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DSC 640

Greenhouse Gases Dashboard Documentation

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For the Greenhouse Gases (GHG) dashboard, a blue color pallet was selected for emphasizing or distinguishing metrics. When used, they were consistently applied to either highlight or to represent China and the United States. It was decided that the intensity of the blue would correspond with the cumulative emissions totals. As such, China is indicated in a slightly darker shade of blue.

The dashboard followed the best practices of minimizing distractions and reducing clutter on the screen. Gestalt principles were used. Packing this much information on a single screen almost required implementation of the concept. The graphs were arranged to follow the natural Z format that the eye naturally makes when scanning the screen. This allows for a natural visual progression and in the order selected by the publisher.

Labels were applied to all axes unless explained in the title or self-explanatory as in the case of year in several of the graphs. Any non-text-based information not specifically highlighted but used for context or comparison was shown in a charcoal or medium grey. Each individual visual or graph was labelled with a consistent font and size. Line charts were used to show trends over time with one exception. In order to emphasize the cumulative effect of greenhouse gases, a bar chart was selected. This chart also provided a 28-year total in dark blue as part of the title section. In that one case, size was also used to increase the font and emphasize the cumulative importance. The dark blue color was used in bold to highlight the definition of the commonly used measurement of MTCO2e in climate science. This metric was later used in several charts on the dashboard. Note that this is also sometimes indicated as MtCO2e by other publishers. Most of the remaining charts were bar charts of various types and selected over pie charts for showing percentages.

Data from the NOAA National Centers for Environmental Information was used to build the anomaly chart (2020). The remaining data was provided by Climate Watch (2020). This organization brings together information from multiple sources on climate change data. An interactive explorer tool

on the site was used which allowed data to be exported conditionally based on type for the data set. The Climate Analysis Indicator Tool (CAIT) dataset was selected for this analysis from the tool. This data is part of the Creative Commons 4.0 license and allows for unrestricted reuse provided proper citation is included. This project can be found at https://github.com/BellevueDSCLoyd/GreenhouseGas with the dashboard located in the dashboard folder.

References:

Climate Watch. (2020). GHG Emissions. Retrieved from https://www.climatewatchdata.org/ghg-emissions?breakBy=sector&end_year=2017&start_year=1990

NOAA National Centers for Environmental Information. (2021, January 9). Climate at a Glance: Global Time Series 2020. Retrieved from https://www.ncdc.noaa.gov/cag/global/time-series/globe/land_ocean/ann/11/1990-2020