Bad Trees)

Goals/Objectives: Eradication/removal of the
Amur Cork Tree on
Thompson Island (TICC).



1. Maintain and restore
culturally significant/native
species.
2. Survey + plant inventory
3. Education

CC Impacts: Challenges: long-term restoration
due to unpredictable climate. Vulnerability
increase due to CC + invasive species.

Opportunities: Re-establish traditional needs
Education + community involvement
Climate Change grants.
New partnerships.

Adaptation Actions: 4.6 Maintain + revitalize cultural
approaches to harvesting + caretaking. 6.4 plan
harvesting, gathering, + collecting opportunities. 11.2
Establish/encourage new mixes of local beings.
10. Maintain + enhance genetic diversity. All of
11. Encourage community adjustments + transition

Monitoring Items:

- Regeneration Success
- Forests Canopy Cover
- Reduction in Invasive Species
- Increase in native species



What's Next?

- Dibaginjigaadeg Anishinaabe Ezhitwaad is ready to leave the nest!
 - How can we help tribes and native communities around the country take this tool and customize it for their own use?
 - How can we help non-tribal organizations use this tool to collaborate and communicate with tribes in your footprint?





Questions?



Thanks for joining us!

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