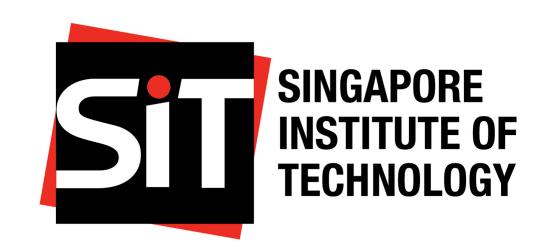
Visualizing Billion-Dollar Disasters in the USA (1980–2024)

Oh Jia Wei Darien, Peter Febrianto Afandy, Quek Joo Wee, Desmond Loy Yong Kiat, Rene Low Yi Xuan, Phileo Teo Weihan (SIT-UoG Computing Science)



Introduction

Previous Visualization

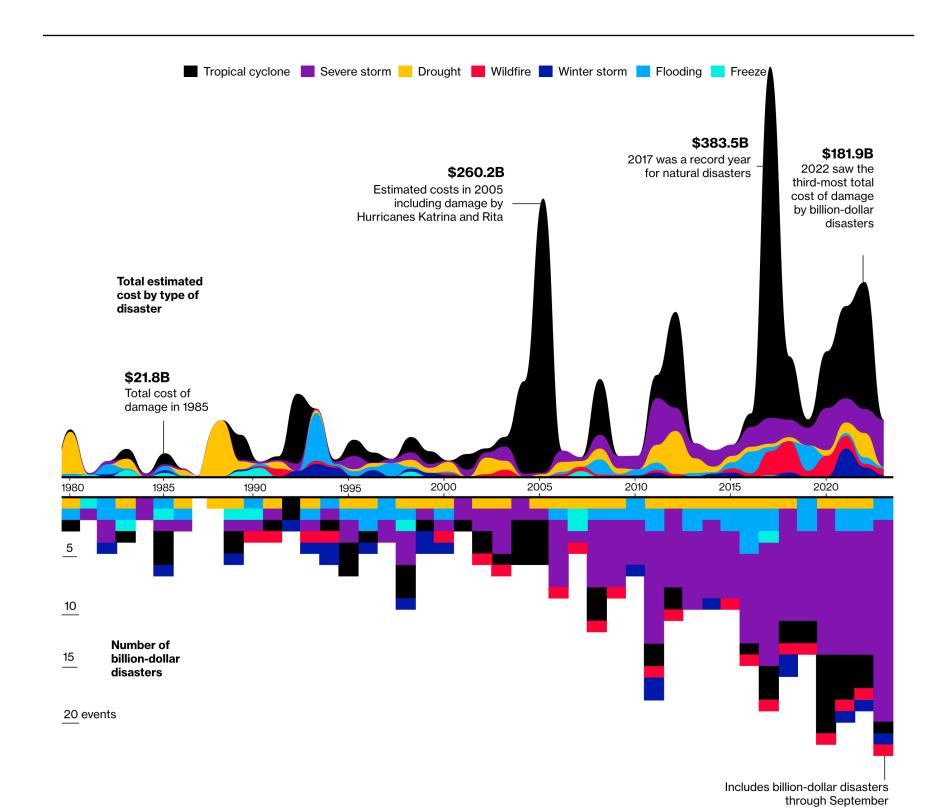


Figure 1: Frequency and Estimated Costs of Billion-Dollar Disasters in the USA by year, published by Bloomberg.

STRENGTHS

SUGGESTED IMPROVEMENTS

IMPLEMENTATION

Data

Software

We used the Quarto publication framework and the R programming language, along with the following third-party packages:

- tidyverse for data transformation, including ggplot2 for visualization based on the grammar of graphics
- *knitr* for dynamic document generation

IMPROVED VISUALIZATION

Estimated Costs of Billion-Dollar Disasters in the USA by Year Estimated Cost of Billion-Dollar Disasters in the USA (1980-2024)

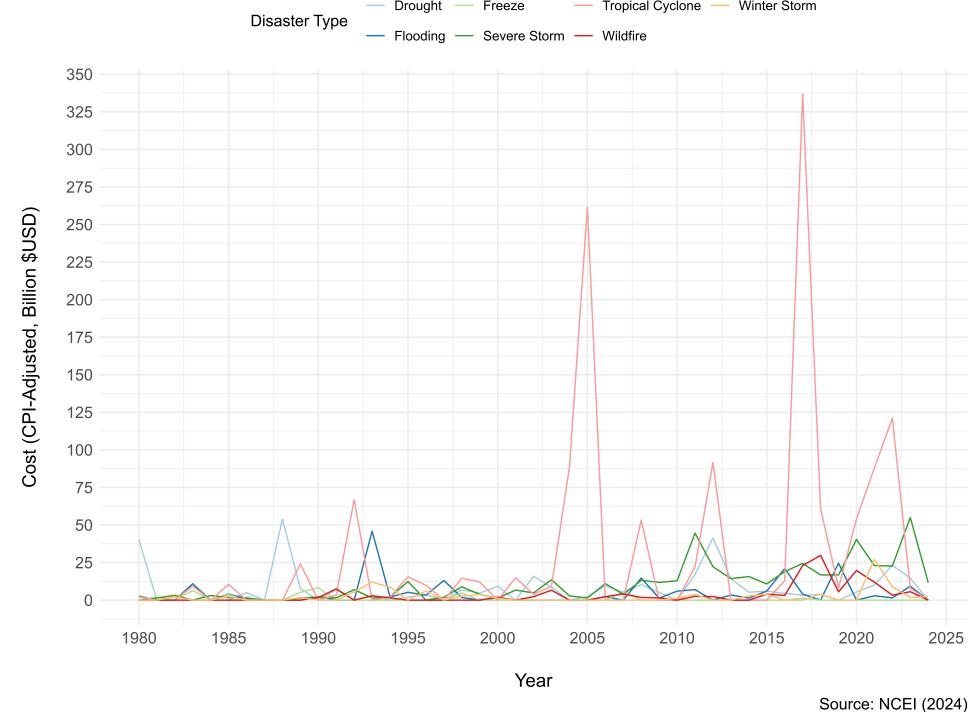


Figure 2: Revised visualization of Estimated Costs of Billion-Dollar Disasters in the USA by year.

Estimated Cost of Billion-Dollar Disasters in the USA (1980-2024)

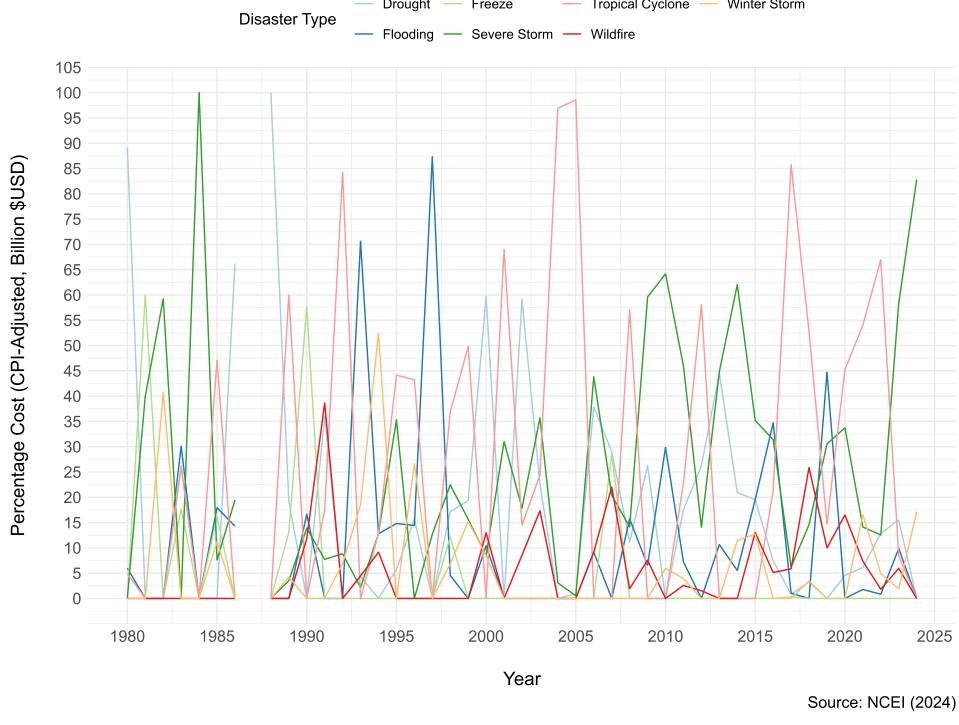


Figure 3: Revised visualization of Estimated Costs of Billion-Dollar Disasters in the USA by year.

Frequency of Billion-Dollar Disasters in the USA by Year

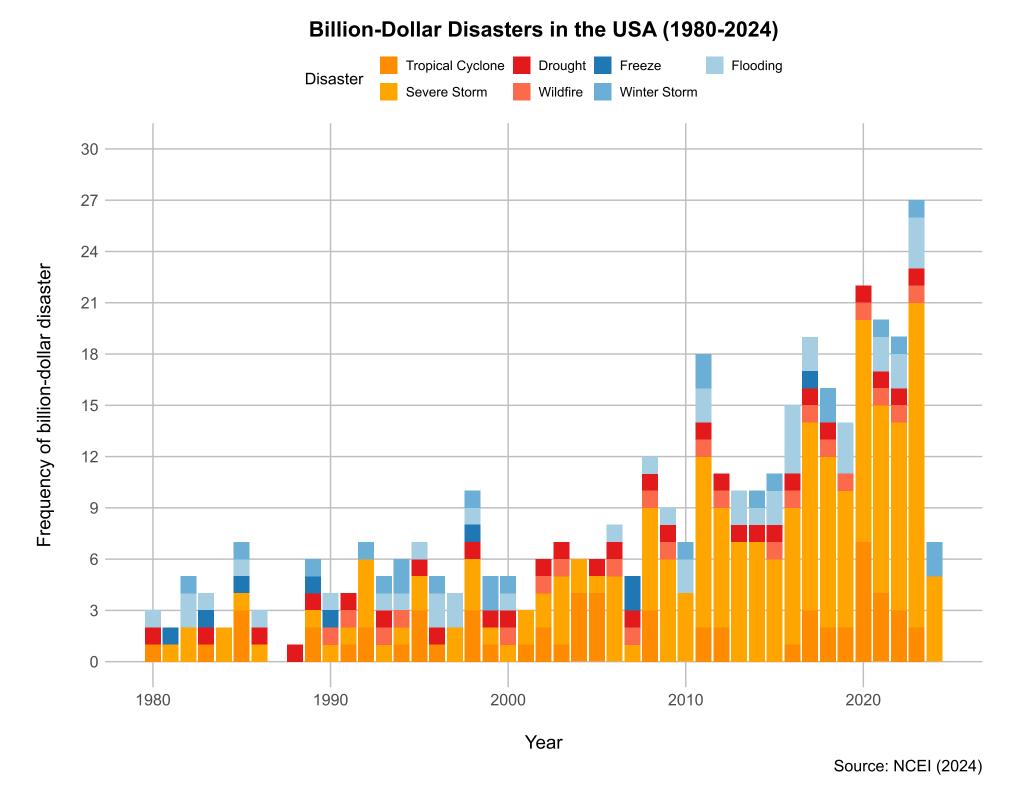


Figure 4: Revised Visualisation of Frequency of Billion-Dollar Disasters in the USA by year.

Combined Plot of Costs and Frequency

Further Suggestions for Interactivity

Conclusion