



# The Wildfires in Canada

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Between 1990 and 2020, there were about 221,272 fires in Canada, burning an area of around 74.5 million hectares of its territory.



Wildfire Data (1990-2020)



Deforestation and CO<sub>2</sub> emission (2000-2020)

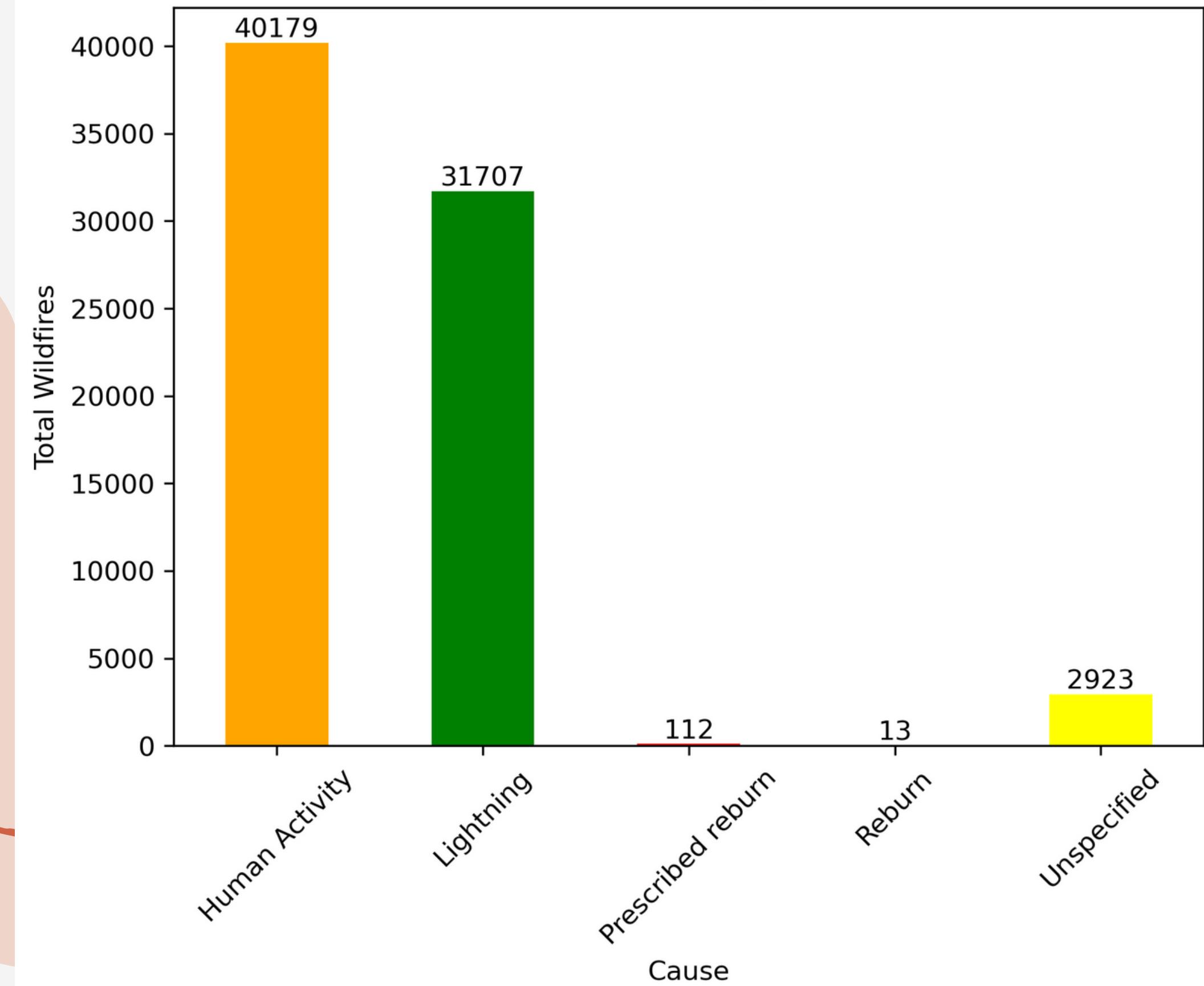
# Objective

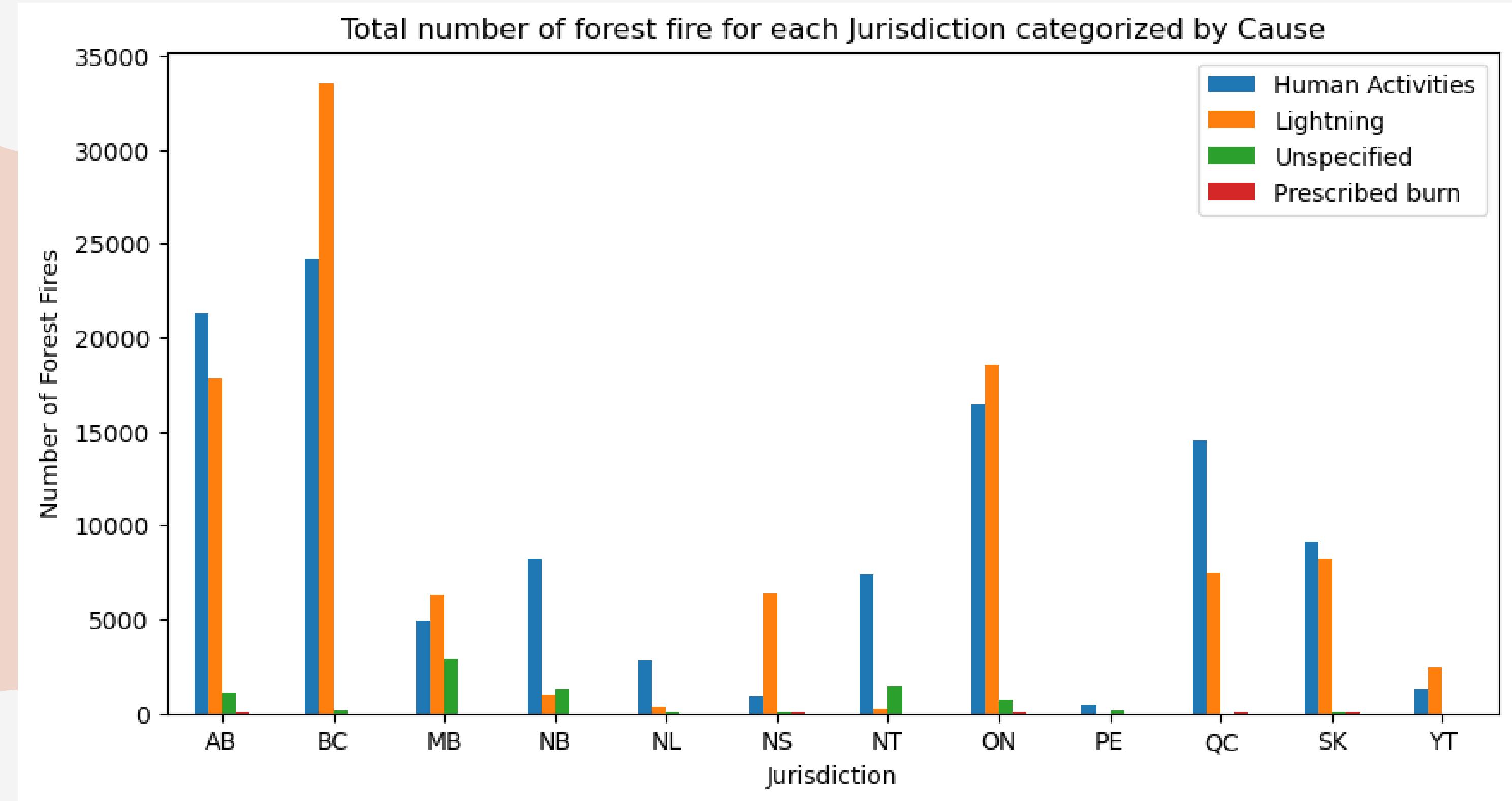
- To investigate the major causes of wildfire in Canada
- To investigate the potential correlation between wildfire frequency and the months of the year.
- To track and visualize the historical number of wildfires in Canada over the years.
- To assess the impact of deforestation on fire spread patterns compared to natural forested areas.

# Causes of Wildfires

Human activity is the leading cause of wildfires in Canada followed by Lightning

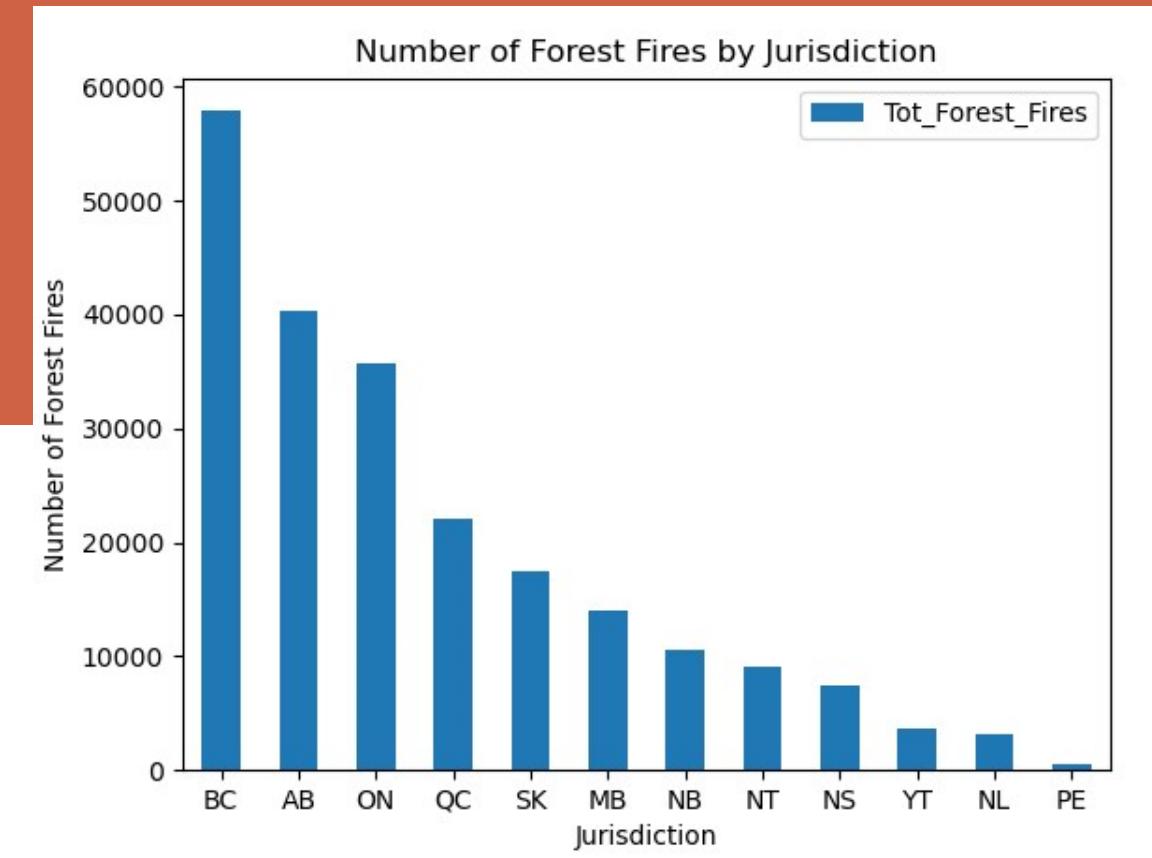
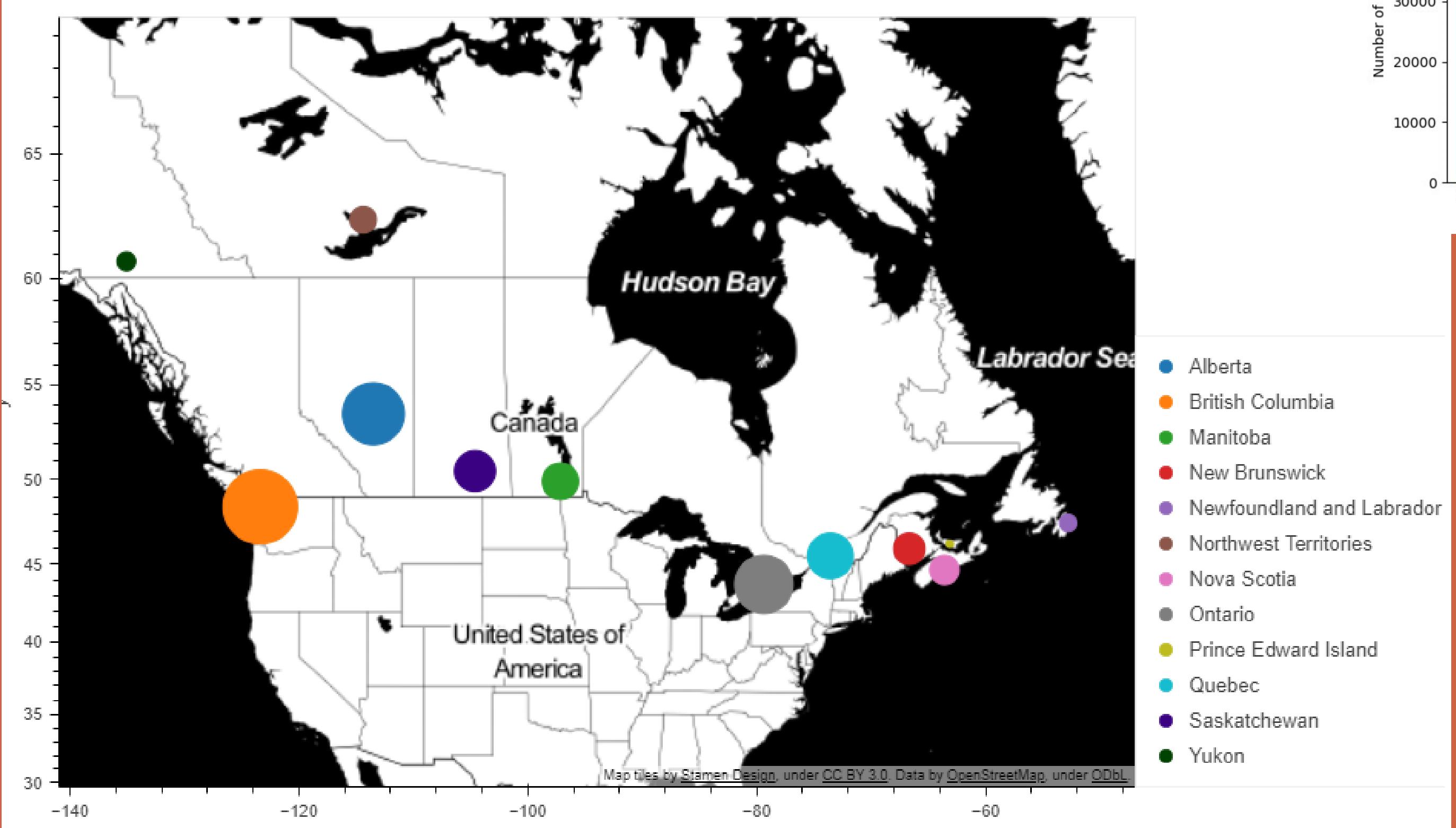
Total Wildfires by Cause



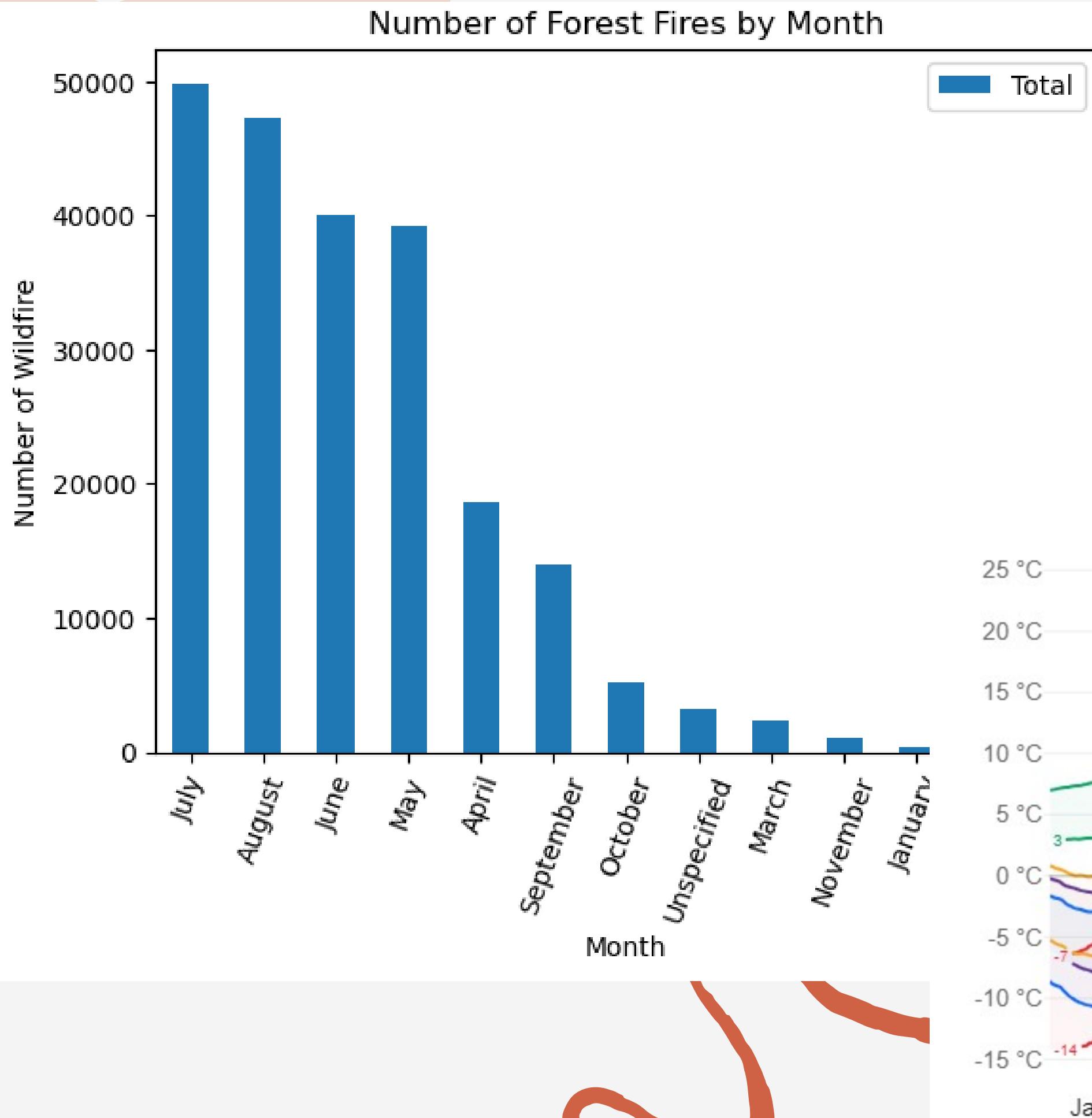


- The major cause of wildfire in British Columbia and Nova Scotia is lightning
- On the contrary, In Alberta, New Brunswick and Quebec, the main cause of wildfire is Human Activities

# The provinces



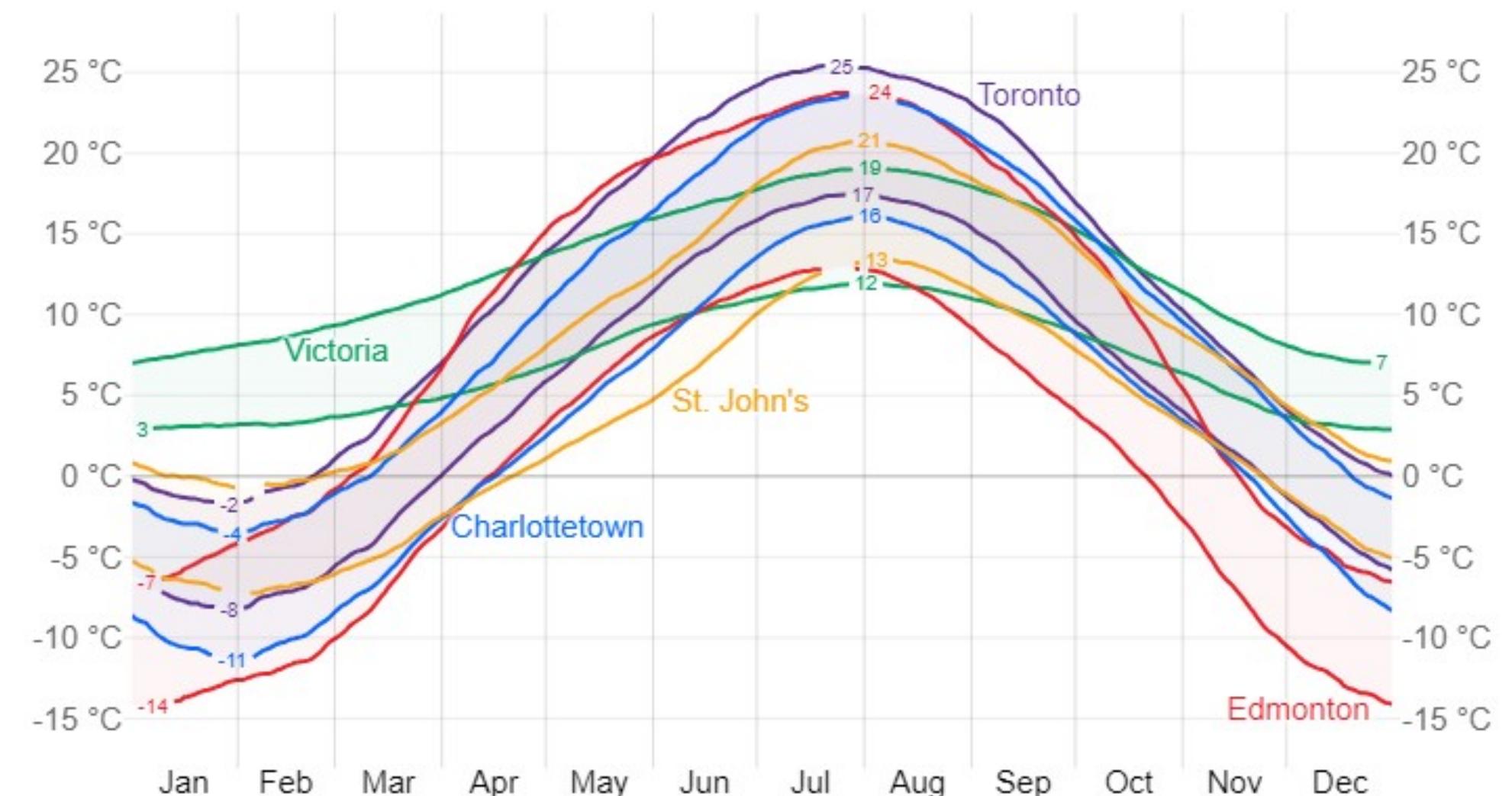
- In the past 31 years, BC has experienced the maximum number of forest fires, followed by Alberta and Ontario
- The Jurisdiction with the least number of Wildfires are Prince Edward Island, Newfoundland and Labrador and Yukon



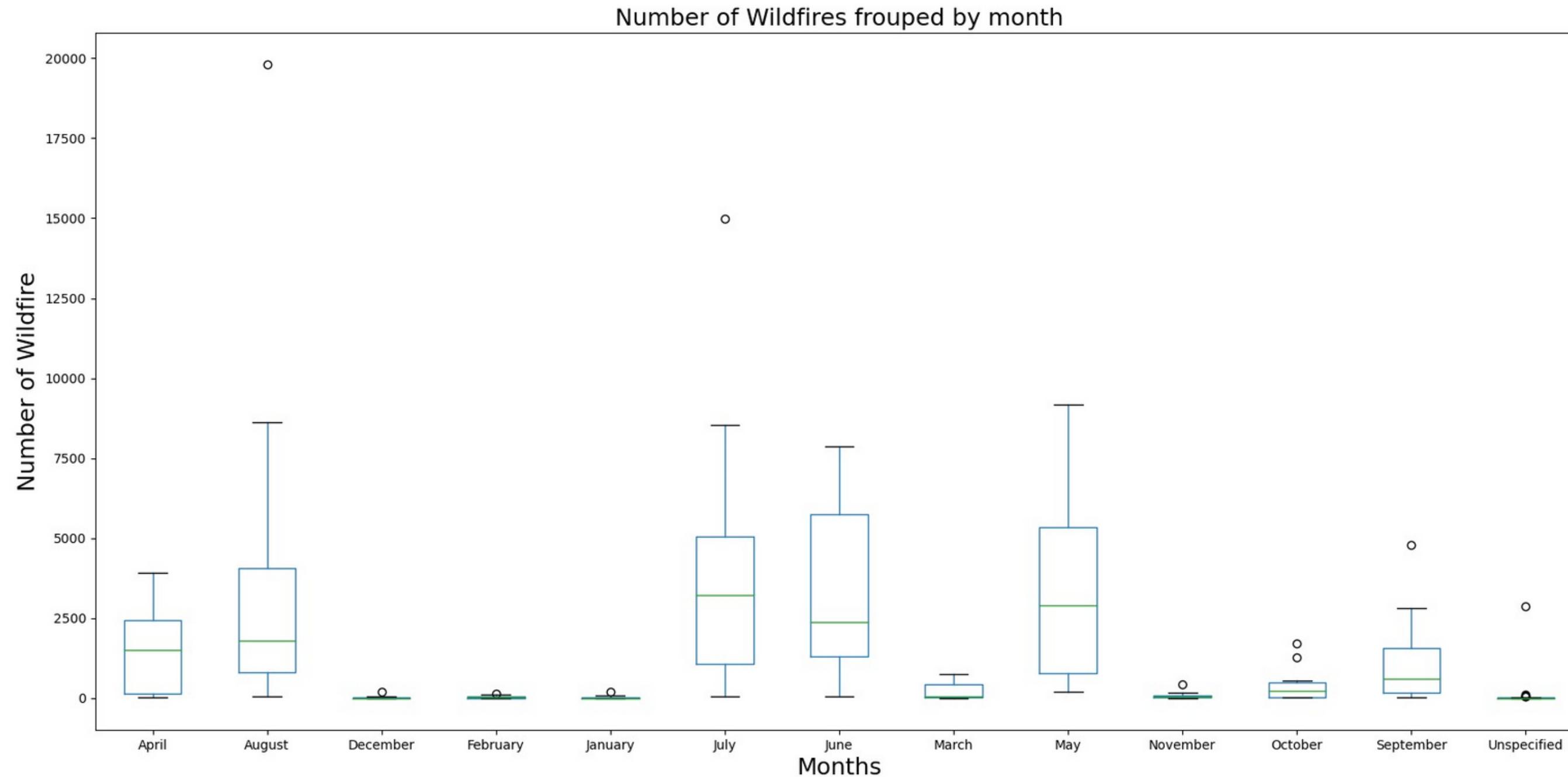
# The months with the most wildfires occurrences

July and August witnessed the maximum number of wildfires from 1990-2020, followed by June and May

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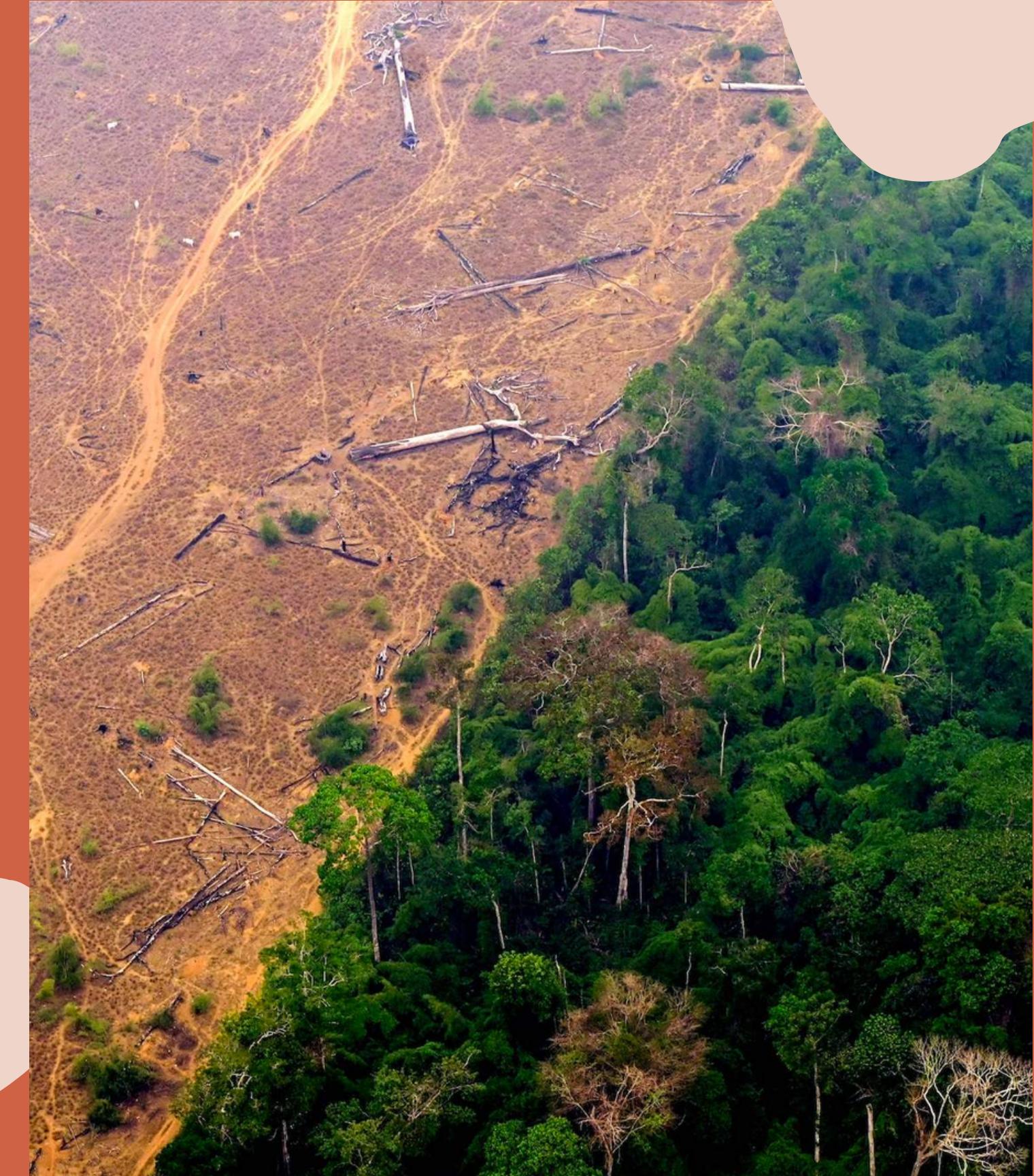
# The months with the most wildfires occurrences



# Deforestation

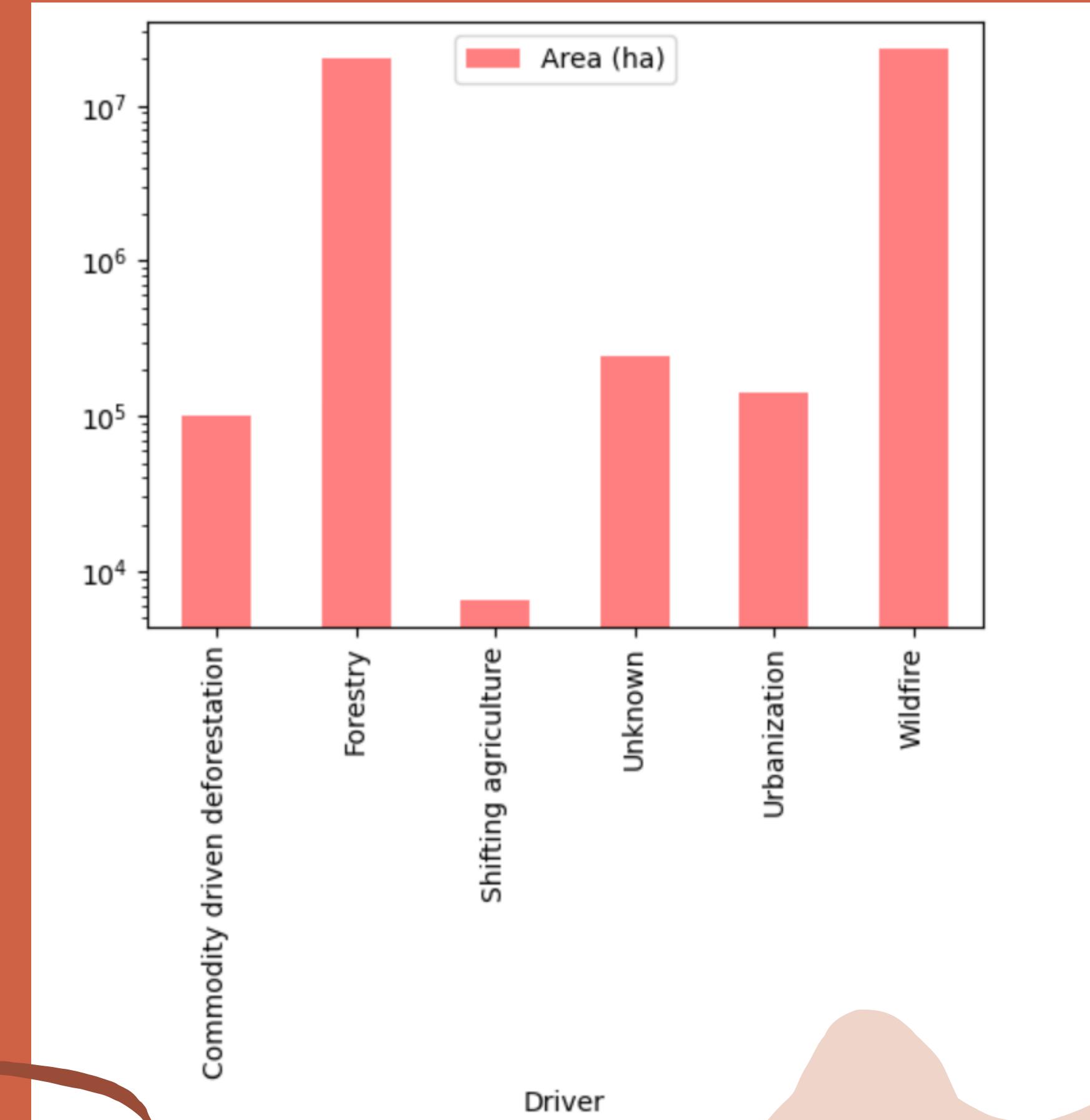
Deforestation is the intentional destruction of forested land for alternative purposes.

Between the period of 2000 to 2021,  
Canada lost more than **44 million**  
hectares of tree cover.



Several factors cause deforestation in Canada, including agriculture and mineral extraction.

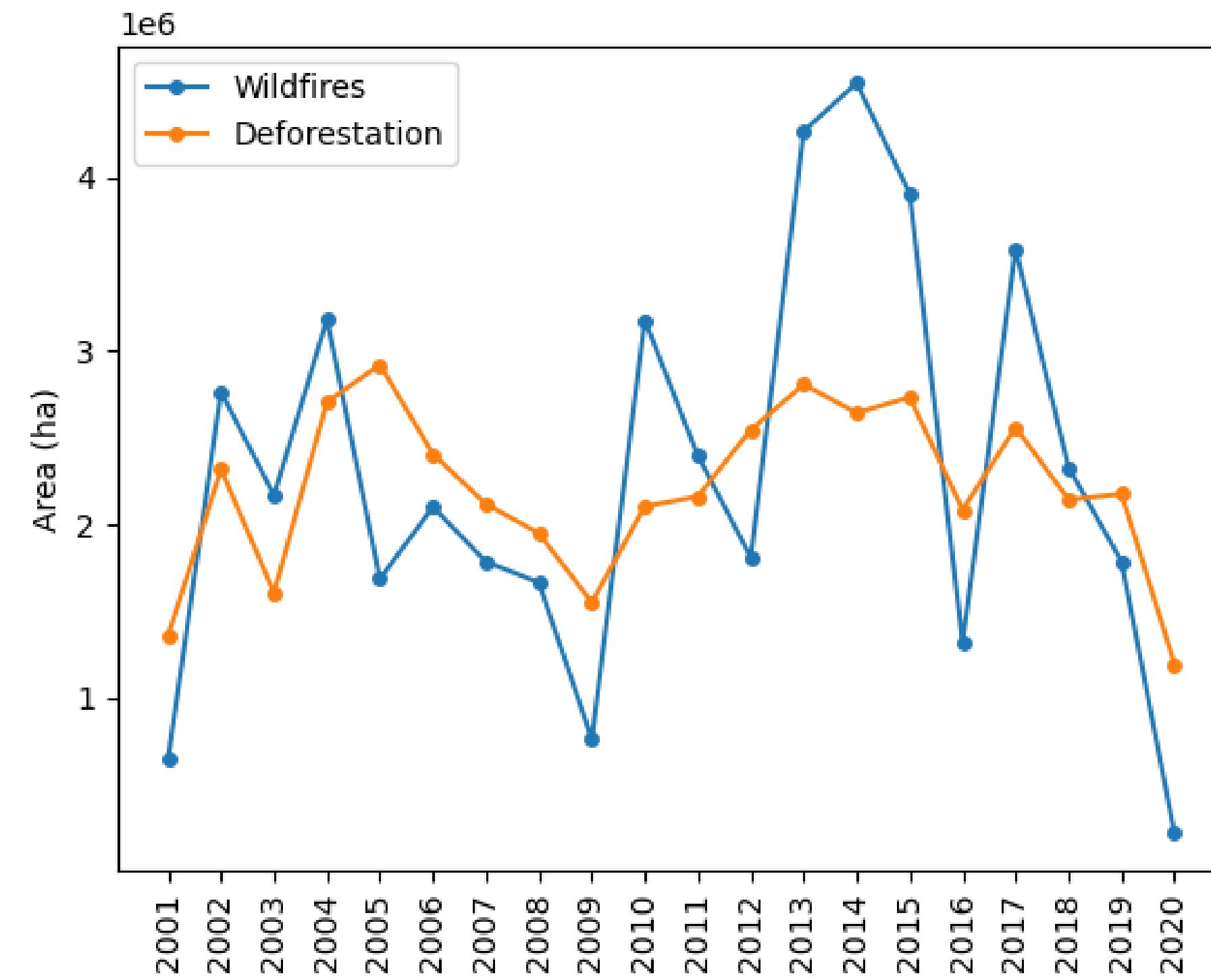
The wildfires and forestry are the main factors, representing more than **98%** of the causes.



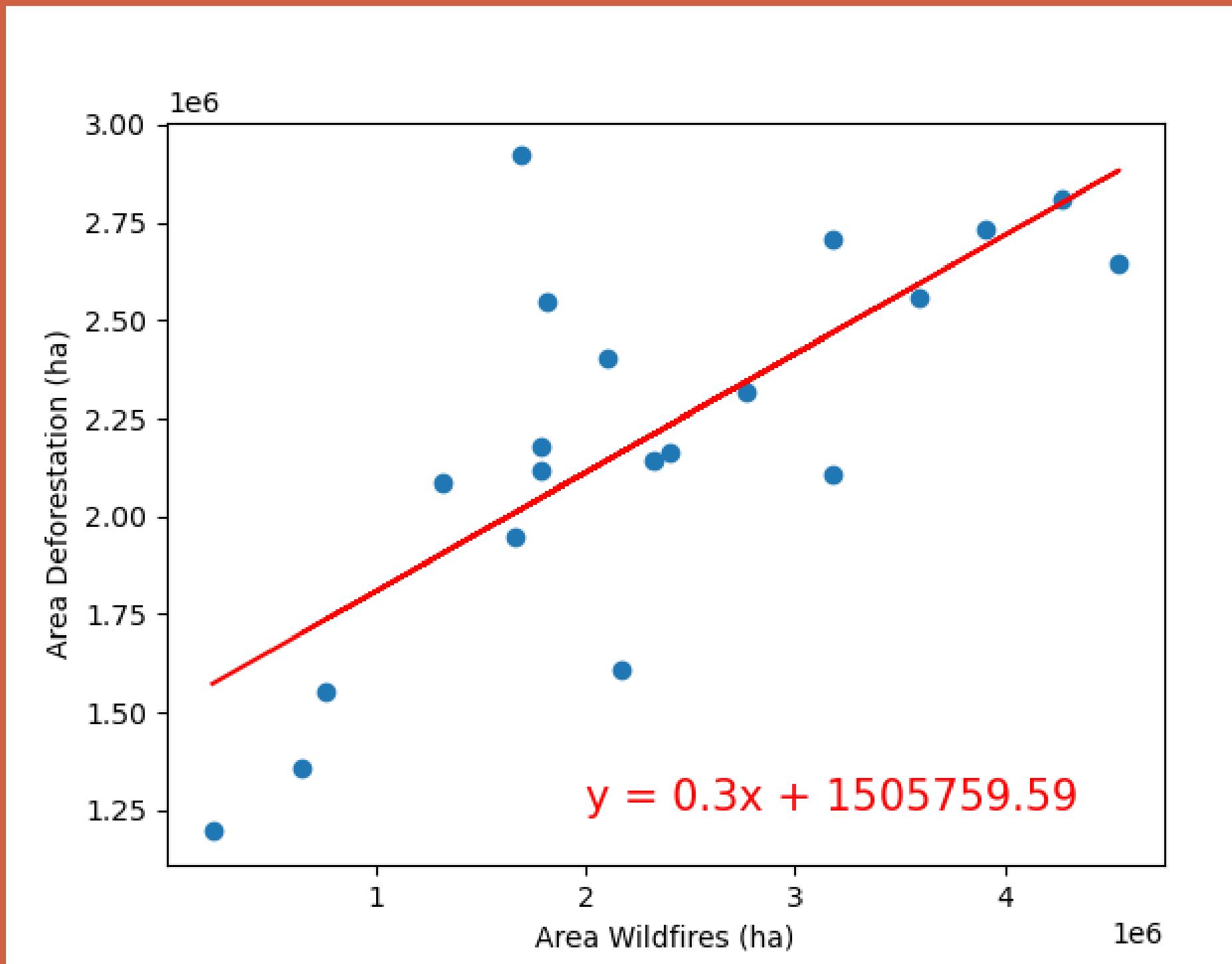
Deforestation contributes to increased fire risk in surrounding woodland.

Reducing tree cover and ground vegetation dries out forests, especially tropical rainforests.

This leads to a greater risk of fire in the area around a deforested zone.



# Linear Regression



The r-value is 0.7395928, showing a strong positive correlation between these factors.



# Conclusion



- Major causes of wildfires in Canada are Human Activities (53.6 %) and Lightning (42.3%)
  - British Columbia has experienced the maximum number of forest fires across all the jurisdictions and the main factor being lightning
  - In Alberta, New Brunswick, and Quebec, the main cause of wildfire is Human Activities
  - The months with the highest temperatures in Canada (July and August) witnessed the maximum number of wildfires
  - A positive correlation was observed between the deforestation area and the area burnt by wildfires
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