ABSTRACT

Analysis of national statistical databases has allowed for the widely-used data-set on annual, fossil-fuel-derived, carbon dioxide emissions (maintained by the Carbon Dioxide Information Analysis Center (CDIAC)) to be subdivided into monthly time intervals. This analysis focused on statistical parameters that could proxy for the solid, liquid, and gaseous fuels consumed in each country at monthly time scales. An intermediate product of this analysis was the fraction of the annual total fuel consumption occurring in each month for each fuel. Monthly fractions were multiplied by the annual carbon dioxide emissions values to obtain monthly emissions estimates for each fuel type. A benefit of this approach is monthly and annual emissions time series that are mutually consistent.

This poster presentation gives monthly emissions for multiple years for the United States, Canada, and Mexico. The monthly data by state and province provide enough detail to begin to understand how the annual cycle of emissions varies spatially (i.e., whether emissions peak in the summer, in the winter, or are relatively uniform throughout the year). Collaboration is being sought to improve the state/provincial detail in the data time series, as well as in compiling additional statistics related to monthly fossil-fuel use. Please see/contact any of the co-authors of this poster if you are interested in such a collaboration.