

Quantitative methods in action: climate change in pictures

The volume of articles and publications written about climate change in general and greenhouse gas (GHG) emissions in particular is enormous, and understanding the impact of all the statistics quoted is not easy, even for experts. However charts and diagrams can help make this understanding easier. The World Resources Institute (WRI) has published a wealth of data and graphics on GHG emissions. For instance the pie chart in Figure 4.1 allows us to see what proportion of GHGs is attributable to transportation. Another interesting chart is the multiple bar chart shown in Figure 4.2 which compares both countries and time frame. Finally Figure 4.3 is a kind of line plot that shows the aggregate contributions of major GHG emitting countries.

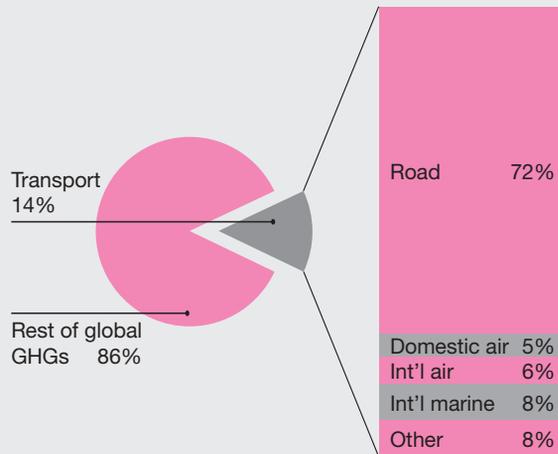


Figure 4.1 GHGs from transportation

What can you summarize from these three charts?

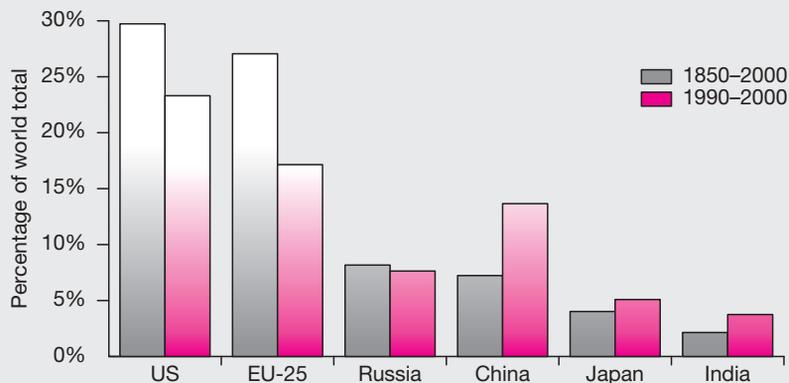


Figure 4.2 Cumulative CO2 emissions: comparison of different time periods

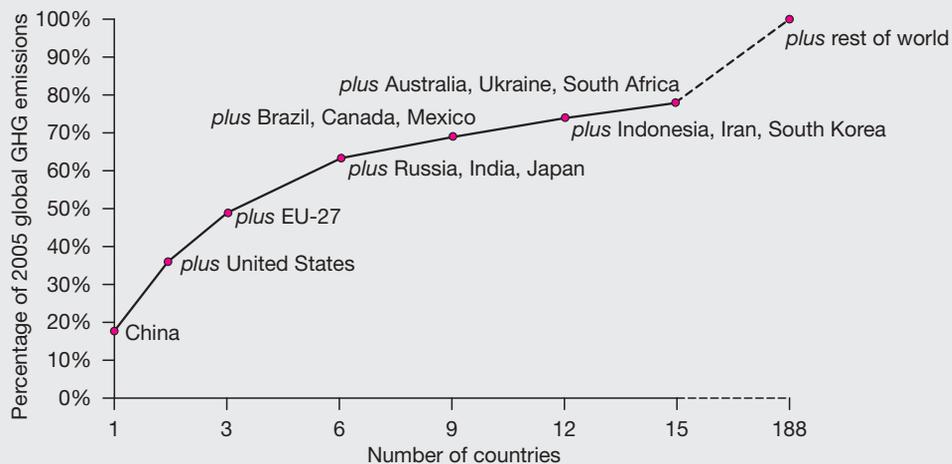


Figure 4.3 Aggregate contributions of major GHG emitting countries, 2005

Sources and notes: WRI, CAIT (<http://cait.wri.org>). Percentage contributions are for year 2005 GHG emissions only. Moving from left to right, countries are added in order of their absolute emissions, with the largest being added first. Figures exclude emissions from land-use change and forestry, and bunker fuels. Adapted from Figure 2.3 in Baumert et al. (2005) 'Navigating the Numbers: Greenhouse Gas Data and International Climate Policy', http://pdf.wri.org/navigating_numbers.pdf.