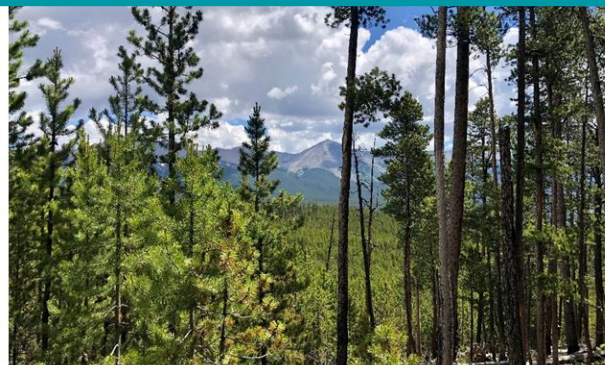


The Climate Adaptation Workbook + Adaptation Menus

Climate Change and Adaptation for Sagebrush Practitioners



Climate Hubs
U.S. DEPARTMENT OF AGRICULTURE

May 22, 2024
Maude Dinan,
USDA Southwest Climate Hub

Northern Institute of Applied Climate Science

Climate

Carbon

The Northern Institute of Applied Climate Science (NIACS) develops synthesis products, fosters communication, pursues science, and provides technical assistance in climate change adaptation and carbon management.

NIACS is a collaborative partnership of Federal, research, conservation, higher education, and Tribal organizations led and supported in part by the USDA Forest Service.



USDA Northern Forests Climate Hub

Established in 2014 to:

Develop and deliver science-based, region-specific information and technologies to agricultural and natural resource managers that enable climate-informed decision-making, and to

Provide assistance to implement those decisions



Tour de Adaptation Workbook



Origins

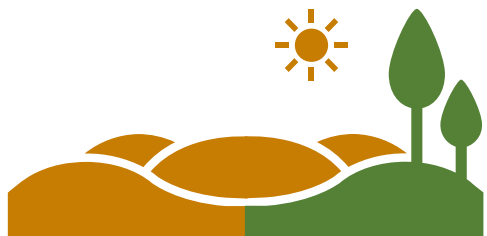
Why are they important?

What is a menu?

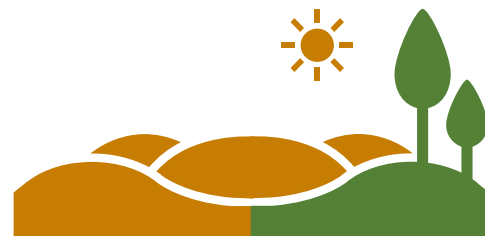
Where can I begin?

How are they built?

Climate-Driven Changes

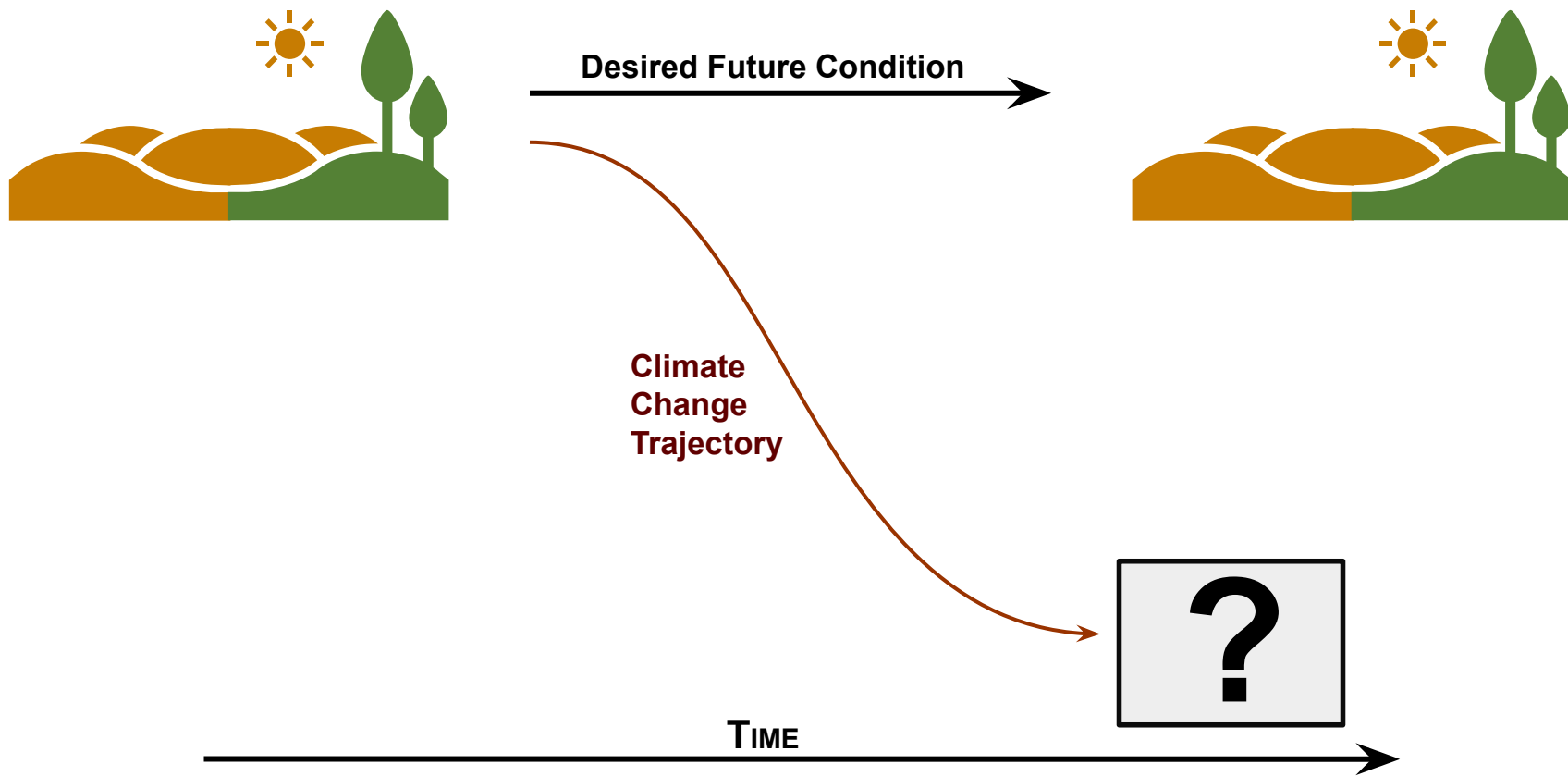


Desired Future Condition →



TIME →

Climate-Driven Changes



What actions can be taken to
**enhance the ability
of a system to cope
with change
and
meet goals and
objectives?**



Photo:
<https://www.fs.usda.gov/midewin>

Adaptation Concepts

RESISTANCE



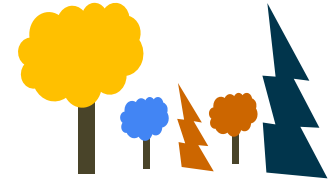
- Improve defenses of forest against change and disturbance
- Maintain relatively unchanged conditions

RESILIENCE



- Accommodate some degree of change
- Return to prior reference condition following disturbance

TRANSITION



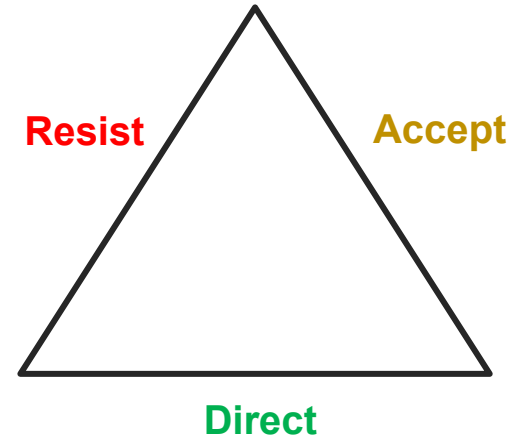
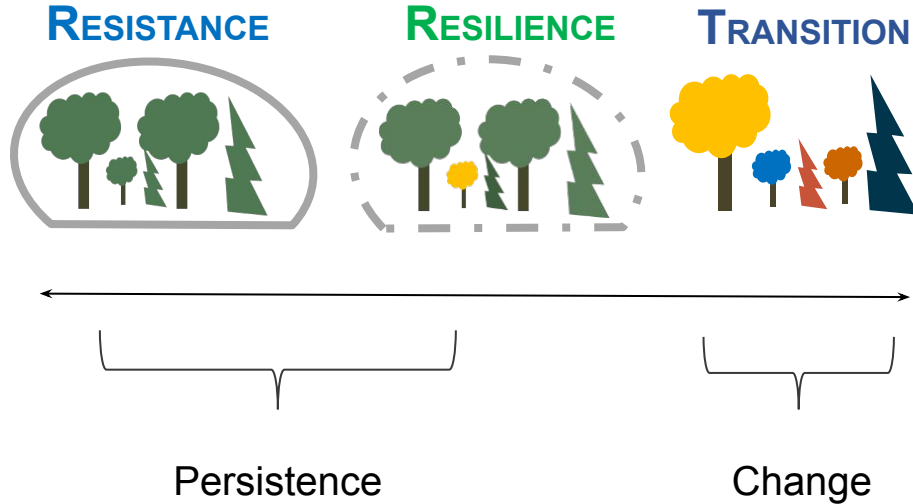
- Intentionally facilitate change
- Enable ecosystem to respond to changing and new conditions



Reduce impacts/maintain current conditions

Forward-looking/promote change

Adaptation Concepts



All of these are meant to help you communicate what you're trying to do and be explicit about intent

Intentionality

Explicitly consider and address climate change

Sure we might get lucky...

Intentionally assessing risk and vulnerabilities
makes our plans more robust!



There are many adaptation planning approaches

Table 5.1. Example adaptation planning approaches.

Approach	Purpose and key features	Spatial scale ^a	Starting point	Effort/Cost ^b	Institutional affiliation	References
Adaptation for Conservation Targets (ACT) Framework	Stepwise process for developing actions to achieve climate-informed conservation goals for specific species, ecological processes, or ecosystems	Site, Landscape	Management targets, goals, or activities	Time: low/moderate Expertise: moderate Cost: low/moderate	NCEAS Climate Change & Wildlife Conservation working group; Wildlife Conservation Society; Southwest Climate Change Initiative	Cross et al. 2012b, 2013
Awareness to Action (AZA)	Adaptation planning services to develop climate change adaptation plans focused on specific regions, species, or ecosystems	Site, Landscape	Either management concerns, or broad look at potential climate-related changes	Variable	EcoAdapt	Hansen and Hoffman 2011
Climate Change Adaptation Framework for Ecosystems	Stepwise process for integrating climate into natural resource management for many species and ecosystems	Landscape	Management targets, goals or activities	Time: moderate Expertise: moderate/high Cost: high	Ontario Centre for Climate Change Impacts & Adaptation Resources	Gleeson et al. 2011
Climate Change Response Framework	Stepwise process for integrating climate into forest planning and management for forest species and ecosystems	Site, Landscape	Management targets, goals or activities	Time: low/moderate Expertise: low/moderate Cost: low/moderate	U.S. Forest Service	Swanston and Janowiak 2012
Climate Project Screening Tool	Questionnaire-based tool to explore options for ameliorating climate effects on forest resource management projects	Site	Management targets, goals or activities	Time: low/moderate Expertise: low/moderate Cost: low	U.S. Forest Service	Morelli et al. 2012
Climate-Ready Estuaries Expert Elicitation Approach	Expert elicitation approach for assessing vulnerabilities and identifying adaptation options	Site, Landscape	Management targets and goals	Time: moderate Expertise: high Cost: moderate/high	U.S. Environmental Protection Agency	U.S. EPA 2012a, 2012b
Climate-Smart Coastal Restoration Planning	Stepwise framework for the design and implementation of climate-smart coastal restoration projects in the Great Lakes	Site	Management targets, goals or activities	Time: low/moderate Expertise: moderate Cost: low/moderate	National Wildlife Federation; EcoAdapt	Glick et al. 2011b
ClimateWise	Stepwise process for developing adaptation strategies and actions coordinated across local ecosystem and human community concerns	Site, Landscape	Broad look at potential climate-related changes	Time: moderate Expertise: moderate Cost: moderate	Geos Institute	Koopman and Journet 2011
Conservation Action Planning for Climate Change	Stepwise process for integrating climate into existing plans developed using the Conservation Action Planning (CAP) process for specific species or ecosystems	Site	Management targets, goals or activities from an existing CAP plan	Time: moderate/high Expertise: moderate Cost: moderate	The Nature Conservancy	Poiani et al. 2011

Table 5.1. Example adaptation planning approaches (continued).

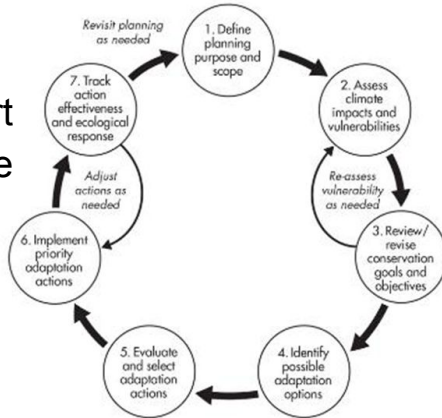
Approach	Purpose and key features	Spatial scale ^a	Starting point	Effort/Cost ^b	Institutional affiliation	References
Decision Framework for Climate Change Adaptation	Decision tree that identifies and prioritizes actions to increase the adaptive capacity of species	Site, Landscape	Particular species and species distribution/bioclimatic envelope model	Time: low/moderate Expertise: moderate Cost: low/moderate	NERC Centre for Ecology & Hydrology; UK Population Biology Network	Oliver et al. 2012
National Park Service Scenario Planning	Scenario planning process to address climate-related uncertainties in managing species, ecosystems, cultural and recreational resources	Site, Landscape	Potential climate-related changes	Time: moderate Expertise: moderate Cost: moderate	National Park Service	Weeks et al. 2011, Rose and Star 2013
North Cascadia and Olympic Peninsula Adaptation Partnership	Science-management partnership for assessing vulnerability and developing adaptation options for species and ecosystems across federal land management units	Landscape	Potential climate-related changes	Time: moderate/high Expertise: moderate Cost: moderate	U.S. Forest Service and National Park Service	Raymond et al. 2013, Littell et al. 2012, Halošky et al. 2011
Open Standards for the Practice of Conservation	Incorporation of climate into a structured conservation planning process for specific species or ecosystems	Site, Landscape	Management targets, goals or activities	Time: moderate Expertise: moderate Cost: moderate	Conservation Measures Partnership	CMP 2013
Refuge Vulnerability Assessment and Alternatives	Stepwise process for spatially explicit assessment of a refuge's vulnerability to climate change and other stressors, and identification of adaptation options	Site, Landscape	Either management concerns or potential climate-related changes	Time: moderate/high Expertise: high Cost: moderate/high	NatureServe	Crist et al. 2012a, 2012b
Template for Assessing Climate Change Impacts and Management Options (TACCIMO)	Web-based tool that synthesizes published research on climate impacts and adaptation options relevant to forest planning and management	Site, State, Landscape	Potential climate-related changes	Time: low Expertise: low Cost: low	U.S. Forest Service	Treasure et al. 2014
Yale Framework	Guidance for selecting assessment and modeling strategies relevant to specific conservation and resource management needs	Site, Landscape	Matrix of adaptation options at different ecological levels	Time: low/moderate/high Expertise: moderate/high Cost: moderate/high	Yale School of Forestry	Schmitz et al. In press

^a Site = Single management unit or jurisdiction at relatively small spatial extent. Landscape = More complex jurisdictional landscape at relatively larger spatial extent. State = Targeted at state-level planning in the United States.

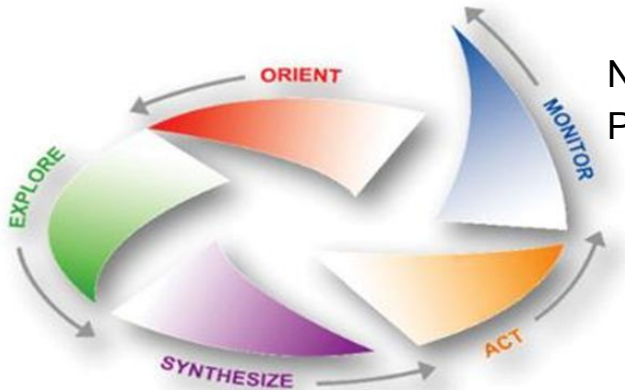
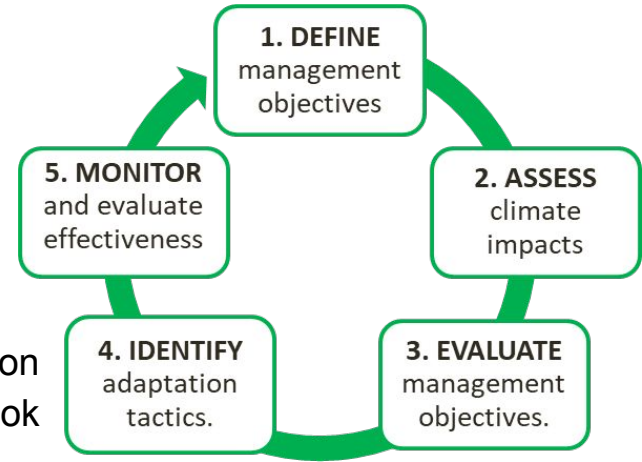
^b Time: low (<1 year), moderate (up to 1 year), high (>1 year); Expertise: low (no special technical expertise required), moderate (some technical expertise helpful), high (technical expertise required); Cost: low (<\$10,000), moderate (\$10,000–75,000), high (>\$75,000).

There are many adaptation planning approaches

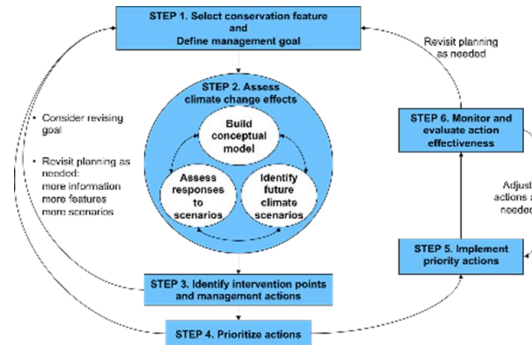
NWF Climate-Smart Conservation Cycle



USFS Adaptation Workbook



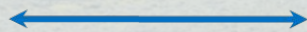
NPS Scenario Planning



Adaptation for Conservation Targets (ACT)

A Few Distinctions

Dedicated adaptation
planning



Integrated adaptation
planning

Single species /
ecosystem



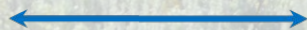
Many species
and ecosystems

Site scale



Landscape scale

Specific management
targets, goals, & activities



Broad look at
potential impacts

Many Similarities

**Participatory and iterative
processes...
...for generating
place-based adaptation actions**

Bottom Line

No one 'correct' framework for climate adaptation

Some approaches may be particularly well-suited to your needs

Most important thing = get started!

Climate Adaptation Workbook and Adaptation Menus

Flexible 5-step workbook designed for a variety of landowners with **diverse goals**

Works at **project-level**

Centers the **manager's expertise, and judgment**

Creates **clear rationale** for actions by connecting them to **broader adaptation ideas**

Does not make recommendations



Includes: Adaptation workbook
Adaptation strategies for different resource areas (menus)

Adaptation Workbook = Climate Change Filter



Use the Adaptation Workbook to ensure ALL of your goals and objectives are robust to climate change impacts.

Tour de Adaptation Workbook

Origins

Why are they important?

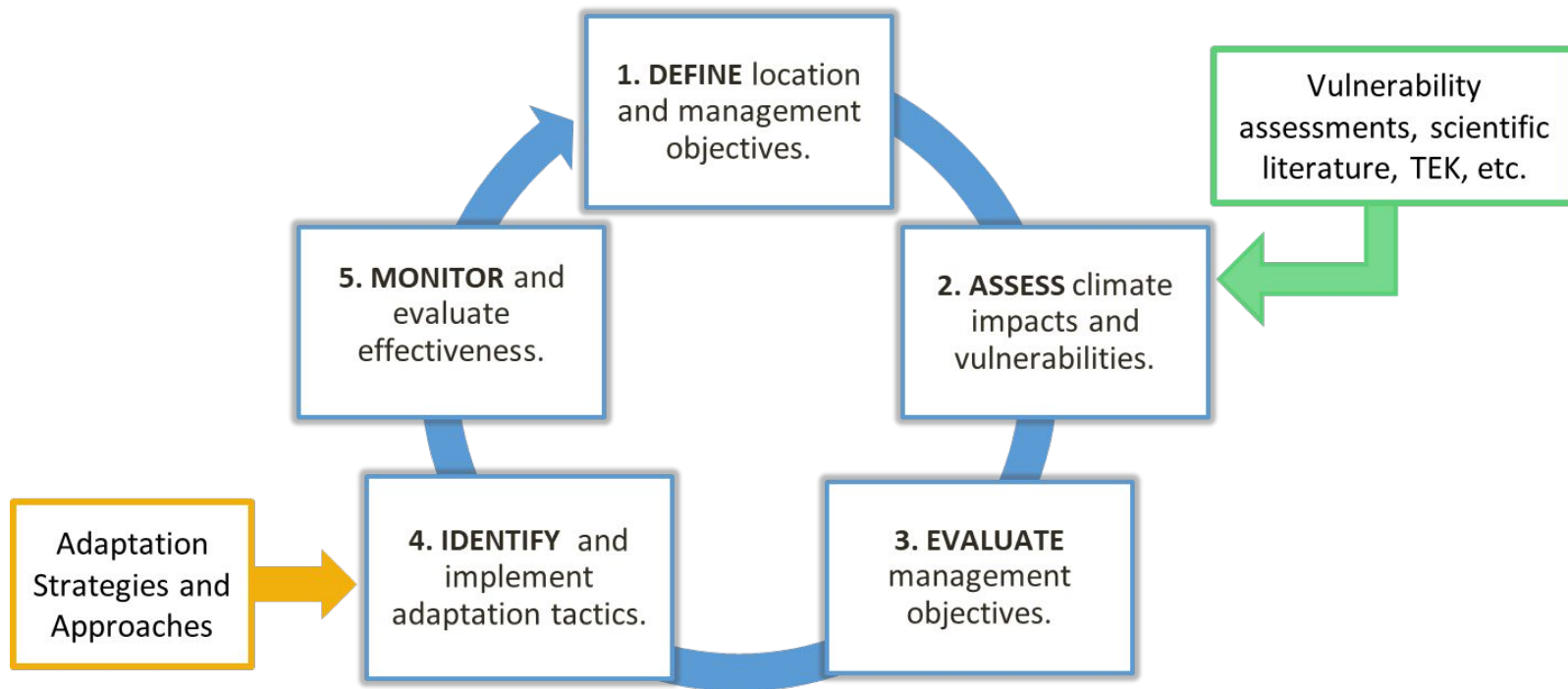
What is a menu?



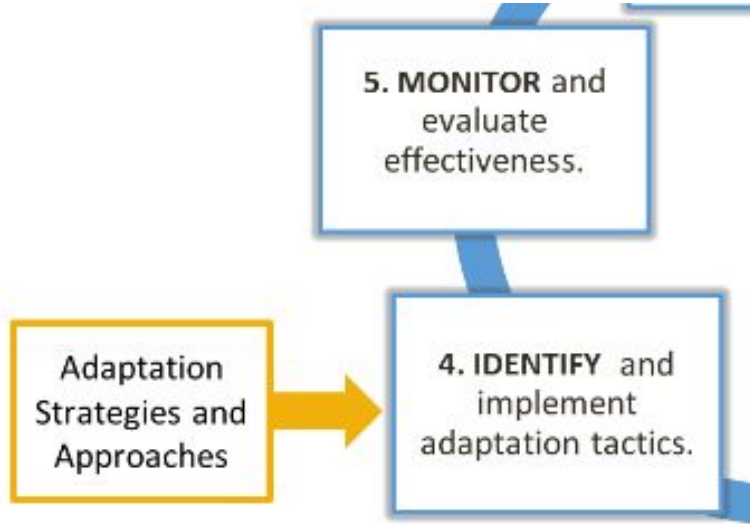
How are they built?

Where can I begin?

Adaptation Workbook



Adaptation Menus of Strategies and Approaches



Brunch Classics

Lemon Ricotta Pancakes	15	AJ's Omelet	14
Whipped Mascarpone Maple Berries		Furtal Cheese, Spinach, Mushrooms	
Coriander Crusted French Toast	15	Eggs Florentine	15
Berries, Maple Syrup		Sunny Capitali, House Made Cheddar Biscuit, Spinach	
Bacon, Egg & Cheese	14	Porchetta Hash	16
		Fresh Egg, Calabrian Chili Herb Butter	
		Chia Pudding	14
		Chia Seeds, Toasted Coconut, Banana, Strawberry	
		Farmhouse Breakfast	14
		Two Eggs, House Made Cheddar Biscuit, Chicken Sausage	
		Chicken Kale Caesar	16
		Chicken, Kale, Croutons	

Our Own Pasta

Sauces

Marinara	
Sun Marzano Tomatoes, Garlic, White Wine, Basil, Oil	
Arrabiata	+1
All-Purpose Flour, Durum Flour, Eggs, Ricotta	
Broken Meatball	+4
House Tomato Sauce with the Addition of Broken Meatballs	
Sunday Sauce	+4
House Tomato Sauce with Short Rib, Sausage, Veal	
Roasted Garlic Pecorino	+2
Sautéing Durum Flour Olive Oil	
Carbonara	+3
Pancetta, Eggs, Peas, Pecorino	

Brunch Cocktails

8	Bloody Mary	10/45
6	Viola, Sprout, Fresh ODP Tomato Juice, Horseradish	
6	Cointreau Spritz	12/55
6	Cointreau Spritz, Aperol, Crème de Peche, Sparkling Wine	
7	Green Side	12/55
6	Keya Viola, Green Juice, Lemon	
8	Morning Derby	12/55
8	Bourbon, Grapefruit, Ginger, Citrus Juice	
10	Sangria	10/45
	Red Wine, Fresh Fruit, Pisco, Crème de Peche	
	Fring Squad	12/55
	Milagro Tequila, Cointreau, Fresh Lime, Grenadine	
	Tall Mimosa	12/55
	Keya Viola, Cointreau, Jaker's Mimosa Juice, Sparkling Wine	

A “menu” of possible actions that allows you to decide what is most relevant for a particular location and set of conditions

Adaptation Menus of Strategies and Approaches

Published:

2012: Forestry
2016: Urban Forestry
2016: Agriculture
2019: Forested Watersheds
2019: Recreation
2019: Non-Forested Wetlands
2019: Inland Glacial Lake Fisheries
2020: Tribal Perspectives
2020: Forest Carbon Management
2021: Wildlife Management
2022: Fire-Adapted Ecosystems

In Preparation:

Ocean Coastal Ecosystems
Fresh-Water Coastal Ecosystems
Grasslands
Southwest Tribal Perspectives

Menu of Adaptation Strategies and Approaches

Developed for fire management

Strategy 1: Sustain fire as a fundamental ecological process

Approach 1.1: Restore or maintain fire in fire-adapted ecosystems

Approach 1.2: Develop fire use strategies in altered or novel ecosystems where fire can play a beneficial role

Strategy 2: Reduce the effects of biotic and abiotic stressors affecting fire regimes

Approach 2.1: Remove and prevent establishment of non-native invasive species that alter fuel regimes
Approach 2.2: Maintain or improve the ability of forests to resist pests and pathogens that may alter fuel regimes

Approach 2.3: Limit, selectively apply, and monitor land uses that increase fire risk or threaten fire resilience

Strategy 3: Reduce the risk of unacceptable fire

Approach 3.1: Protect fire-sensitive and vulnerable ecosystems from fire

Approach 3.2: Alter forest structure and composition to reduce the risk and spread of unacceptable fire

Approach 3.3: Establish or maintain fuel breaks to stop the spread of unacceptable fire

Strategy 4: Limit the effects of unacceptable fire and promote post-fire recovery

Approach 4.1: Promote habitat connectivity and increase ecosystem redundancy

Approach 4.2: Maintain or create fire refugia

Approach 4.3: Stabilize and enhance the physical fire footprint

Approach 4.4: Promote recovery of native vegetation and habitat

Strategy 5: Maintain and enhance structural, community, and species diversity using fire and fuels treatments

Approach 5.1: Maintain or increase structural diversity from stand to landscape scales

Approach 5.2: Promote diversity within and among communities to enhance fire resilience

Strategy 6: Identify, promote, and conserve fire- and climate change-adapted species and genotypes

Approach 6.1: Promote native species and genotypes that are better adapted to future climate and fire regimes, disfavor species that are distinctly maladapted

Approach 6.2: Use plant materials from regional areas that have current climate and fire regimes similar to anticipated future conditions

Strategy 7: Facilitate ecosystem adaptation to expected future climate and fire regimes

Approach 7.1: Facilitate the movement of species that are expected to be adapted to future climate and fire regimes

Approach 7.2: Use fire as a tool to align existing vegetation communities with changing climate and fire regimes

Adaptation Menus of Strategies and Approaches

Adaptation Workbook Get started About How to Use Explore Training Log in

Strategies and Approaches

The Northern Institute of Applied Science has led the development of adaptation strategies and approaches for a variety of natural resource topics, which can be used with the **Adaptation Workbook**. These "menus" provide a curated list of adaptation actions to help you move from broad ideas to specific actions. Although menu items can be applied in various combinations to achieve desired outcomes, not all items on the menu will work together. Furthermore, actions that work well in one ecosystem type may not work in another; it is up to the land manager to select appropriate actions according to project location and goals. [Learn more about the workbook.](#) All menus are peer-reviewed, interact with menus in the links below, and find supporting publications at the Climate Change Response Framework ([forestadaptation.org](#)).

These resources were designed for the **Midwest and Northeast U.S.**, and are a product of a synthesis of academic literature and widespread input from the management community. However, these tools may be useful in other regions as well. Adaptation actions for **other regions** are also available through the USDA Forest Service Climate Change Resource Center.

Browse Menu of Adaptation Strategies and Approaches, by topic:

- Forest Strategies and Approaches**
Developed for forested ecosystems, with focus on forest management and planning.
- Urban Forest Health Strategies and Approaches**
Developed for communities working in urban ecosystems. This version is supplemental to the 2016 version of the Urban Forest Strategies and Approaches menu, found [here](#).
- Forested Watershed Strategies and Approaches**
Developed for water resources management; with focus on hydrology, vegetation management, landscape planning, and infrastructure.

```
graph TD;
  A[CONCEPT] --> B[STRATEGIES];
  B --> C[APPROACHES];
  C --> D[TACTIC];
  D --> E[ACTION];
```

The **Adaptation Workbook** contains browseable lists of NIACS adaptation menus, as well as a tool for adaptation planning.

www.adaptationworkbook.org/strategies

The **National Compendium for Climate Change Adaptation Actions** provides a searchable database of adaptation strategies for different geographic regions and resource areas.

www.fs.usda.gov/ccrc

USDA U.S. FOREST SERVICE CLIMATE CHANGE RESOURCE CENTER
United States Department of Agriculture

CLIMATE CHANGE RESOURCE CENTER

EDUCATION TOPICS TOOLS ADAPTATION LIBRARY

Compendium of Adaptation Approaches

- The Adaptation Approaches help natural resource managers and landowners identify actions for responding to climate change. It provides a curated list of adaptation actions that helps you move from broad ideas to specific actions. Many illustrative examples of adaptation actions are included in this tool, but it is not a comprehensive list of all available options. [Learn more about adaptation actions.](#)
- The collection is organized by adaptation approach. Click on each approach for more information on how the idea links to broader adaptation strategies and more specific management tactics. You can browse by resource area, region, or climate change impact.
- We created this tool to inspire thinking and spur brainstorming for adaptation planning. It can also be used to link a specific management action to a broader adaptation approach in order to show how management is intentionally addressing climate change concerns. As you do this, it is important to consider your own management goals and local climate change impacts before selecting actions for implementation. We strongly encourage you to use a structured process to intentionally consider climate change in your planning and project development.

Find Approaches For Your Project

Resource Area: Climate Change Effect:

Region:

Tour de Adaptation Workbook



Origins

Why are they important?

What is a menu?

How are they built?

Where can I begin?

1. Translating broad **concepts** to specific **actions**



1. Translating broad concepts to specific actions

Menu of Adaptation Strategies and Approaches

Developed for Outdoor Recreation

Strategy 1: Protect and sustain key infrastructure

Approach 1.1 Stabilize shorelines to reinforce vulnerable infrastructure.

Approach 1.2 Maintain, improve, and construct infrastructure using materials that can withstand a range of climate stressors.

Approach 1.3 Maintain, improve, and construct infrastructure using designs that reduce impacts from variable water levels.

Approach 1.4 Employ technological innovations to maintain the viability of developed winter recreation areas.

Approach 1.5 Employ protective measures to minimize damage from disturbance events.

Strategy 2. Enhance measures to prevent ecological damage from variable precipitation

Approach 2.1 Maintain and increase the capacity of stormwater infrastructure to accommodate variable precipitation.

Approach 2.2 Enhance the capacity of natural systems to accommodate variable precipitation.

Approach 2.3 Minimize impacts of existing roads and trails that are compromised by changing conditions.

Strategy 3. Manage impacts from shifting visitation and use trends

Approach 3.1 Reduce visitor impacts to vulnerable areas.

Approach 3.2 Optimize timing of opportunities to align with changing conditions.

Approach 3.3 Provide alternative means of access.

Strategy 4. Account for and communicate risks to human well-being

Approach 4.1 Train employees to be aware of climate-exacerbated risks to public safety.

Approach 4.2 Prevent or minimize hazards from wildland fire.

Approach 4.3 Prevent or minimize hazards from extreme heat events.

Approach 4.4 Improve public awareness regarding climate change and climate-exacerbated risks.

Approach 4.5 Communicate the reality of environmental change.

Strategy 5. Manage recreational opportunities to address impacts of expected conditions

Approach 5.1 Recondition recreation-related infrastructure located in vulnerable areas.

Approach 5.2 Use appropriate vegetation to increase resilience of recreation settings to climate-related stressors.

Approach 5.3 Alter infrastructure to better capture and use natural and man-made snow.

Approach 5.4 Employ snow-based options that are functional in low-snow conditions.

Strategy 6. Alter recreational opportunities to accommodate expected conditions

Approach 6.1 Increase four-season and non-skiing recreation opportunities at winter sports areas.

Approach 6.2 Relocate existing infrastructure and opportunities to areas with less risk of climate-exacerbated damage.

Approach 6.3 Integrate long-term siting and climate considerations into recreation management.

Approach 6.4 Use materials and designs that are permanent.

Approach 6.5 Remove or decommission vulnerable infrastructure.



Options:

- Foundational adaptation concepts:
- Resistance, Resilience, Transition

Strategies:

- Broad adaptation responses that consider:
 - Regional ecological conditions
 - Overarching management goals

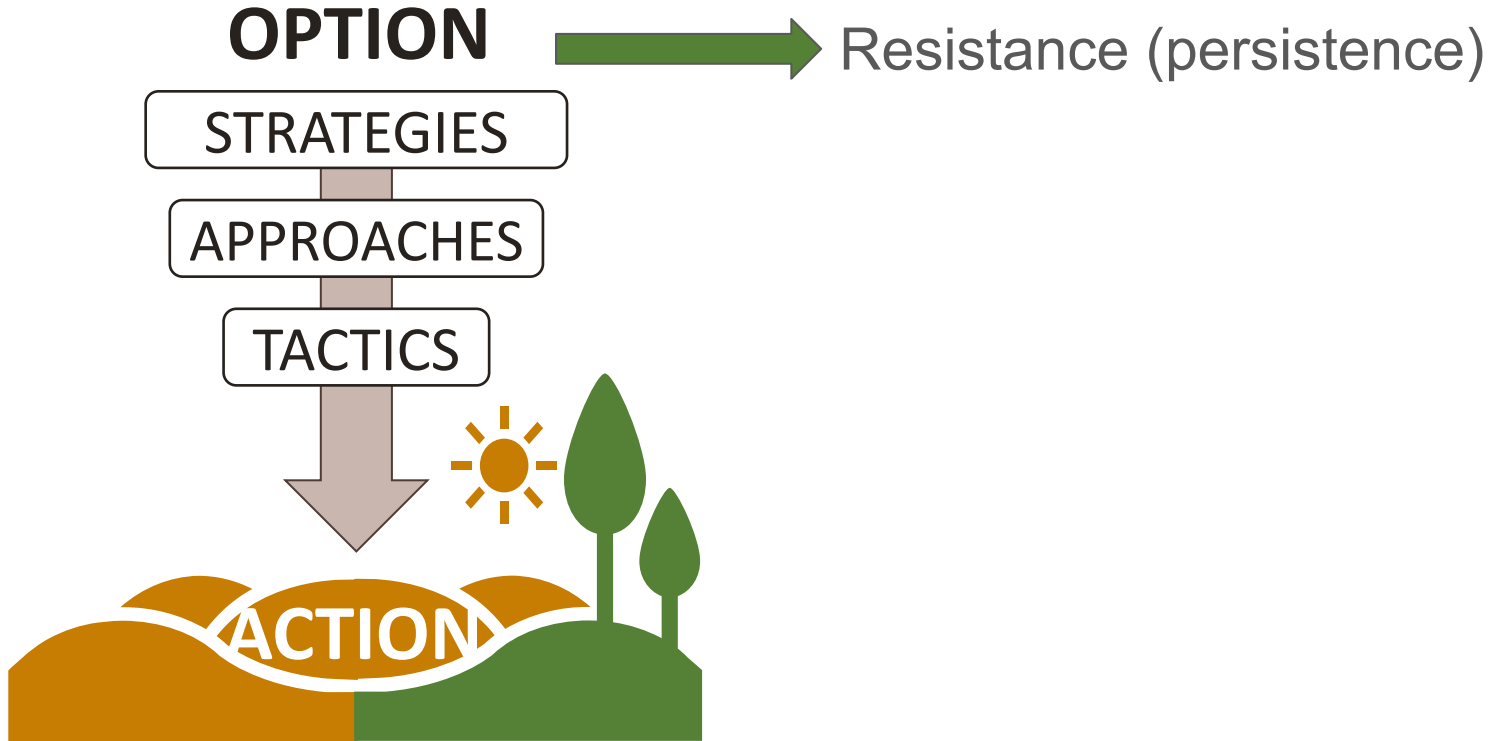
Approaches:

- More detailed responses that consider:
 - Site-level conditions
 - Site-level management objectives

Tactics:

- Prescriptive actions designed for:
 - Specific site conditions
 - Specific management objectives

1. Translating broad **concepts** to specific **actions**



1. Translating broad **concepts** to specific **actions**

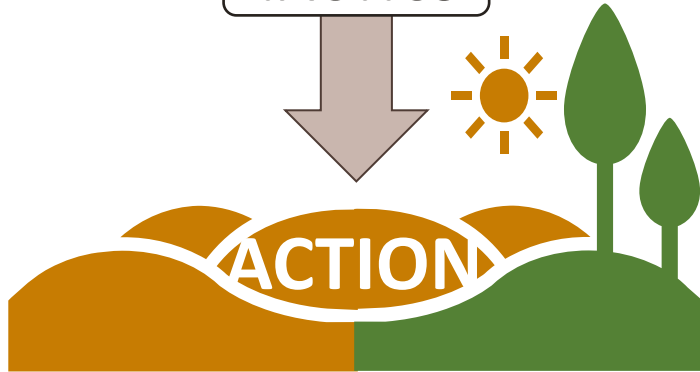
OPTION

STRATEGIES

APPROACHES

TACTICS

ACTION



Adaptation Strategies and Approaches (Recreation)

Adapted from Forest Adaptation Resources: Climate Change Tools and Approaches for Land Managers

Created using the NIACS Adaptation Workbook

- Strategy 1: Strategy 1: Protect and Sustain Key Infrastructure
 - Stabilize Shorelines to Reinforce Vulnerable Infrastructure
 - Maintain, Improve, and Construct Infrastructure Using Materials that Can Withstand a Range of Climate Stressors
 - Maintain, Improve, and Construct Infrastructure Using Designs that Reduce Impacts from Variable Water Levels
 - Employ Technological Innovations to Maintain the Viability of Developed Winter Recreation Areas
 - Employ Protective Measures to Minimize Damage from Disturbance Events

1. Translating broad **concepts** to specific **actions**

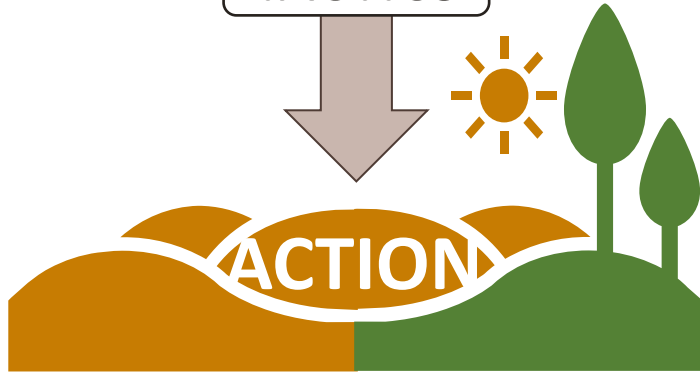
OPTION

STRATEGIES

APPROACHES

TACTICS

ACTION



Adaptation Strategies and Approaches (Recreation)

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1. Translating broad **concepts** to specific **actions**

OPTION

STRATEGIES

APPROACHES

TACTICS

ACTION



- Construct and maintain defensible space in the direct vicinity of at-risk recreational infrastructure, via removal of dead and dying vegetation, removal of ladder fuels, and favoring of less flammable deciduous vegetation.
- Construct fuel breaks around vulnerable recreational areas or infrastructure.

1. Translating broad **concepts** to specific **actions**

OPTION

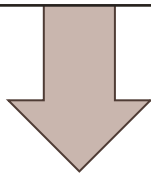


Direct/Transition (change)

STRATEGIES

APPROACHES

TACTICS



ACTION

1. Translating broad **concepts** to specific **actions**

OPTION

STRATEGIES

APPROACHES

TACTICS

ACTION

Strategy 6: Strategy 6: Alter Recreational Opportunities to Accommodate Expected Conditions

- Increase Four-Season and Non-Skiing Recreation Opportunities at Winter Sports Areas
- Relocate Existing Infrastructure and Opportunities to Areas with Less Risk of Climate-Exacerbated Damage
- Integrate Long-Term Siting and Climate Considerations into Recreation Management
- Use Materials and Designs that Are Impermanent
- Remove or Decommission Vulnerable Infrastructure



1. Translating broad **concepts** to specific **actions**

OPTION

STRATEGIES

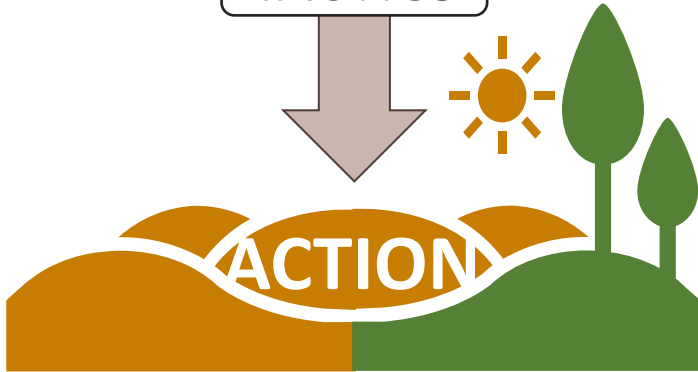
APPROACHES

TACTICS

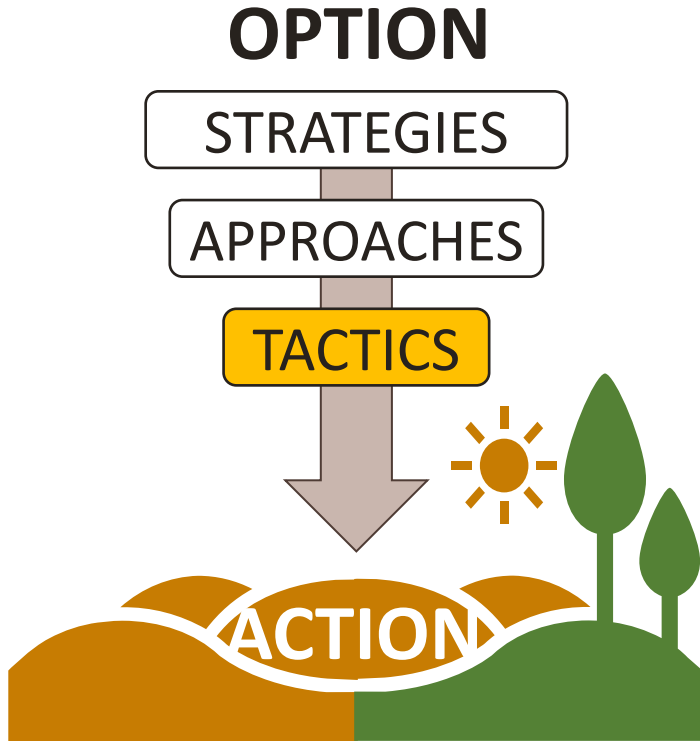
ACTION

Strategy 6: Strategy 6: Alter Recreational Opportunities to Accommodate Expected Conditions

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- Relocate Existing Infrastructure and Opportunities to Areas with Less Risk of Climate-Exacerbated Damage
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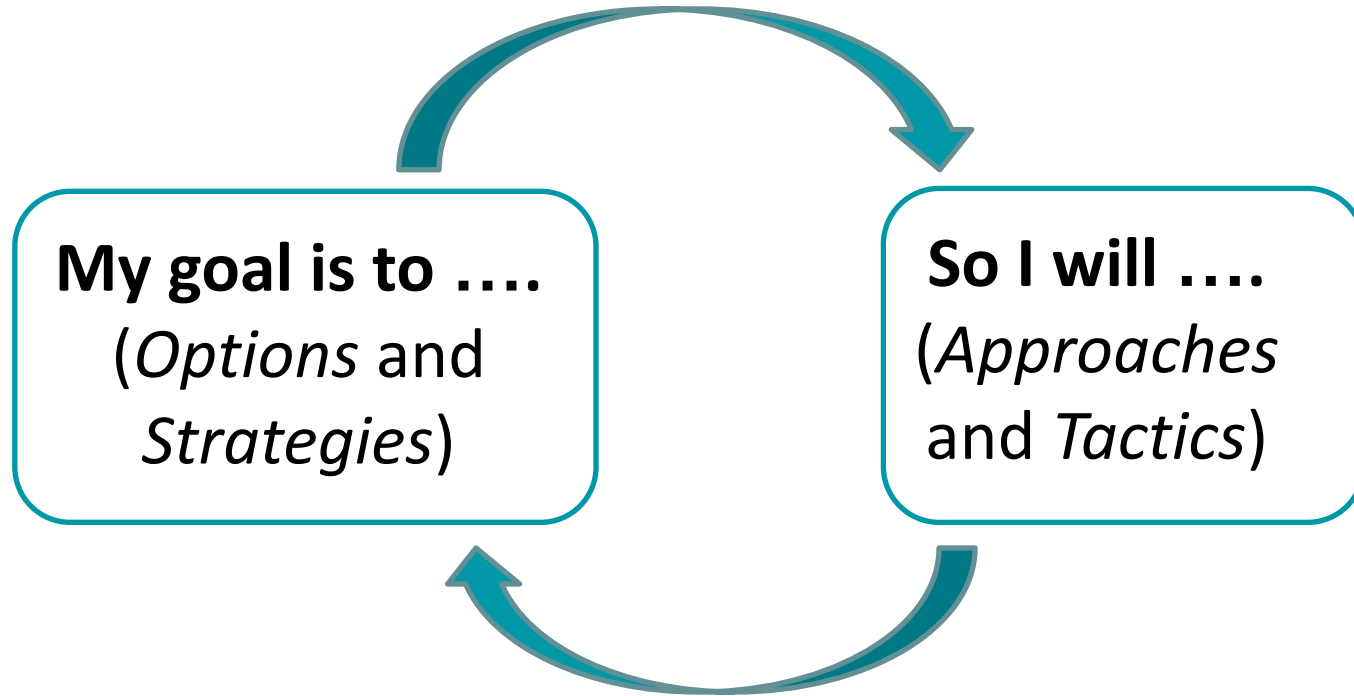


1. Translating broad **concepts** to specific **actions**



- Decommission facilities that are duplicative in a particular area with other existing facilities in adjacent areas
- Intentionally allow a site or area to undergo deterioration or environmental changes without any human intervention

2. Making Actions Intentional



Workbook + Menu

Management Goals
& Objectives

Climate Change
Impacts

Challenges &
Opportunities

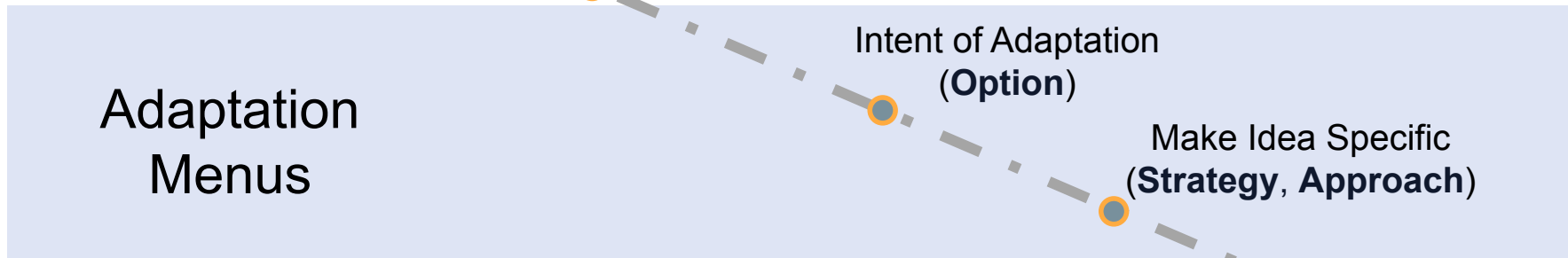
Intent of Adaptation
(Option)

Make Idea Specific
(Strategy, Approach)

Action to Implement
(Tactic)

Why it's important:
Helps connect the dots from broad
concepts to specific actions for
implementation.

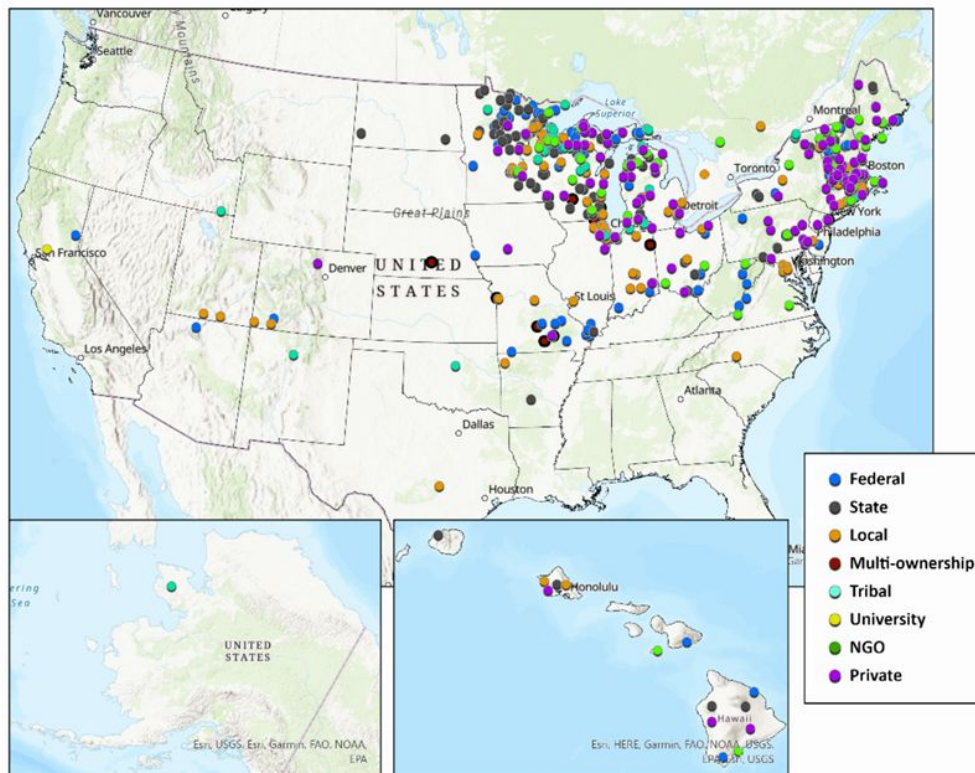
Adaptation
Menus



3. Communicating Your Ideas

Real-world examples of climate-informed forest management

Over 500 projects have used the Adaptation Workbook to consider climate change and identify adaptation actions



501 Climate change adaptation and mitigation demonstration projects, some featured on forestadaptation.org. Updated Sept. 27, 2021.

4. Boosting Creativity



Tour de Adaptation Workbook

Origins

What is a
menu?

Why are they
important?



How are they
built?

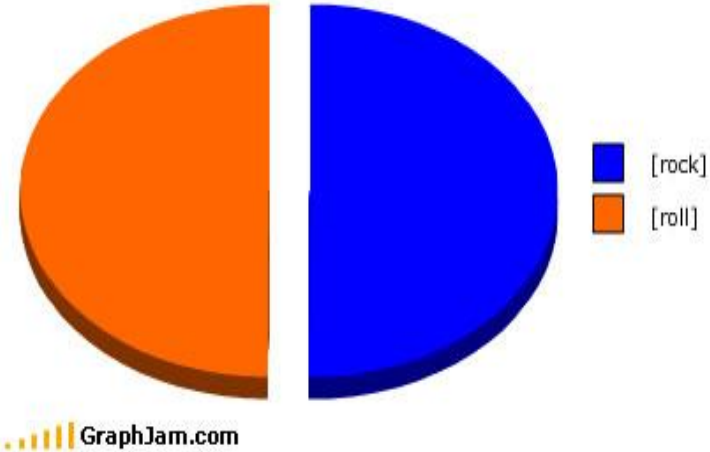
Where can I
begin?

How are Menus Created?

Recipe:

- A need from the community
- Partners
- Literature review
- Vetting in real-world situations
- Peer-review
- Publication

MATERIAL USED TO BUILD THIS CITY



Tour de Adaptation Workbook

Origins

Why are they important?

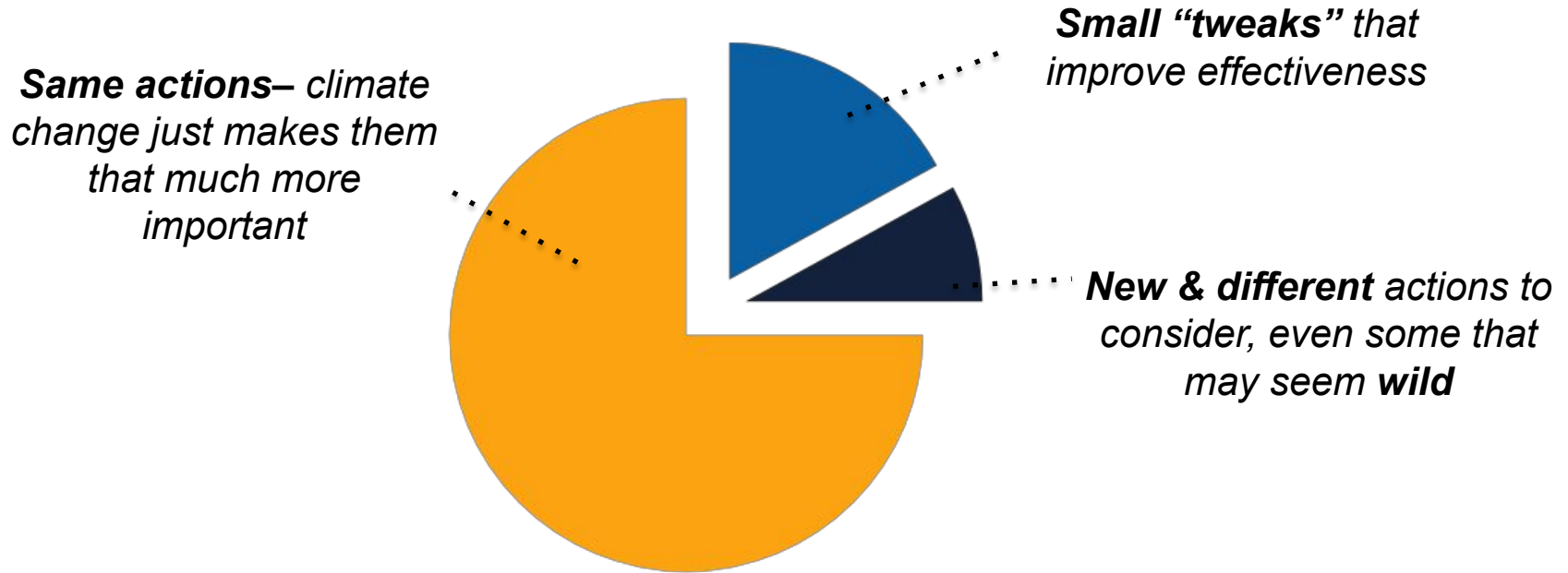
What is a menu?

How are they built?

Where can I begin?



Adaptation Actions Can Be...



Adaptation actions may not look that different from current management actions, especially in the near term.



Adaptation Workbook

a climate change tool for land
management and conservation

[> Get Started](#)

Explore

Use a map to explore how climate change may affect your region and forested ecosystems. Understanding and evaluating climate change impacts is an important first step in adapting lands to climate change.

Strategies and Approaches

Adaptation "menus" provide a curated list of adaptation actions by topic to help you move from broad ideas to specific actions using the Adaptation Workbook.

Take an Online Course

Enroll in a free guided training to consider climate change using the Adaptation Workbook. Bring a real-world land management project to create a custom adaptation plan.

<https://adaptationworkbook.org/>

Adaptation Trainings

Rapid assessment adaptation courses

- Uses Adaptation Quick Guide
- Introduction to adaptation, develop a short plan
- 4 weeks online, 1-2 days in person

Robust adaptation planning courses

- Uses Adaptation Workbook
- Develop a comprehensive plan
- Topically-focused based on Menus, option for regionally-oriented
- 8 weeks online, 2 days in person

Customized consultations

- Uses Adaptation Workbook
- Project-focuses, team-based
- Virtual or in-person
- ~6-12 hours

... And Training Adaptations!

SWCH developing a team of adaptation specialists to facilitate workshops using the AW process

Past Workshops:

- Piloted the Adaptation Workbook in Hawai'i and the Upper Rio Grande Basin
- Partnering on Adaptation Workshops with the Forest Service on the Rio Grande, White River, Gunnison, Kaibab and Coconino National Forests

Tailoring the process for NRCS partners following Climate Conversations

Expanding applicability to new audiences

Climate Adaptation for Tropical Island Land Stewardship:
Adapting a Workshop Planning Process to Hawai'i

Ryan J. Longman, Courtney L. Peterson, Madeline Baroli, Abby G. Frazier, Zachary Cook, Elliott W. Parsons, Maude Dinan, Katie L. Kamelamela, Caitriana Steele, Reanna Burnett, Chris Swanston, and Christian P. Giardina

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Thank you!
Questions?

Photo courtesy of USFWS



Climate Hubs
U.S. DEPARTMENT OF AGRICULTURE

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