

Sam Loyd

Targeting Climate Change Efforts

Executive Summary

January 2021

This executive summary on where we should target our efforts on greenhouse gases is broken into three sections or chapters. The first focuses on the atmospheric composition and history of the importance of focusing on carbon dioxide as the most critical greenhouse gas. The second targets the energy sector as contributing the largest account of carbon dioxide emissions. The longest and final section looks at the two most important carbon dioxide emitting nations and the different problems presented by each. This section is broken into a contrast of China and the United States as the primary offenders. The concluding slide summarizes the importance of targeting the energy sector overall with a focus on China and the United States each with different problems primarily due to the population differences. The goal was to follow a story book architecture for relaying this data effectively.

The presentation design follows the best practices of minimizing distractions. Gestalt principles were used. Blue was used primarily to highlight important information from each graph. Line and stacked area graphs were used with annual data shown over time. A bar chart was elected over a pie chart to show total emissions by sector including percentages of the total. A treemap was selected for the initial comparison of all nations as it addressed the large number of nations involved while allowing for a primary focus on the two highest carbon dioxide emitting nations.

In conclusion, an analysis of this data led to a recommendation that we focus on carbon dioxide as the primary greenhouse gas. Currently, we have an unprecedented level of carbon dioxide in the atmosphere not seen in over 800,000 years. The energy sector accounts for over 77% of the problem. China and the United States stand out as the top two carbon dioxide emitting nations. Their totals are similar over a 28-year period ending in 2017, but they got there in very different ways. In particular, the current upward trend for China is particularly troubling. The data for the historical graph of the last 800,000 years was provided by Our World in Data (2018). The remaining data was compiled from Climate Watch (2018).

References:

Climate Watch. (2018). GHG Emissions. Retrieved from https://www.climatewatchdata.org/ghg-emissions?breakBy=sector&end_year=2017&start_year=1990

Our World in Data. (2020, August). Atmospheric concentrations of CO2 continue to rise. Retrieved from <https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>