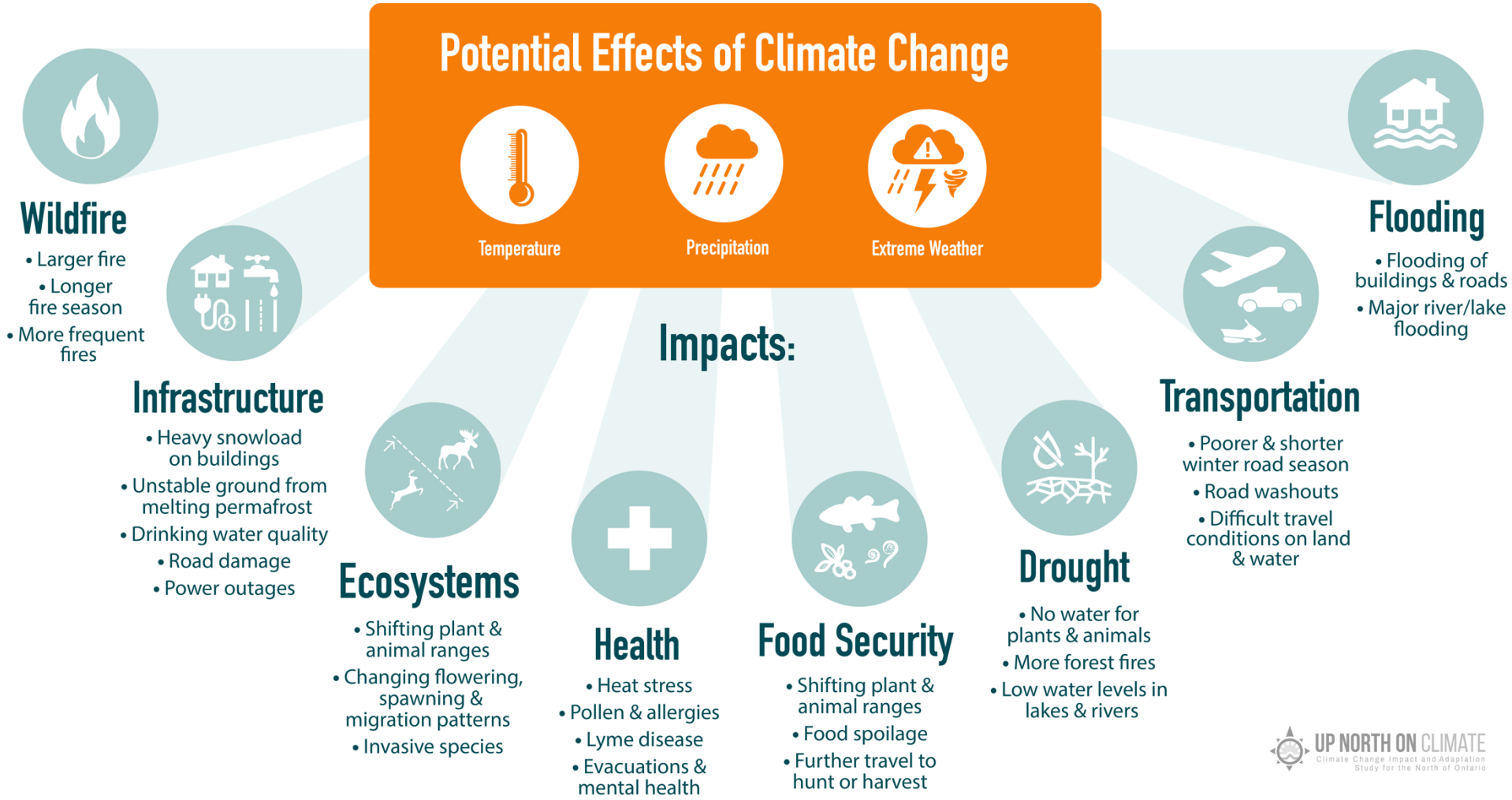
Assessing Risks • Prioritizing Action • Preparing for Climate Change

Adapting to Climate Change in Northern Ontario

Rapid Risk Assessment



UP NORTH ON CLIMATE
Climate Change Impact and Adaptation Study for the North of Ontario

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Assess • Prioritize • Prepare

Preparing for change

As First Nation peoples, coping with change is built into culture and day to day lives. In the north, adverse weather is already a familiar challenge. However, as the climate changes, people and the environment may become vulnerable in ways that was not the case in the past. Warmer weather in all seasons, more extreme weather, and changes in the plants and animals have already been seen and will become even more pronounced over the next 40-100 years. More droughts, floods and wildfires are predicted. Health, food security, infrastructure, and transportation will likely be affected. Now is the time to plan and prepare for these changes.

Getting started

To begin the adaptation and preparation process, 3 steps are proposed. You can use the "Assess•Prioritize•Prepare" table at the end of this booklet to record observations and start the planning process of preparing for change. This booklet is divided into 8 climate change impacts. In each section, you will find a worksheet to record observations as well as an example "Assess•Prioritize•Prepare" table to help you fill out your APP table on PAGE 18.

Step 1: Assess Assess the impacts of Climate Change within your community and on your activities			Step 2: Prioritize Prioritize which of the impacts is a priority and will be addressed		Step 3: Prepare Take steps to reduce impact	
Observations *What changes/ issues have you noticed on the land or in your community?*	**Projections** *What conditions are predicted with future climate change?*	**Risk** *What effects are these changes having? What effects could they have in the future?*	**Objectives** *What specific concerns/ issues/ problems need attention or action?*	**Priority** *Assign a priority from high to low*	**Adaptation Ideas** *What are the options for addressing the problem?*	**Selected Actions** *Which action ideas will be put into practice now and in the future?*

WILDFIRE

People who live on the Boreal Shield in Ontario have already noticed more fires and fires earlier in the spring and later in the fall than before. In the Hudson Bay lowlands, people speak of fires on their land where fires were rare. Forest fires are a natural part of the boreal forest ecosystem, but they may get too close to communities causing evacuations, putting people, homes and communities at risk. Fires are predicted to become more frequent with our changing climate because of hotter, drier and longer summers and more storms that will bring lightning strikes.

Observations: Questions you may want to ask yourself or your community to get started	**Notes** Use these notes to fill out the first column of your planning table
Topic: Longer fire seasons • Are wildfires happening during months when they didn't in the past?	
Topic: Storms with lightning • Does lightning happen more often than in the past?	
Topic: Wildfire as a threat • Has wildfire come close enough to threaten buildings in your community?	
Topic: Smoke as health issue • Has smoke required people with breathing problems to be evacuated? Has that happened recently? When? • Do people with breathing problems understand the risk?	
Topic: Evacuations because of fire • Are evacuations smooth and efficient?	
Any other concerns?	

WILDFIRE

Example table for FIRE Assess•Prioritize•Prepare: Some ideas of how to fill out your planning table. You may especially interested in the projections

Assess the risk			Prioritize		Adapt	
Observations *What changes/ issues have you noticed on the land or in your community?*	**Projections** *What conditions are predicted with future climate change?*	**Risk** *What effects are these changes having? What effects could they have in the future?*	**Objectives** *What specific concerns/ issues/ problems need attention or action?*	**Priority** *Assign a priority from high to low*	**Adaptation Ideas** *What are the options for addressing the problem?*	**Selected Actions** *Which action ideas will be put into practice now and which will be followed up on in the future?*
More fires	Hotter weather Could have more dry periods Longer fire season	Wildfires could impact community and/or community members	Protect community and community members	High	-Create a community fire plan -Promote safe fire practices	Short term - Promote safe fire practices Long term - Create a community fire plan with FireSmart
Wildfires close enough to community to threaten buildings	Hotter weather Possible increase in dry periods Longer fire season	Community buildings threatened	Protect community buildings	High	-Create a community fire plan -Create buffer zones -Ensure evacuation plan is in place	Create a community fire plan (look at inclusion of buffer zones) Update evacuation plan
Wildfires happening during month when they didn't happen before	Hotter weather Longer fire season	Longer season for wildfire risk	Protect community and community members		-Monitor bush conditions -Promote safe fire practices -Create a community fire plan	Monitor Create a community fire plan
More lightning storms	Severe storms might happen more often	Lightning strikes could cause wildfires	Protect community		-Monitor bush conditions -Create a community fire plan	Monitor
Smoke entering community - evacuation needed for people with breathing problems	Longer fire season More severe fires	Health of community members at risk	Protect community members	High	-Monitor air quality -Ensure evacuation plan is in place	Monitor air quality and issue community alerts Update evacuation plan

Example

INFRASTRUCTURE

Under a changing climate, more extreme weather events will put infrastructure to the test. Buildings are at risk of collapse from heavy snowfalls and freezing rain. Structures built on permafrost can shift as the ground thaws. Aging or under-designed transmission infrastructure is vulnerable to extreme winds and freezing rain. Mid-winter warm spells damage community roads. Extreme rainfall will affect drinking water quality, flushing of bacteria and toxins into water

Observations: Questions you may want to ask yourself or your community to get started	**Notes** Use these notes to fill out the first column of your planning table
Topic: Permafrost – melting of frozen ground • Are problems being caused by the melting of permafrost in your region in the north? When did melting become visible? • If there are problems, which are the most important?	
Topic: Drinking water quality • Have water levels in source water changed? How? • Have lakes temperature changed? Is this causing problems? • Do heavy rainstorms impact drinking water quality?	
Topic: Freezing rain on transmission lines • Is freezing rain more common than it used to be? Does it cause problems? • Are there power outages in winter? Have they gotten more frequent?	
Topic: Weather and buildings • Do weather events damage buildings in your community? What type(s) of weather? Has this become more common?	
Any other concerns?	

INFRASTRUCTURE

Example table for INFRASTRUTURE Assess•Prioritize•Prepare: Some ideas of how to fill out your planning table. You may especially interested in the projections

Assess the risk			Prioritize		Adapt	
Observations *What changes/ issues have you noticed on the land or in your community?*	**Projections** *What conditions are predicted with future climate change?*	**Risk** *What effects are these changes having? What effects could they have in the future?*	**Objectives** *What specific concerns/ issues/ problems need attention or action?*	**Priority** *Assign a priority from high to low*	**Adaptation Ideas** *What are the options for addressing the problem?*	**Selected Actions** *Which action ideas will be put into practice now and which will be followed up on in the future?*
Permafrost melt affecting riverbank	Temperature will continue to warm	Roads and buildings near riverbank in danger	Protect community members and community infrastructure	High	-Relocate roads/ buildings if in danger -Avoid building on unstable banks - Plan building with future climate in mind	Immediate - close road along riverbank Near term - Determine which buildings are in danger if bank destabilizes Future - Relocate buildings if necessary
Low water in drinking water source lake	Warmer temperatures and changes in precipitation could = more changes in lake water levels	Drinking water quality could be affected	Protect drinking water	High	-Monitor drinking water quality -Assess vulnerability of drinking water system, upgrade if needed -Advocate for safe drinking water	Short term - Monitor drinking water quality Long term - Advocate for improved drinking water system
More power outages, especially in winter	Extreme weather may become more common. More freezing rain in winter	Power outages in winter can be an emergency situation	Protect community members during winter power outages	Med	-Make an emergency plan -Inform households how to prepare for outages -Wellness checks for vulnerable people -Community warming center -Improve power structures or consider a local microgrid	Short term - Help community households prepare for winter power outages Long term - Create community warming centres in case of long power outages in cold weather
Buildings losing shingles in strong winds	Extreme weather may become more common	Could lead to leaking roofs	Protect community buildings from damage	Low	-Repair roofs as needed -Consider alternate roofing materials; Plan for future climate in new construction	Short term - repair roofs Long term - look into alternate roofing material

Example

SHIFTING ECOSYSTEMS

As the temperature warms, the range of many plants and animals will shift north and affect harvesting practices of First Nations. The timing of temperature driven events like flowering, spawning, and migration may change. Events that depend on each other, like flowering and pollinator activity, might no longer occur at the same time. Severe rain can make lake water murky affecting plants, bugs and fish. Hotter water can drive out cold-water fish in favor of warm-water ones like bass. Invasive species are surviving; people have observed pelicans as far north as the Hudson Bay coast.

Observations: Questions you may want to ask yourself or your community to get started	**Notes**
Topic: Trees and bushes • Are people noticing changes in the growth and health of trees? • Are some kinds of trees beginning to grow where they didn't in the past? • What about bushes?	
Topic: Berries and medicinal plants • Are some berries and medicinal plants harder to find? Are some harvesting places changing? Why? • Are people able to find new places to harvest?	
Topic: Animals • Are moose, caribou, deer harder to find?	
Topic: Spawning beds • Are some spawning beds being lost? Are new ones appearing? What might be the cause? Which fish are being affected?	
Topic: Caterpillars and insects • Have you noticed any new caterpillars or insects in or near your community? • Have insects or caterpillars caused damage?	
Topic: New arrivals – "invasive species" • Are people seeing plants, insects or animals that are new in your region? Are any of them causing problems?	

SHIFTING ECOSYSTEMS

Example table for ECOSYSTEMS Assess•Prioritize•Prepare: Some ideas of how to fill out your planning table. You may especially interested in the projection

Assess the risk			Prioritize		Adapt	
Observations *What changes/ issues have you noticed on the land or in your community?*	**Projections** *What conditions are predicted with future climate change?*	**Risk** *What effects are these changes having? What effects could they have in the future?*	**Objectives** *What specific concerns/ issues/ problems need attention or action?*	**Priority** *Assign a priority from high to low*	**Adaptation Ideas** *What are the options for addressing the problem?*	**Selected Actions** *Which action ideas will be put into practice now and which will be followed up on in the future?*
New plants noticed along roadside	Many plant species shifting northward	Could disrupt native ecosystem.	Protect area from invasive plants	Low	-Monitor for new species, identify if possible -Create action plans for invasive species of concern	Identify new plants, decide if control is needed.
Fewer blueberries, raspberries / berries harder to find	Areas where berries can grow may change	Risk to traditional harvesting and food security	Want to continue harvesting berries	Med	-Monitor (find where berries are growing) -Protect areas of berry growth -Consider planting berries is local gardens	Find where berries grow. Arrange ride sharing if needed. Plant raspberries in the community
Fewer moose seen	Areas where moose can live may change, likely to shift north	Risk to traditional harvesting and food security	Want to continue harvesting moose	Med	-Monitor moose -Protect moose habitat -Consider harvesting deer	Create moose monitoring program
Invasive spiny water flea found in nearby lake		Spiny water flea disrupts lake ecosystems	Prevent spiny water flea from entering lakes in our area	High	-Monitor area lakes for spiny water flea -Inform community how they can prevent spread of invasive in lakes (clean boats and gear, properly empty live wells, etc.)	Immediate: Inform community about spiny water flea and how they can prevent its spread. Future: monitoring program

Example

HEALTH

Climate change can directly and indirectly impact human health. Higher temperature and more heatwaves may lead to heat-related and respiratory illnesses and spoilage of harvested food. Increase in plant productivity could lead to more pollen and allergies. Animal carriers surviving further north may increase the human exposure to diseases such as Lyme disease. Heavy rains can lead to flooding, flushing contaminants and bacteria into drinking water and increasing the chance of mould in houses. The stressors brought on by climate change such as disease, trouble in harvesting traditional foods and more fires and flooding with evacuations can take a toll on a person's mental health.

Observations: Questions you may want to ask yourself or your community to get started	**Notes** Use these notes to fill out the first column of your planning table
Topic: Periods of very hot days and nights • Have periods of very hot weather affected your community? Are they happening more? • Do elderly people in your community suffer from heat stress during hot weather? What about babies and young children?	
Topic: Diseases carried by insects • Are people in your community concerned about Lyme disease? Have they noticed more ticks? Ticks in new areas?	
Topic: Water levels changing in wells and excavations • Has water level in the ground, in wells or excavations changed? Higher or lower? Has that caused problems?	
Topic: Lake water temperatures different from the past • Is the water in lakes warmer than in the past? Does it warm up sooner in the spring? • Has warmer water caused any issues for the community?	
Topic: Air quality • Is smoke from wildfires more common in the community? Does it cause problems? • Are seasonal allergens causing problems?	
Any other concerns?	

HEALTH

Example table for HEALTH Assess•Prioritize•Prepare: Some ideas of how to fill out your planning table. You may especially interested in the projections.

Step 1: Assess the risk			Step 2: Prioritize		Step 3: Prepare	
Observations What changes/ issues have you noticed on the land or in your community?	**Projections** What conditions are predicted with future climate change?	**Risk** What effects are these changes having? What effects could they have in the future?	**Objectives** What specific concerns/ issues/ problems need attention or action?	**Priority** Assign a priority from high to low	**Adaptation Ideas** What are the options for addressing the problem?	**Selected Actions** Which action ideas will be put into practice now and which will be followed up on in the future?
Hotter summers	Summer temperatures will continue to rise. Heatwaves could become more common.	Could impact the health of community members, especially Elders, children, those with medical conditions	Protect the health of community members	High	- Community cooling centers - Wellness checks for vulnerable people - Public education on heat illness	Immediate - wellness checks Future - cooling centers
Concerns blacklegged ticks and Lyme could enter area	Ticks are predicted to move further north	Blacklegged ticks can carry the bacteria that causes Lyme disease	Protect the health the community members	Med	- Monitor for blacklegged ticks - Inform community about Lyme prevention and symptoms	Short term - Inform community Long term - set up tick monitoring program
Warmer weather during fall harvesting	Fall temperatures will continue to rise	Harder to keep harvested meat cool, could lead to food spoilage	Keep harvested meat from spoiling	Med	- Wait for cooler weather to hunt - Community cooler for butchering/meat storage	Create community coolers
Lower water levels in wells	Hotter weather and changes in rain and snow predicted	Could impact drinking water supply and quality	Protect drinking water	Med	- Monitor water levels - Monitor water quality - Promote water conservation - Advocate for safe drinking water in community	Monitor Continue to advocate for safe drinking water
Air quality concerns from smoke and allergens	Hotter weather, long fire season predicted. Longer growing season could mean more pollen	Could impact health of community members, especially those with respiratory problems.	Protect health of community members	High	- Monitor air quality and air quality alerts, share info with community - Limit exposure to smoke/allergens - Ensure access to healthcare	Share air quality alerts with community. Continue to advocate for health care needs

Example

FOOD SECURITY

Traditional hunting and gathering is an important source of food and medicine in First Nation communities in northern Ontario. Food security of these communities is being threatened by climate change. Higher temperatures are shifting the range of plants and animals northward, making hunting times more unpredictable, increasing the risk of food spoilage and making it unsafe to travel on the land and water. This is already being observed as hunters are, for example, sighting deer where they have never seen them before, and fisherman are catching warm water species like bass in northern lakes.

Observations: Questions you may want to ask yourself or your community to get started	**Notes** Use these notes to fill out the first column of your planning table
Topic: Changes in the migration of geese • Have the dates of the arrival and departure of geese changed compared with the past? When to when? Are geese landing in the same places as before? Has hunting been affected? Good or bad?	
Topic: Changes in caribou and moose • If caribou or moose are hunted by your community, are there fewer, more, or about the same number in traditional hunting areas? • If there are changes, is it a problem for people in the community? • Are they as healthy as they were in the past?	
Topic: Fish • Have there been changes in the kinds of fish that are found in lakes and rivers near your community? • Are some fish becoming more or less common? Which ones? What might be causing changes? Are cold water and warm water fish not in same places or at the same depth in lakes as they were in the past?	
Topic: Berries and medicinal plants • Are some berries and medicinal plants harder to find? Are some harvesting places changing? Why? • Are people able to find new places to harvest?	
Topic: The growing season • Are plants beginning to grow earlier in the spring than before? Are they growing later in the fall? Is it a problem? • Are people growing vegetables they couldn't in the past? Is that a benefit?	

FOOD SECURITY

Example table for FOOD SECURITY Assess•Prioritize•Prepare: Some ideas of how to fill out your planning table. You may especially interested in the projections.

Assess the risk			Prioritize		Adapt	
Observations *What changes/ issues have you noticed on the land or in your community?*	**Projections** *What conditions are predicted with future climate change?*	**Risk** *What effects are these changes having? What effects could they have in the future?*	**Objectives** *What specific concerns/ issues/ problems need attention or action?*	**Priority** *Assign a priority from high to low*	**Adaptation Ideas** *What are the options for addressing the problem?*	**Selected Actions** *Which action ideas will be put into practice now and which will be followed up on in the future?*
Changes in the timing of goose migration; fewer geese in traditional areas	Range of birds may change	Risk to traditional harvesting and food security	Want to continue hunting geese	Med	-Monitor geese migration -Adjust harvesting -Share harvest with community	Determine when geese migrate now and where they land, and change hunting time/location as needed. Arrange ride sharing in community if needed.
More bass in area lakes	Bass moving northward with warmer temperatures	Bass could displace other fish	Want to continue fishing as usual	Low	-Monitor for bass -Begin fishing for bass -Prevent the spread of invasive species by encouraging proper disposal of baitfish, etc.	Short term - Tell people how they can prevent spread of invasive fish Long term - fish monitoring program
Fewer blueberries, raspberries / berries harder to find	Areas where berries can grow may change	Risk to traditional harvesting and food security	Want to continue harvesting berries	Med	-Monitor (find where berries are growing) -Protect areas of berry growth -Consider planting berries is local gardens	Find where berries grow. Arrange ride sharing if needed. Plant raspberries in the community
Plants grow earlier in spring than they used to	Temperatures will continue to warm	Longer growing season could be a benefit	Use longer growing season to increase food security	Med	-Monitor spring temperatures, plant growth, etc. -Promote personal gardens -Create community garden	Create a community garden. Involve youth from local school.

Example

DROUGHT

In the north of Ontario, people have noticed dead trees, disappearing ponds and low levels in lakes and rivers used for drinking water. Drought is a temporary but long dry period with less rain compared to normal for a particular location. Periods of drought are expected to increase due to higher temperatures and drying of the land. Plants, animals and people may struggle to get the water they need, country foods may become more difficult to find and forest fire risk may increase.

Observations*:* Questions you may want to ask yourself or your community to get started	**Notes** Use these notes to fill out the first column of your planning table
Topic: More Drought • Are weeks of dry weather becoming more frequent and lasting longer than in the past?	
Topic: Dry bush • Is the bush or the ground in the bush often drier in the summer than it was in the past?	
Topic: Drought affecting water • Are dry periods causing water quality problems in your community?	
Any other concerns?	

DROUGHT

Example table for DROUGHT Assess•Prioritize•Prepare: Some ideas of how to fill out your planning table. You may especially interested in the projections

Assess the risk			Prioritize		Adapt	
Observations *What changes/ issues have you noticed on the land or in your community?*	**Projections** *What conditions are predicted with future climate change?*	**Risk** *What effects are these changes having? What effects could they have in the future?*	**Objectives** *What specific concerns/ issues/ problems need attention or action?*	**Priority** *Assign a priority from high to low*	**Adaptation Ideas** *What are the options for addressing the problem?*	**Selected Actions** *Which action ideas will be put into practice now and which will be followed up on in the future?*
Land around community is drier, especially in summer	Hotter weather Could have more dry periods	Increase risk of wildfires	Protect community from wildfires	Med	-Encourage safe fire practices (campfires, etc.) -Monitor bush conditions	Inform community when the land is dry and discourage outdoor fires during those times
Concerns drought could impact drinking water supply	Hotter weather Could have more dry periods	Drinking water could be affected	Protect drinking water	High	-Determine if/how drinking water could be impacted by drought (this is called a Vulnerability Assessment) -Monitor water quality -Encourage water conservation	Continue to advocate for safe drinking water Have a vulnerability assessment done on community drinking water

Example

TRANSPORTATION

Transportation for First Nations communities means more than travelling on the road or by air. Traditional routes include travel over land and water in all seasons. These routes may become vulnerable due to climate change and, in fact, people have already noticed that some routes are no longer useable. In remote communities, winter roads connect First Nations to each other and to urban centres, allowing for transportation of goods, access to special services and social opportunities.

Observations: Questions you may want to ask yourself or your community to get started	**Notes** Use these notes to fill out the first column of your planning table
Topic: Dangers in winter road travel • When is thin ice on the winter road a problem? At the beginning? During the road season? At end of the road season? • Are there problems on land parts of roads? What are they? • Do drivers know the rules of the road?	
Topic: Opening and closing of winter road season • For pickup trucks - dates before? dates today? • For heavy trucks – dates before? dates today? • What is the shortest winter road season you have experienced? When?	
Topic: Dangers in winter snowmobile travel because of thin ice on traditional travel routes • Have the dates in which it is safe to travel over ice with a snowmobile changed? • Are traditionally routes still passable & safe? Is it difficult to assess ice thickness safety?	
Topic: Effect of changing water levels • Are water levels a problem for safe boat travel? Is this a bigger problem today than in the past? Are water level changes causing problems in any other ways? • Are there traditional routes that can't be used during some summers?	
Topic: Predicting the weather • Has it become more difficult to predict the weather? What kind of weather has become more difficult to predict? • Is this causing problems for people in the community?	

TRANSPORTATION

Example table for TRANSPORTATION Assess•Prioritize•Prepare: Some ideas of how to fill out your planning table. You may especially interested in the projections

Assess the risk			Prioritize		Adapt	
Observations *What changes/ issues have you noticed on the land or in your community?*	**Projections** *What conditions are predicted with future climate change?*	**Risk** *What effects are these changes having? What effects could they have in the future?*	**Objectives** *What specific concerns/ issues/ problems need attention or action?*	**Priority** *Assign a priority from high to low*	**Adaptation Ideas** *What are the options for addressing the problem?*	**Selected Actions** *Which action ideas will be put into practice now and which will be followed up on in the future?*
Winter road is not open as long as it used to be	Temperatures will continue to rise Less snow and more winter rain expected	Can't bring as many supplies into the community	Avoid supply shortages in community	Med	-Different methods for winter road construction -Realign road to avoid water -Bridges over rivers -Reduce reliance on winter road -All season road	Aim to lessen reliance on winter road by transitioning away from diesel generators
Freeze-up happens later than it used to - ice too thin for travel early in the season	Temperatures will continue to rise	Travel on the land has to be delayed Risk to personal safety	Keep community members safe	High	-Monitor ice thickness and share info with community -Ice safety training and equipment -Alternate routes	Set up Facebook group for community members to share information about ice thickness. Make ice safety equipment available
River gets shallow mid-summer - limits boat travel	Hotter summers Changes in rain Periods of dry weather may become more common	Many people travel the river in summer and are now having difficulty	Want to continue traveling over the land	Low	-Use boats/motors for shallow water -Portage around shallow areas -Find alternate routes	Create portage trails around areas where water is often shallow
Sudden storms stranding people who are out on the land	Extreme weather may become more common	Risk to personal safety	Keep community members safe	Med	-Plan travel with weather in mind -Take emergency supplies -Encourage people to share trip information with trusted friend	Encourage community members to share their travel plans and take emergency supplies. Create a pool of emergency supplies community members can borrow if needed.

Example

FLOODING

Localized flooding can occur when water from a heavy rainstorm, rain on frozen ground, or rapid snow melt can't drain away from buildings and homes. Major flooding occurs when rivers and lakes overflow their banks because of runoff, rain or ice jams. In Ontario, changes in precipitation and extreme weather because of climate change are likely to lead to an increase in flooding events.

Observations: Questions you may want to ask yourself or your community to get started	**Notes**
Topic: Flooding in winter and early spring because of rain on frozen ground • Does this happen in your community? Where? Does it happen every year? • Does flooding happen during winter or spring? • Can ditches and culverts handle the water? Are homes and building affected?	
Topic: Flooding over the banks of rivers caused by ice jams • Does this happen? Where? When did it last happen? Does it happen often? • Are homes and building affected? Is there a warning system?	
Topic: Flooding over the banks of rivers or lakes during rapid snow melt • Does this happen? Where? Does it happen every year? • Can ditches and culverts handle the water? Are homes and building affected?	
Topic: Sudden flooding in summer during heavy rainstorms • Does this happen? Where? How often? • Are storms more frequent? More severe? • Can ditches and culverts handle the water? • Are homes and buildings affected? Is it a problem for travelling on the land?	
Any other concerns?	

FLOODING

Example table for FLOODOING Assess•Prioritize•Prepare: Some ideas of how to fill out your planning table. You may especially interested in the projections

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More heavy rainstorms	-More summer rain -Heavy rainstorms may become more common	Community flooding Risk to people	Lower chance of community flooding	Med	-Maintain or improve culverts/ditches -Limit surfaces that don't allow water to pass through -Protect wetlands and greenspace	Replace damaged culverts Promote greenspace in the community
Lake floods north end of community every spring	Warmer springs (could lead to faster melt) More spring precipitation	Damage to community	Prevent flooding in north end	High	-Relocate buildings in flood plain -Avoid building in the flood plain -Water control structures (berms, dams, etc.) -Monitor for conditions that can lead to flooding (water levels, rainfall, ice condition, etc.)	Short term - monitor for flood conditions Long term - Create berm for problem area. Avoid future construction in north end.
Localized flooding with spring melt	Warmer springs (could lead to faster melt) More spring precipitation	Basements and crawlspaces flood as a result of the water.	Stop flooded basements		-Slope ground away from homes so water runs away from foundations -Pile snow away from homes to reduce runoff	Snow will be removed from problem areas and piled in designated locations.

Example

Your ***Assess•Prioritize•Prepare*** table

Assess the risk			Prioritize		Adapt	
Observations *What changes/ issues have you noticed on the land or in your community?*	**Projections** *What conditions are predicted with future climate change?*	**Risk** *What effects are these changes having? What effects could they have in the future?*	**Objectives** *What specific concerns/ issues/ problems need attention or action?*	**Priority** *Assign a priority from high to low*	**Adaptation Ideas** *What are the options for addressing the problem?*	**Selected Actions** *Which action ideas will be put into practice now and which will be followed up on in the future?*

Your ***Assess•Prioritize•Prepare*** table

Assess the risk			Prioritize		Adapt	
Observations *What changes/ issues have you noticed on the land or in your community?*	**Projections** *What conditions are predicted with future climate change?*	**Risk** *What effects are these changes having? What effects could they have in the future?*	**Objectives** *What specific concerns/ issues/ problems need attention or action?*	**Priority** *Assign a priority from high to low*	**Adaptation Ideas** *What are the options for addressing the problem?*	**Selected Actions** *Which action ideas will be put into practice now and which will be followed up on in the future?*