Climate change is a global phenomenon that affects ecosystems, and consequently, human health. Due to rising greenhouse gas emissions, such as carbon dioxide and methane, the greenhouse gas effect has caused excess heat to linger on our planet (Denchak, 2023). Global warming impacts everyone regardless of where they live. There is no zone that is shielded from global warming because average global temperatures have increased everywhere (Denchak, 2023).

Researchers have discovered that atmospheric carbon dioxide emissions have been increasing since the Industrial Revolution, or mid-18<sup>th</sup> century (Stein, 2022). For context, average carbon dioxide emissions prior to the Industrial Revolution were consistently 280 ppm but have risen over 420 ppm for the first time in 2022 (Stein, 2022). The industrial revolution was a period of innovation and growth that developed new technologies, promoted new businesses, and commercialized new goods to strengthen economies, yet these human activities increased demand and use of fossil fuel-based energy, unintentionally releasing greenhouse gas emissions (McMichael, 2013).

Burning of fossil fuels, such as oil coal, and natural gas, has accelerated the rise in greenhouse gas emissions since that time (Denchak, 2023). In excess amount, these emissions are polluting and overheating our planet to extreme temperatures, resulting in increased risk for harm, namely injuries and deaths due to natural disasters, heat-related illnesses, and transmission of vector-borne infectious diseases (McMichael, 2013). Furthermore, in modern times, the world has become more interconnected as countries exchange goods and services across borders to grow local and global economies, so industrialization is not slowing down. Unfortunately, if we cannot control industrialized activities and reduce global greenhouse gas emissions, our economies and health are predicted to decline due to global warming events (McMichael, 2013). These events include ecosystem damage and extreme weather, which lead to increased risk of illness and injury

to farm workers, increased antimicrobial resistance, reduced biodiversity, and lower food yields and nutrition (McMichael, 2013).

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