



ClimateReadyYYC

Adapt. Connect. Thrive

# What is Climate Adaptation & Mitigation?

## Imagine you are on a sinking boat.

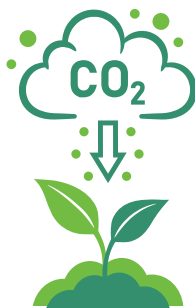
There is a hole, where water is pouring in, and you need to act fast to stay afloat. The most important thing you should do is find a way to seal the leak to avoid more water coming in. This strategy is called **mitigation**, and it addresses the **root cause** of the problem.

However, there is still water in your boat, even if the leak is sealed. If you can grab a bucket to get rid of the water, you are addressing the effect that was caused by the hole. This is **adaptation**. You are using your available resources to keep your boat afloat.



Now, let's translate this to climate.

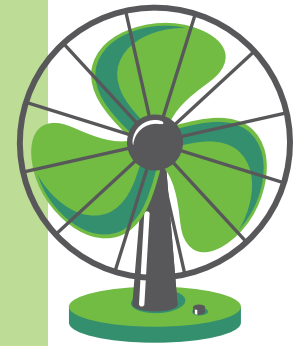
## Climate Mitigation



Climate mitigation is to reduce the emissions of greenhouse gases and enhance sinks that sequester and store greenhouse gases. Sinks, like a plantation of trees, reverse the effects of carbon dioxide, a common greenhouse gas. Mitigation, unlike adaptation, addresses the root cause of climate change. (I.e. plugging the hole.)

## Climate Adaptation

Climate adaptation addresses the effects of climate change. It refers to how we adjust to the predicted and actual effects of climate change to help both people and the environment cope with the impact of climate hazards and reduce our vulnerability.



For example, climate change is leading to hotter summers.

### Mitigation

One form of mitigation would be to transition to renewable energy sources, like solar, to help reduce emissions.

Ultimately, this will play a role in controlling the rising temperature.

### Adaptation

Adaptation would include things like using a fan, sitting in the shade, or going to the pool to cool off during hot weather. These actions will make you more comfortable and reduce your risk of heat-related illness. It will not reduce the heat but will help you cope with it.

We require both mitigation and adaptation measures to deal with the entire story of climate change.

## Common Climate Hazards in Calgary



Extreme Heat



Drought



Wildfire smoke



Heavy Rain



Winter Storms



River Flooding



Severe Storms



Shifting Seasons

# The Difference between climate mitigation and adaptation

## Mitigation

Reduce the emissions of greenhouse gases and enhance sinks that sequester and store greenhouse gases like plantation of trees

Addresses the root cause of climate change

Goal is to stop climate change.

Increase our capacity to stop or reduce the change in climate.

For example, putting out a forest fire or cutting down emissions to slow down global warming and reduce the chances of wildfires happening in the first place.

## Adaptation

Adjust to the expected and actual effects of climate change to reduce vulnerability

Addresses the effects of climate change

Goal is to reduce risk and increase the ability to prepare, absorb and recover from adverse climate events

Increase our capacity to thrive under adverse climate conditions

For example, to help Calgarians adapt to wildfire smoke from rural wildfires, wearing an N95 mask when there's wildfire smoke or using HEPA filters can help provide breathable air.