

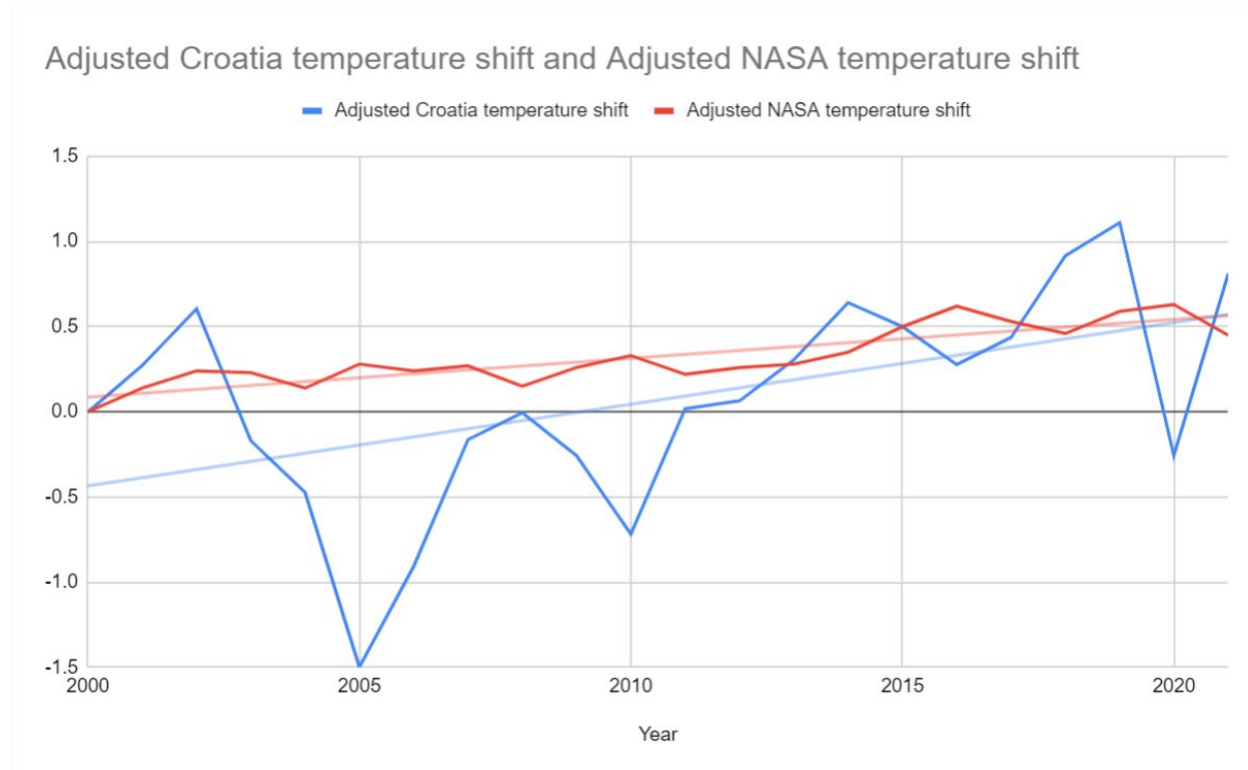
GLOBE Climate Change Data Challenge: Does GLOBE air temperature data show evidence of climate change? Using ADAT to retrieve and analyze GLOBE's air temperature data

Adapted from [David Overoye's 2022 blog post](#)

In 2022, Dave prepared some training material on how to use GLOBE's data retrieval systems: Vis and ADAT. You can view the presentations here:

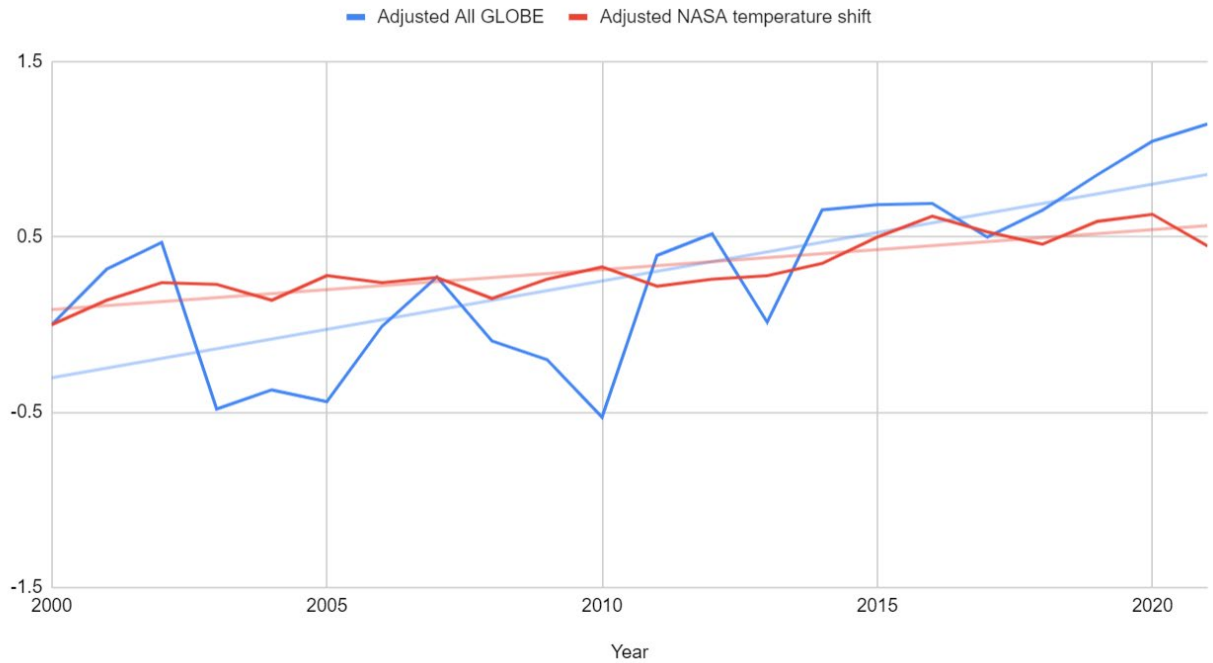
- [Vis System Presentation](#): Includes tasks you can complete to try working with the system.
- [ADAT System Presentation](#): Includes tasks you can complete to try working with the system. Also includes the data and instructions if you'd like to try the following analysis using GLOBE's air temperature data...

Croatia has been with the GLOBE program since 2000 and they have recorded a large amount of data. So, Dave decided to review the air temperature data recorded by Croatian participants over a 21-year period to see whether these data provide any evidence of climate change. Using the ADAT system, he retrieved the air temperature monthly averages from Croatia from 2000 through 2021. He then used a pivot table to calculate the average annual temperature in Croatia per year for the last 21 years and placed a trend line on the data. Finally, he added NASA's data set for measured temperature change over those 21 years and compared the two:



Next, he used ADAT to retrieve all of GLOBE's worldwide monthly air temperature data in the 30–50 degree latitude band for the same 21 year period and plotted the results to see how it compared to the NASA data:

Adjusted All GLOBE and Adjusted NASA temperature shift



What do these GLOBE data show you? How is it similar or different than NASA's global air temperature measurements? What factors might contribute to those differences? What conclusions do you draw? Where do you think the 2022 and 2023 data ended up? Where do you think the 2024 data will be?