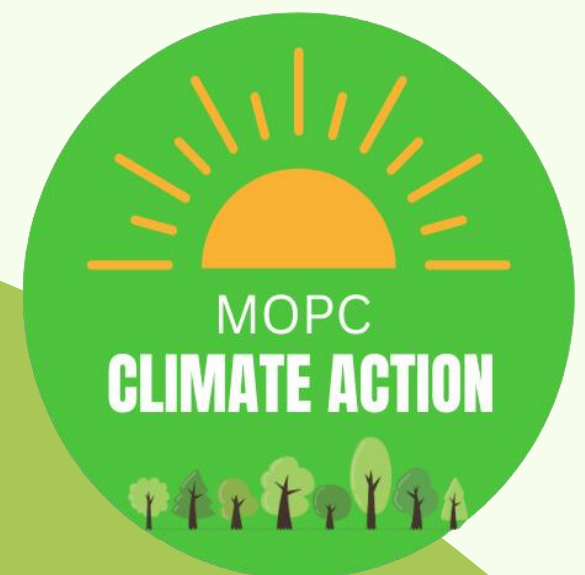




# Climate Change Action Planning for Pictou County

Townhall Meeting Sponsored by  
Climate Change Advisory Committee



# What is this About?

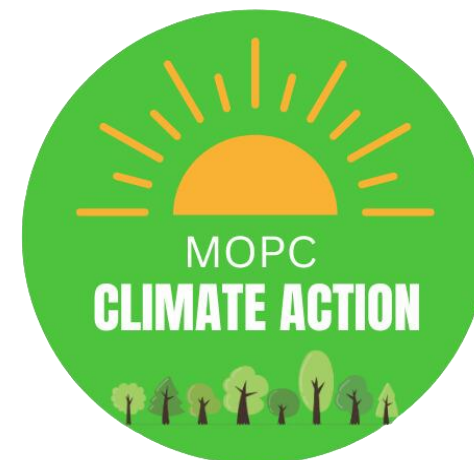
In 2019 the Municipality of Pictou County (MOPC) Council formed a **Climate Change Advisory Committee**

In February 2022, the Council declared a **Climate Change Emergency** and committed to reducing its carbon footprint to net-zero

In July 2023 the Advisory Committee commissioned the preparation of a **Municipal Climate Change Action Plan**

In January 2025 we are **seeking input on climate action** at 8 Townhall Meetings

The focus of our discussion is on **dealing with the impacts of climate change, not if this is real or the causes of climate change**



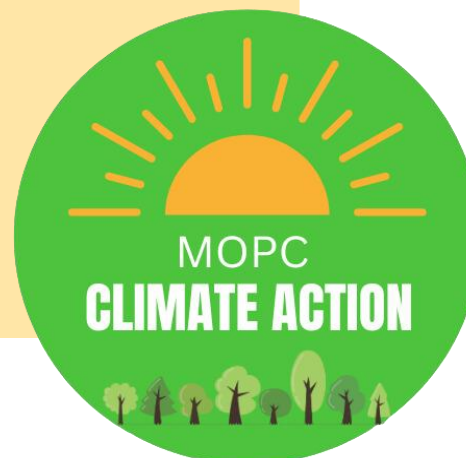
# Public Education and Engagement

Information about 10 climate change impacts available on MOPC social media and flyers

1. Coastal Erosion and Flooding
2. Wildfires
3. Severe Winds
4. Sea Level Rise and Warming
5. Climate Refugees
6. Property Insurance
7. Droughts
8. Unpredictable Growing Seasons and Food Shortages
9. Ticks and Lyme Disease
10. Human Health

Townhall Meetings to engage with County citizens in 8 locations

- River John Legion – Jan. 7<sup>th</sup>
- Caribou Fire Hall – Jan. 9<sup>th</sup>
- Merigomish Community Centre – Jan. 14<sup>th</sup>
- Eureka Fire Hall – Jan. 16<sup>th</sup>
- Durham Community Centre – Jan. 21<sup>st</sup>
- Hillside Community Centre – Jan. 23<sup>rd</sup>
- Little Harbour Community Centre – Jan. 28<sup>th</sup>
- Abercrombie Fire Hall – Jan. 30<sup>th</sup>



# Impacts of Climate Change on Pictou County

# Impact 1: Coastal Erosion and Flooding



# Storm Impacts

- People in Pictou County have noticed the coast is eroding more quickly now.
- Climate change makes this worse by causing bigger storms like Fiona and reducing ice that protects the shoreline.
- A 2022 report by Nova Scotia Environment and Climate Change Department advises that Pictou County will be one of the most vulnerable Nova Scotia counties to increased coastal and river flooding by the 2030s.



# Impact 2: Wildfires



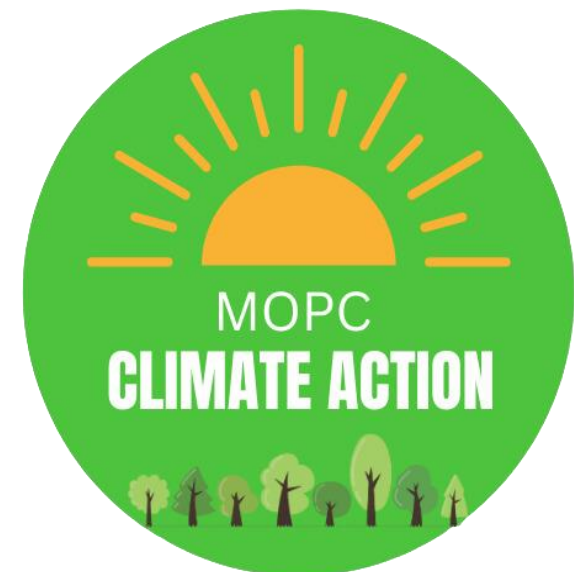
# Vulnerability



The 2022 Climate Change report advises that Pictou County will be highly vulnerable to wildfires by the 2050s. The damage from Hurricane Fiona has made this risk even greater.

Future planning must avoid new developments in deep evergreen woods that are at high risk of wildfires.

For existing homes, it is important to assess the wildfire risk by checking if the property is near large, unharvested blowdowns or softwood forests.





# Impact 3: Severe Winds



# Winds of Change

- Severe windstorms like Fiona topple massive hardwood trees, leading to higher wildfire risks, significant damage to homes and other structures, and costly cleanup.
- Softwood forests suffered even more damage. Once the wind reached the edge, these shallow-rooted trees fell easily.
- Climate change raises questions about the future of our forests. What tree species can withstand stronger winds, more rain, and higher temperatures? How should we adapt our housing?



# Impact 4: Sea Level Rise and Warming

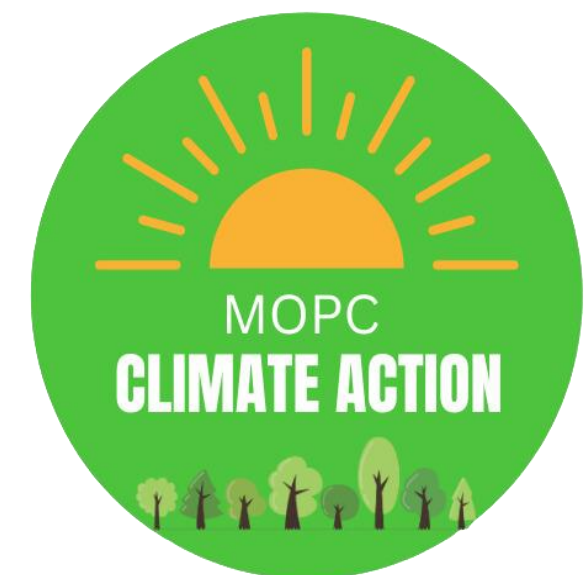


# Sea Level and Temperature

- Sea levels are rising because glaciers and ice sheets are melting, and seawater is expanding as it warms.
- In Pictou County, the sea is rising faster because the southern parts of maritime Canada are sinking.
- By 2100, sea levels in our area are predicted to rise by a total of up to 100 cm (39 inches) relative to the 1985-2006 timeframe.
- Warmer ocean temperatures also affect our region. For example, fish that need cool water are moving north or to deeper waters.
- Warmer seas also increase the risk of invasive species and lead to more intense hurricanes reaching Nova Scotia.



# Impact 5: Climate Refugees



# What are Climate Refugees?

“Climate refugees” are people forced to leave their homes because of major environmental problems. From 2008 to 2016, 21.5 million people had to relocate each year due to climate-related events like floods and storms.

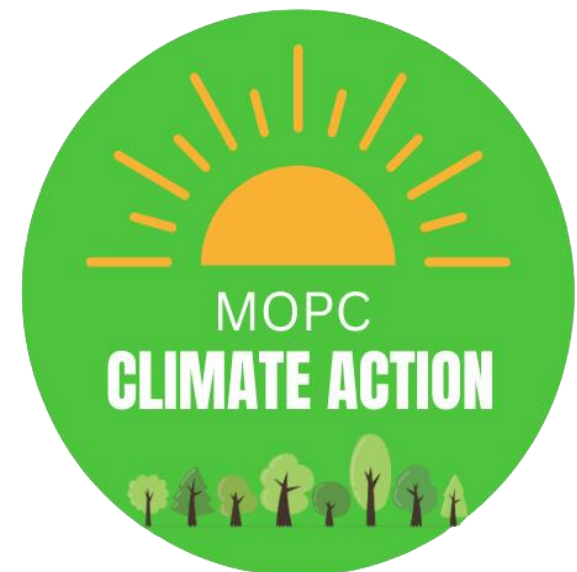
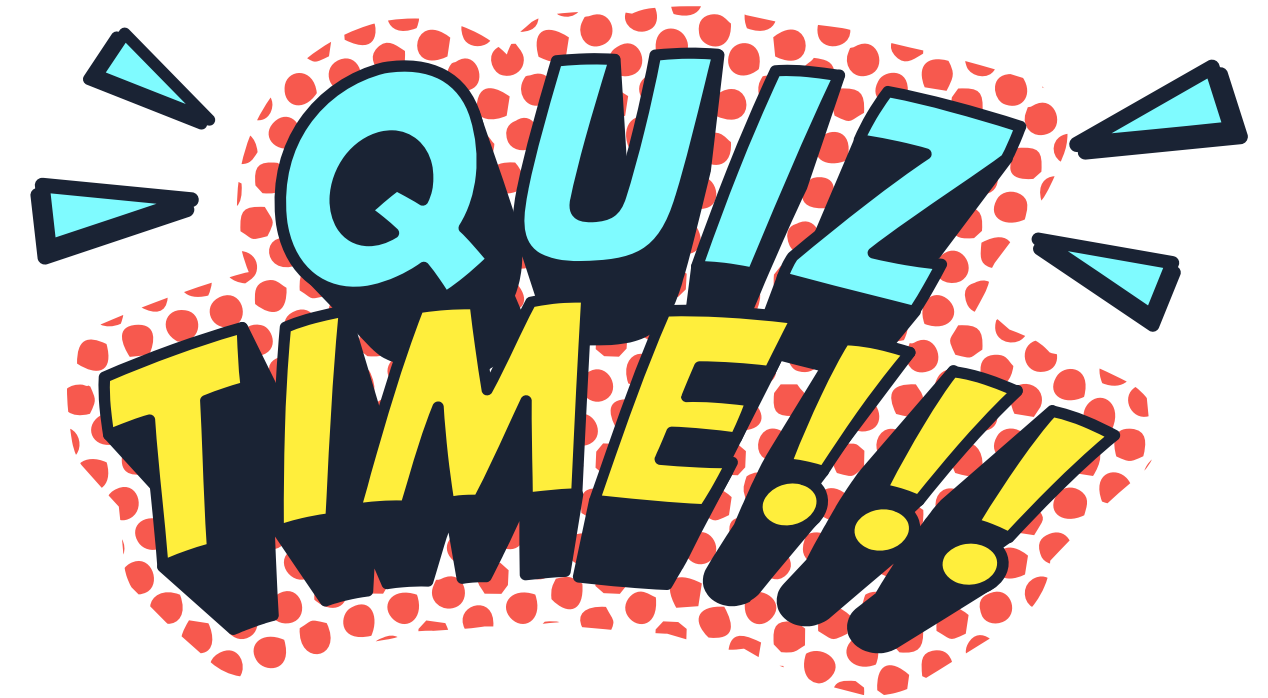
In 2019, about 24.9 million people were displaced in 140 countries due to weather-related hazards. Without strong climate action, the number of people needing help could grow to over 200 million annually by 2050.



# Impact 6: Property Insurance

**Who decides where it is safe to work and live? Pick one or more:**

1. Nobody's the boss of me; it's a free country, right?
2. The Government of Nova Scotia
3. Actually, the Province has passed this responsibility to Municipalities
4. Mother Nature
5. The Canadian property insurance industry



# The Answer

Ultimately, Mother Nature and the insurance industry will likely determine where it's safe to live and work.

As climate change determines which parts of the County may flood and burn, insurance costs will impact future property values and locations.

Owners of properties in floodplains, on eroding coastlines or near woodlands may face higher insurance rates or lose coverage, as they have in Florida and California.





# Should MOPC take action, and if so, how?

- Prevent development in risky areas; or
- Take a “hands off” approach, and let the insurance industry decide where affordable housing and businesses can go or remain?
- The risk of the latter is the property owner discovering, after purchase and construction, that insurance coverage will be dropped.



# Impact 7: Droughts



# Drought in Pictou County

- Even though droughts are often linked to places like the Prairies, Pictou County can experience dry weather too.
- In 1975, water had to be pumped from a nearby watershed to supply Westville. In 1997, a lack of rain harmed livestock farmers, forcing them to buy expensive feed and, in some cases, sell their herds.
- As the climate warms, we risk more wildfires and heatwaves affecting agriculture by the 2080s, suggesting more droughts that will also affect well water users in the County.

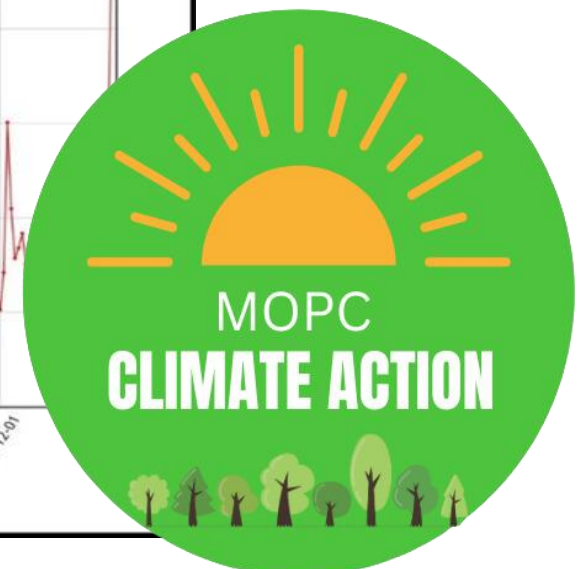
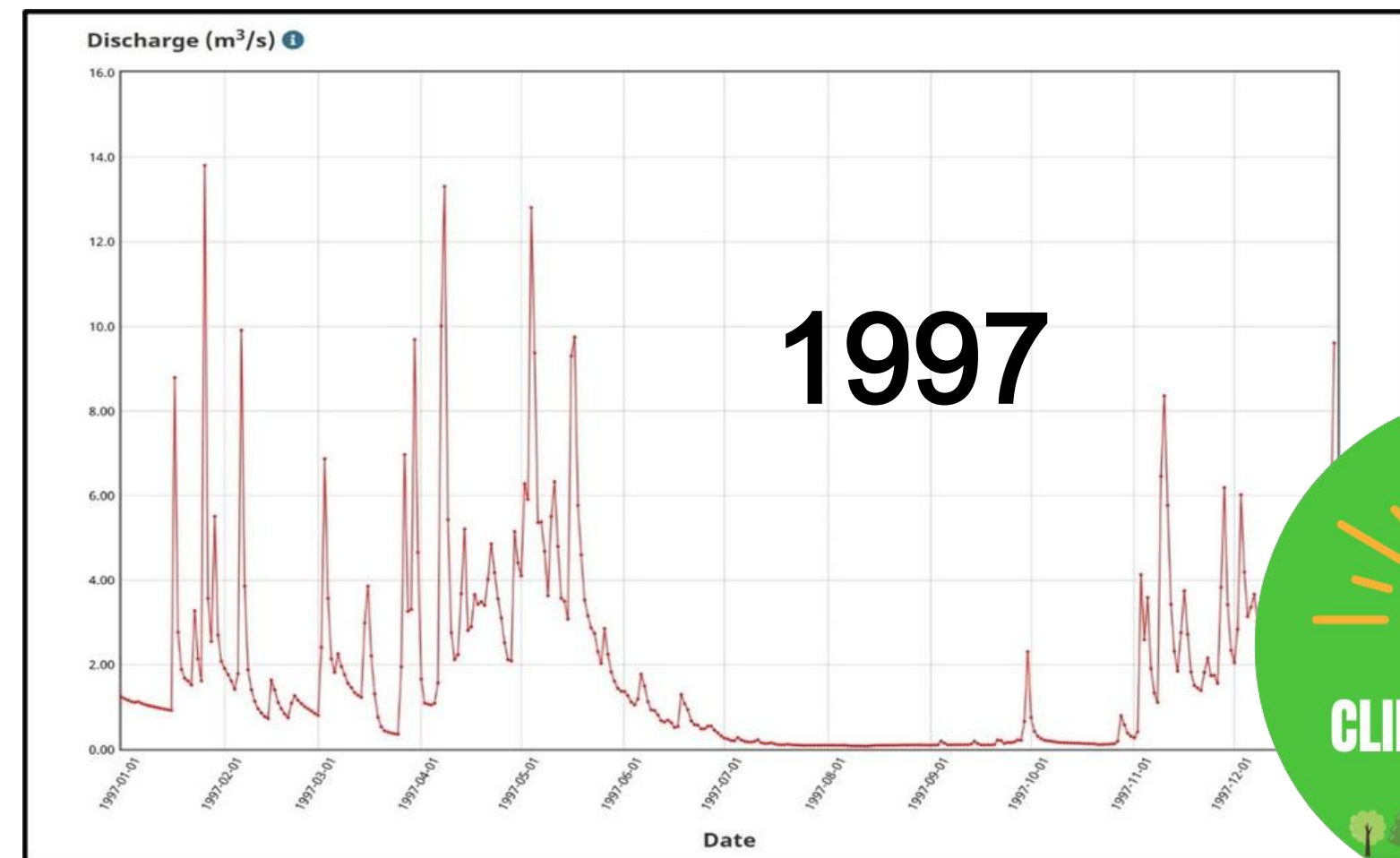
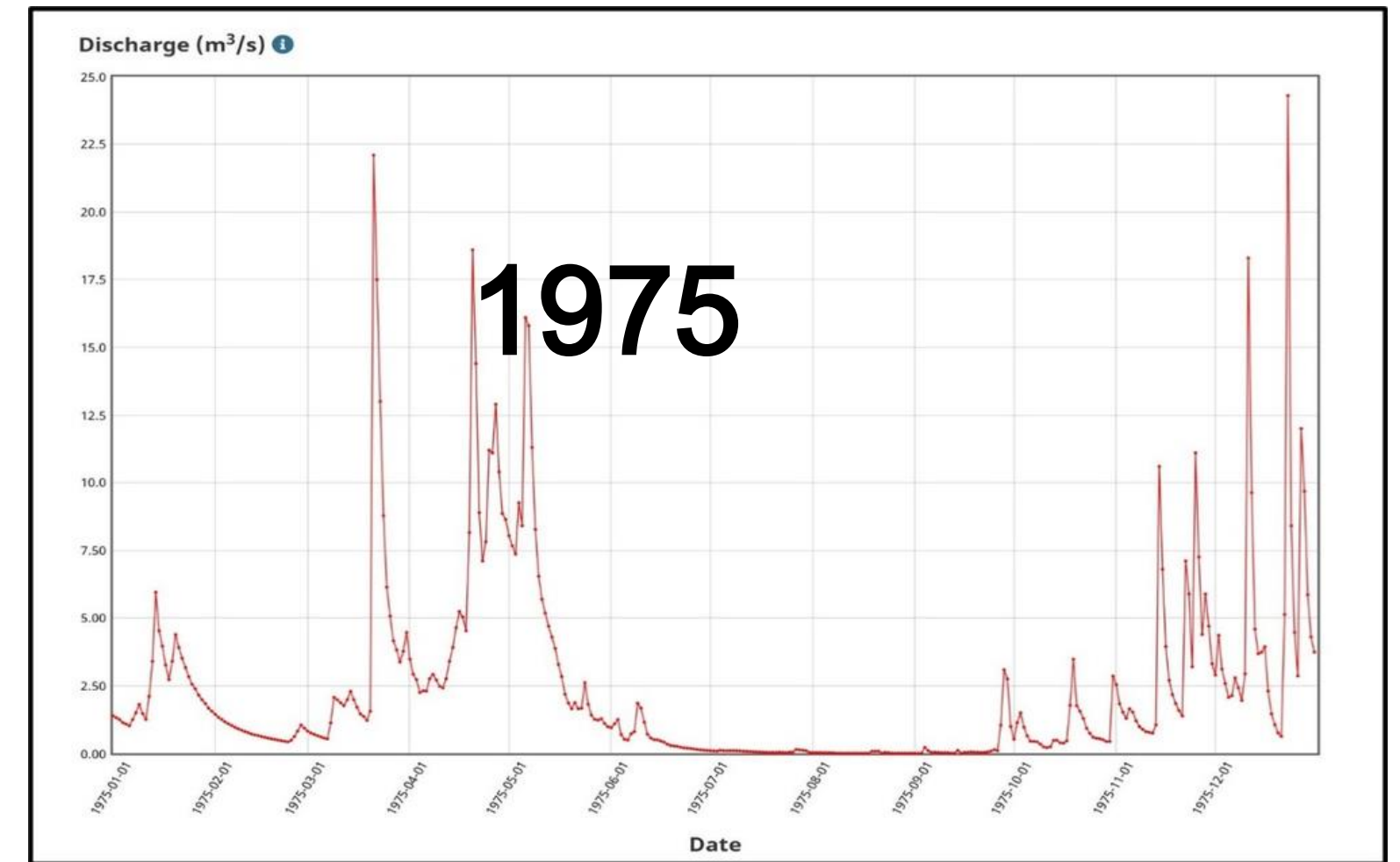


# Past Droughts

The water level gauge graphs in these charts on the Middle River in Rocklin tells the story for those two years.

As is obvious in both graphs, there wasn't much water in the Middle River during the June-October growing season.

Future droughts might also affect well water users in the County.



# Impact 8: Unpredictable Growing Seasons and Food Shortages



# Got Food?

- Pictou County, like the rest of Nova Scotia, doesn't grow enough food to meet all our needs.
- If we lose transportation links with the rest of Canada, such as from a hurricane flooding the Trans-Canada highway and railway at the NS-NB border, Nova Scotia could face food shortages quickly.
- Unpredictable weather has caused problems recently. In June 2018, frosts hurt the fruit sector, the polar vortex in winter 2023 harmed fruit trees, and hurricanes have damaged crops.
- To reduce the risk of food shortages, Pictou County could use its underutilized farmland to grow more fruits, vegetables and livestock.

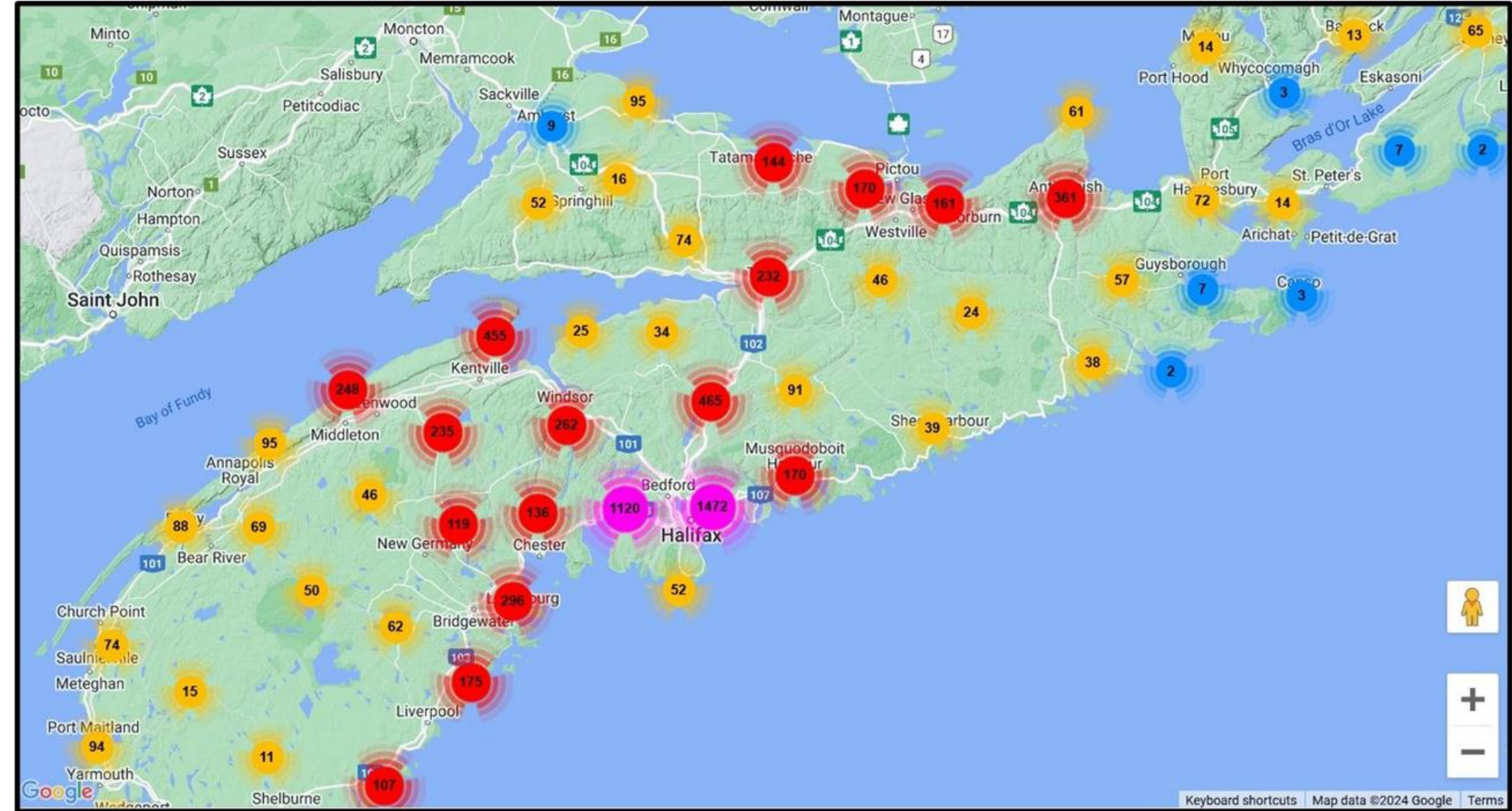


# Impact 9: Ticks and Lyme Disease



# Ticks in Nova Scotia

- Nova Scotia's climate is ideal for ticks and there are more ticks per person here than in other parts of Canada (see map illustrating the number of reported tick encounters in the past five years).
- Warmer winter weather allows ticks to live longer and spread to new areas. Higher temperatures and more rain help ticks and the diseases they carry spread faster.

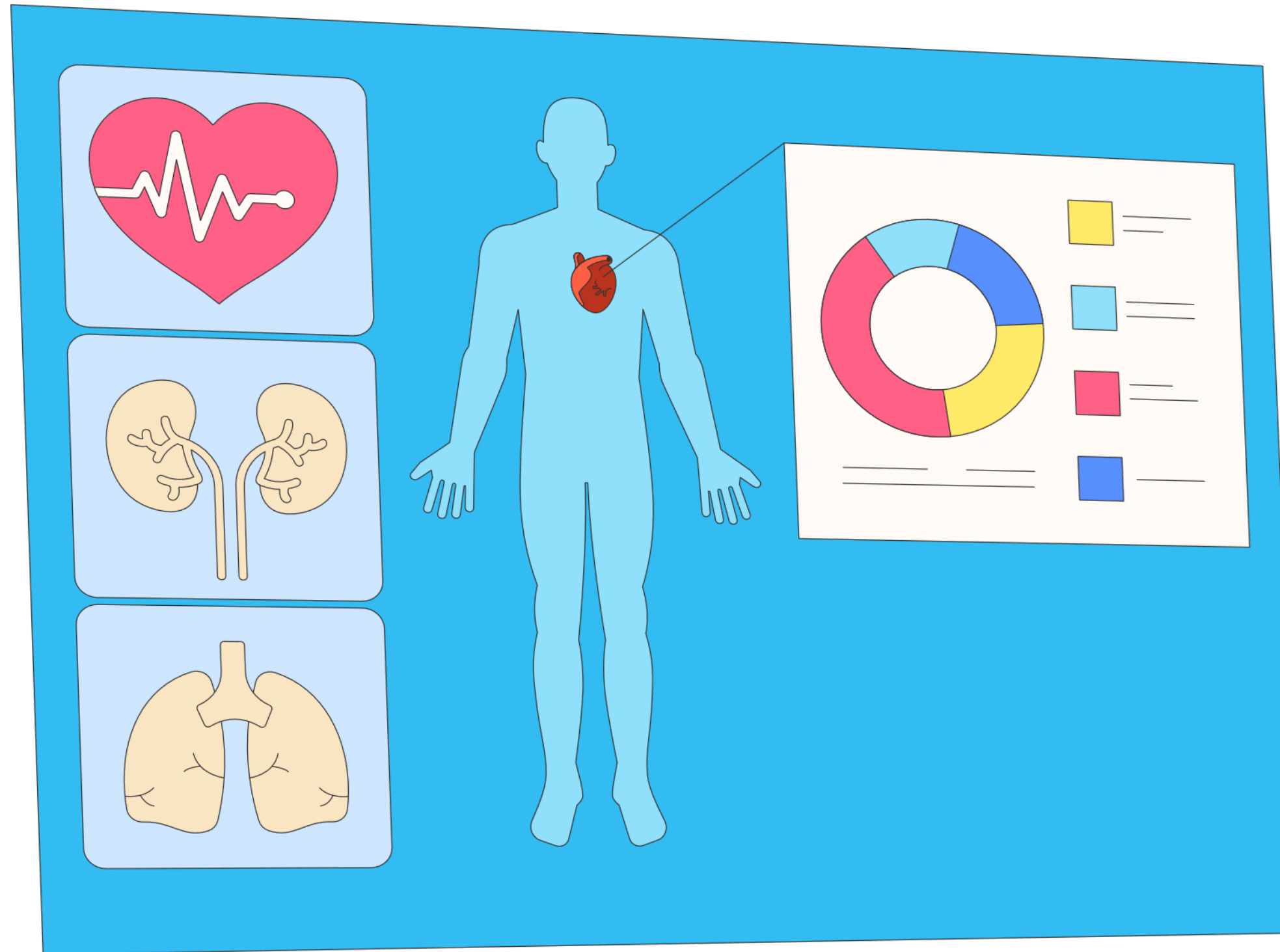


Source: [eTick | Public Tick Map](#)



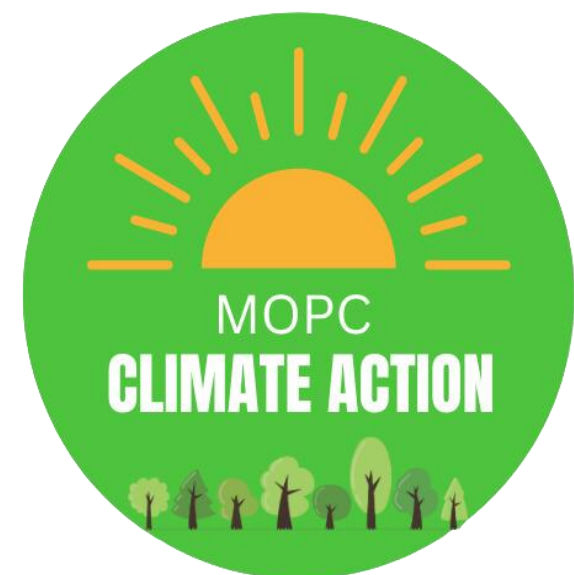


# Impact 10: Human Health



# An Unhealthy Change

- Climate change makes natural hazards like storms, floods and heatwaves worse, leading to injuries and health problems like heart and lung diseases.
- Water quality and quantity are affected by changes in precipitation and temperature. This can threaten drinking water, increase waterborne diseases, and cause injuries from heavy rainfall.
- Air pollution also worsens due to climate change, with wildfires and more pollen contributing to poorer air quality.
- Vulnerable groups, including Indigenous peoples and rural residents, face greater risks due to less infrastructure and existing challenges.



# Proposed Climate Change Actions for Pictou County

# Mitigation and Adaptation Actions

Climate action is generally sorted into two types:

- Mitigation is about reducing the amount of greenhouse gases we release into the atmosphere, and efforts aim to slow down or stop climate change.
- Adaptation is about preparing for the changes that are already happening because of climate change, and involves making adjustments to help people, communities, and ecosystems cope with climate change impacts.



# Mitigation Action: Greenhouse Gas Reduction

1. Replacing MOPC transportation fleet with zero-emission vehicles by 2035
  - 1.1 Developing annual EV procurement strategies and targets and purchasing vehicles
  - 1.2 Installing EV charging stations at MOPC Administrative Building
  - 1.3 Accessing funding programs
2. Replacing emission-generating energy sources within MOPC buildings with zero-emission sources by 2035
  - 2.1 Evaluating energy consumption reduction opportunities (e.g., doors, windows, insulation, solar energy and heating options), and purchasing and installing retrofit or new facilities
  - 2.2 Accessing funding programs



# Mitigation Action: Carbon Capture

## 3. Enhancing the annual MOPC Tree Planting Program

- 3.1 Increasing planting capacity by growing the volunteer group, working with partner organizations and employing tree planting contractors
- 3.2 Assessing the need for replacement of existing boreal species with more climate adapted tree species
- 3.3 Accessing funding programs



# Adaptation Action: Erosion and Flooding Protection

## 4. Developing a tool to analyse the risk of damage from storm surge and flooding events

- 4.1 Completing a database of flood mapping, coastal and river topography, predicted coastal erosion, and river flows in the County
- 4.2 Enhancing the NSCC user-friendly online Emergency Coastal Flooding tool (<https://agrgims.cogs.nsc.ca/CoastalFlooding>) that landowners and emergency professionals can use to predict damage from weather events
- 4.3 Accessing funding programs



# Adaptation Action: Wildfire Protection

## 5. Developing a tool to analyse the risk of damage from wildfire events

5.1 Completing a database of forest areas that are prone to wildfires and close to homeowners at risk

5.2 Developing a user-friendly online Emergency Wildfire Decision Support System tool that landowners and emergency responders can use to model the movement of fires based on fuel, topography and weather, and visualize the fire simulations

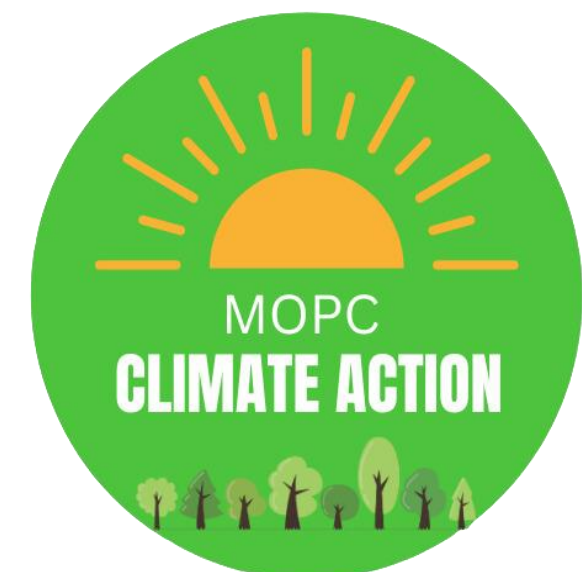
5.3 Accessing funding programs





# Adaptation Action: Emergency Measures

6. Creating measures for ensuring the safety of citizens impacted by climate disaster events (e.g., floods, hurricanes, wildfires)
  - 6.1 Improving the notification of impending damaging events to danger-prone citizens using all available means (e.g., phone, text, email, broadcast media, social media, etc.)
  - 6.2 Improving the provision of evacuation facilities and advertising well in advance of impending events
  - 6.3 Encouraging citizens to develop evacuation plans for high-risk floods and wildfires



# Adaptation Action: Infrastructure Modification

## 7. Assessing and modifying the MOPC infrastructure that is vulnerable to climate change impacts

- 7.1 Developing an inventory of County structures (e.g., buildings, wastewater treatment plants, culverts, etc.) that need to be adapted
- 7.2 Planning for the replacement or modification of vulnerable structures and purchasing and installing retrofit or new facilities
- 7.3 Accessing funding programs



MOPC is committed to climate action and sustainability, and we believe that, working together, the community can improve the health of the environment and adapt to climate risk in Pictou County.

# Questions and Discussion

# References for Public Education on Climate Impacts

**SLIDES 8, 37** Weathering What's Ahead: Climate Change Risk and Nova Scotia's Well-being, Department of Environment and Climate Change, December 2022, p.29, [climate-change-risk-report.pdf \(novascotia.ca\)](#)

**SLIDES 22, 23** Climate Change: Global Sea Level [Climate Change: Global Sea Level | NOAA Climate.gov](#)

**SLIDE 24** CANADA'S MARINE COASTS in a CHANGING CLIMATE [https://natural-resources.canada.ca/sites/nrcan/files/earthsciences/pdf/assess/2016/Coastal\\_Assessment\\_Chapter4\\_EastCoastRegion.pdf](https://natural-resources.canada.ca/sites/nrcan/files/earthsciences/pdf/assess/2016/Coastal_Assessment_Chapter4_EastCoastRegion.pdf)

**SLIDE 29** Extreme weather 'new normal' for business, The Chronicle Herald (Provincial), Fri., 19 Jul. 2024, <http://saltwire.pressreader.com/article/281492166553451>

**SLIDES 32** There could be 1.2 billion climate refugees by 2050. Here's what you need to know, Zurich Insurance Group, September 19, 2023, <https://www.zurich.com/media/magazine/2022/there-could-be-1-2-billion-climate-refugees-by-2050-here-s-what-you-need-to-know>

**SLIDE 32** Climate change is the defining crisis of our time and it particularly impacts the displaced, UNHCR, 30 November 2020, <https://www.unhcr.org/news/stories/climate-change-defining-crisis-our-time-and-it-particularly-impacts-displaced>

**SLIDE 33** 'A crisis entirely of humanity's making': UN chief issues climate SOS on trip to Pacific, The Guardian, 27 Aug 2024, <https://www.theguardian.com/world/article/2024/aug/27/a-crisis-entirely-of-humanitys-making-un-chief-issues-climate-sos-on-trip-to-pacific>

**SLIDE 34** Could Canada be a safe haven for climate refugees? CBC, Jun 20, 2019, <https://www.cbc.ca/news/science/canada-climate-refugees-1.5165029>