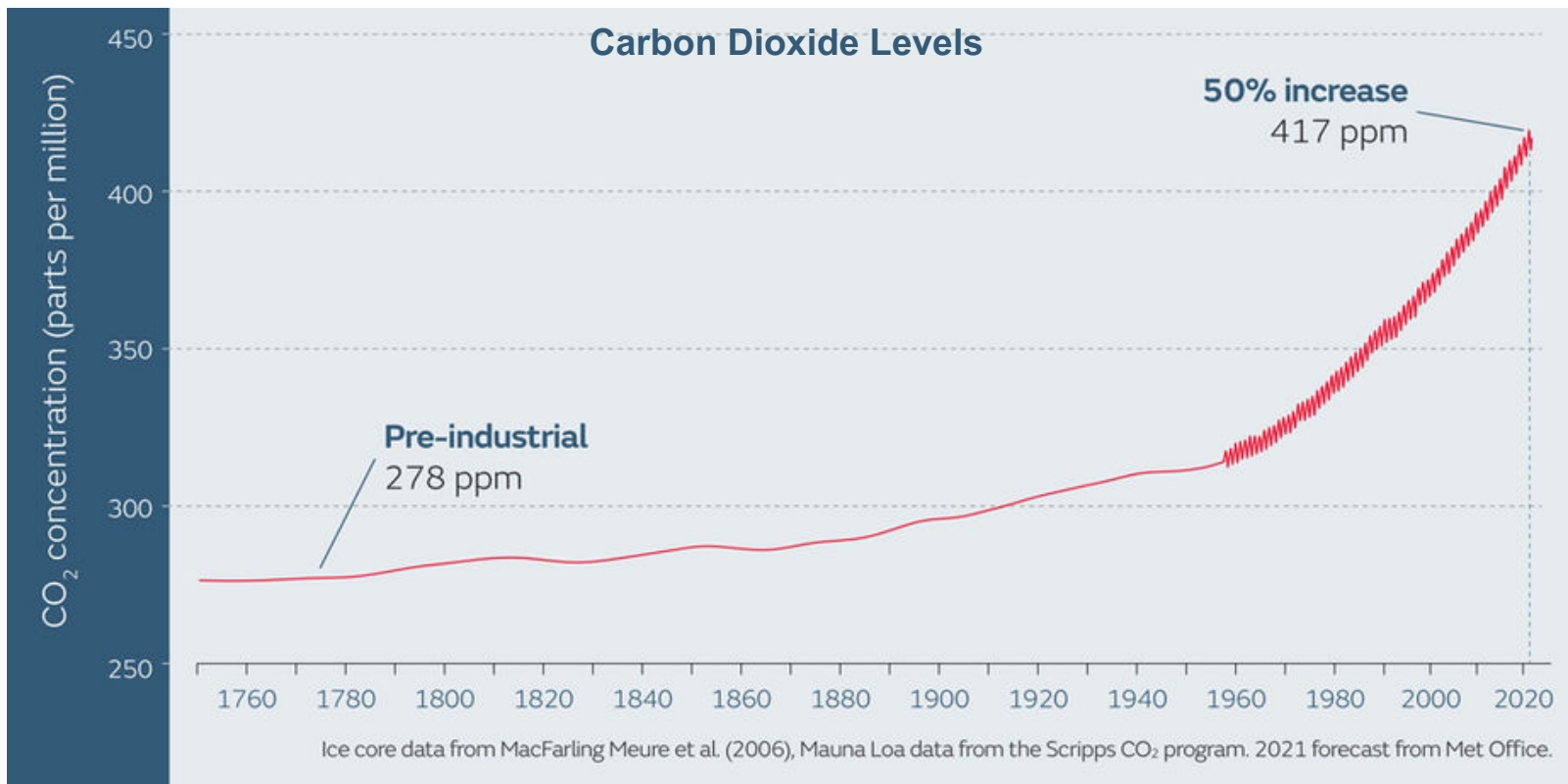


# Carbon Dioxide Levels

Use the information provided to answer the questions below. Show all work.



The red line on the graph shows the concentration of Carbon Dioxide in the atmosphere. The line until 1958 is extrapolated from air bubble samples from cores of ice removed from glaciers. From 1958 and beyond, all data is collected at the Mauna Loa Observatory.

1. Use the graph above to determine an approximate concentration of CO<sub>2</sub> in 1765 and 1958. Use the following equation to estimate percent change between the two years.

$$\text{Percent Change} = \left[ \frac{(\text{Later Concentration} - \text{Original Concentration})}{\text{Original Concentration}} \right] * 100$$

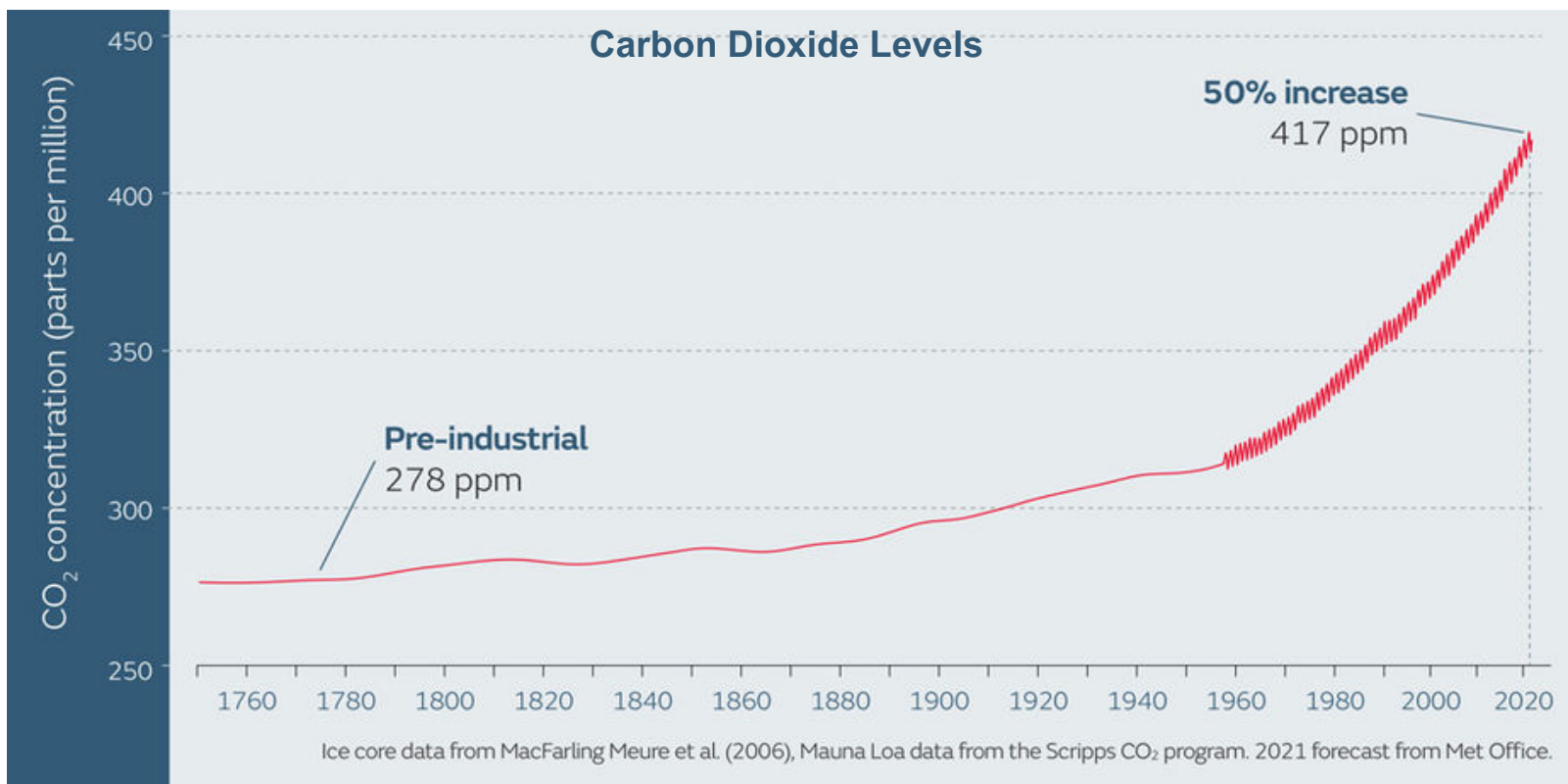
2. Using the same equation, find the percent change in Carbon Dioxide Levels between 1958 and 2020.

3. Which had a higher percent change? What do you think caused the increase?



# Carbon Dioxide Levels - KEY

Use the information provided to answer the questions below. Show all work.



The red line on the graph shows the concentration of Carbon Dioxide in the atmosphere. The line until 1958 is extrapolated from air bubble samples from cores of ice removed from glaciers. From 1958 and beyond, all data is collected at the Mauna Loa Observatory.

1. Use the graph above to determine an approximate concentration of CO<sub>2</sub> in 1765 and 1958. Use the following equation to estimate percent change between the two years.

**Percent Change = [(Later Concentration - Original Concentration) / Original Concentration] \* 100**

$$\text{Percent Change} = [(315 - 278) / 278] * 100$$

**Answers may vary depending on value estimation.**

$$\text{Percent Change} = \text{Approximately } 13\%$$

2. Using the same equation, find the percent change in Carbon Dioxide Levels between 1958 and 2020.

$$\text{Percent Change} = [(417 - 315) / 315] * 100$$

**Answers may vary depending on value estimation.**

$$\text{Percent Change} = \text{Approximately } 32\%$$

3. Which had a higher percent change? What do you think caused the increase?

**The time period between 1958 to 2020 had a higher percent change because in that time humans have used increasing amounts of fossil fuels which causes an increased release of carbon dioxide into the atmosphere.**

