Global Climate Change Dashboard

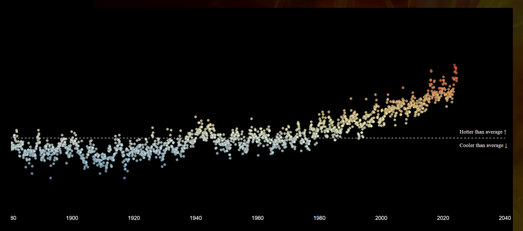
VISUALIZING THE FACTORS DRIVING CLIMATE CHANGE

BACKGROUND

Our dashboard brings together critical climate data to visualize how temperature anomalies, CO_2 emissions, ice cap reduction, and sea level rise contribute to climate change.

TEMPERATURE

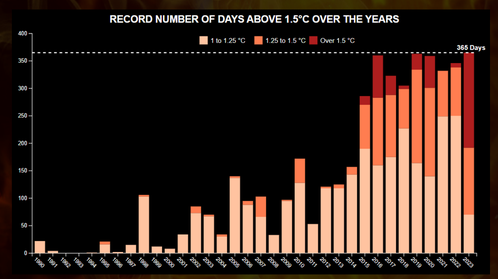
Earth Was Due for Another Year of Record Warmth. But this Warm?



In 2023, **all 365** days were above **1°C** (the previous record was 363 days in 2019), and **almost 50%** were **above 1.5°C.**

2023

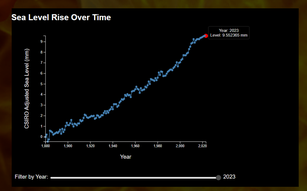
Warmest year on record, close to **1.5°C** above pre-industrial level.

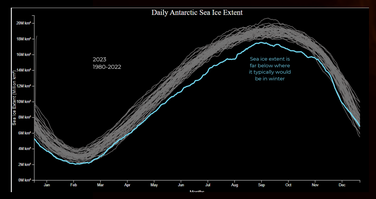


Number of days with temperature increase above pre-industrial level(1850-1900).

SEA LEVEL

Rising seas threaten coastal ecosystems and human settlements.

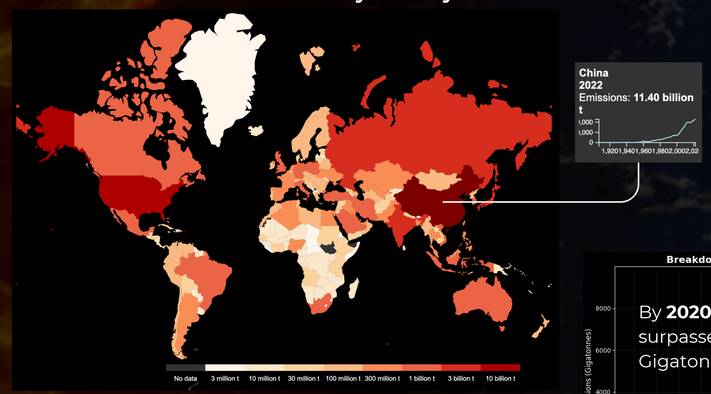




SURGING SEA IN A WARMING WORLD

In **2023** a record low extend for the corresponding time of the year observed for most months.

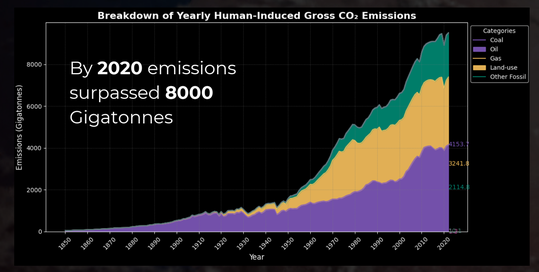
Annual CO2 Emission by Country

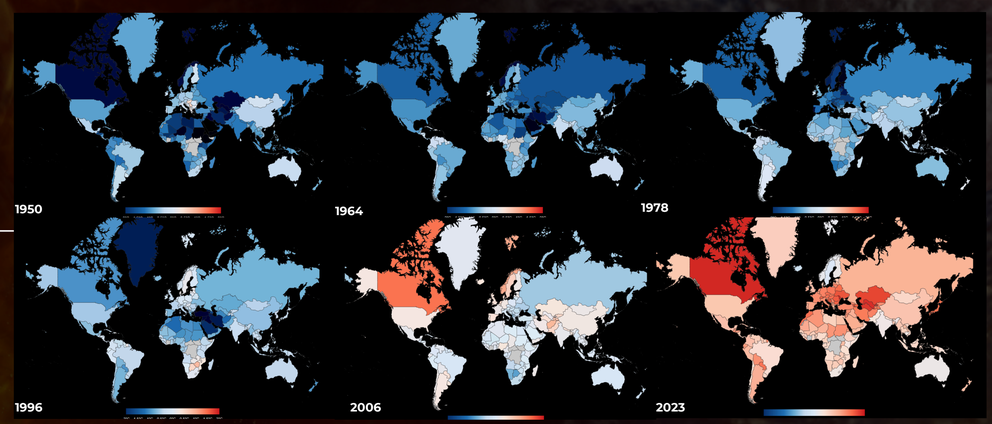


Annual CO2 emissions by countries with **China**, **USA**, and **Russia** being the top contributors.

RISING C02, RISING ALARM

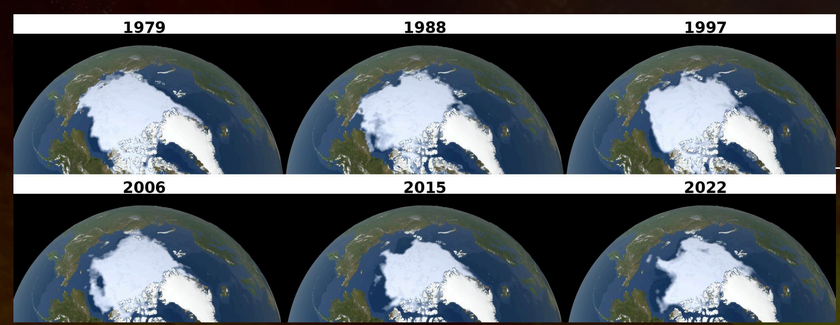
Yearly **human-induced** CO2 with **Coal**, **Oil**, **Gas**, **Land Change,** and **Other Fossil** emissions that steadily increased due to industrialization.





Annual Temperature Anomaly: The deviation of a specific year's average surface temperature from **1990-2023** mean, in degrees Celsius over all the countries.

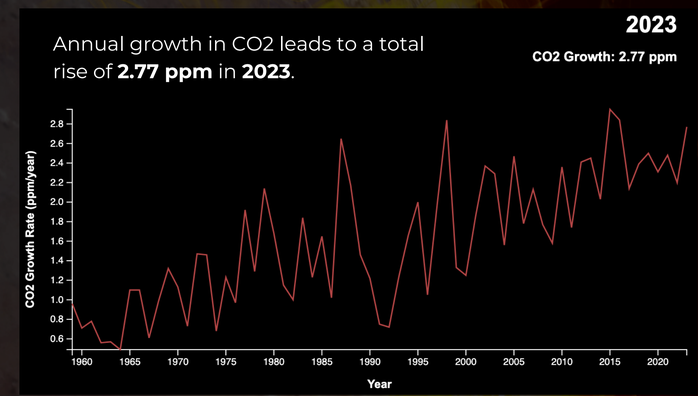
Highlights the rapid decline in Arctic ice over **43 years,** showcasing visible impact on polar regions.



CO2 Emission

Fossil fuel usage and industrial activities are major contributors to greenhouse gas emissions.

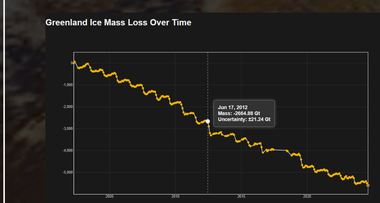
Annual growth in CO2 leads to a total rise of **2.77 ppm** in **2023**.



ICE CAP REDUCTION

Shrinking polar ice caps are contributing to rising sea levels.

SHRINKING ICE CAPS, SWELLING OCEANS



Decline in Greenland's ice mass by over **5000 gigatons** since 2002.

Continuous decline in the Antarctic ice mass from 2002 to 2024, with significant losses exceeding **2400 gigatons**.

TOOLS & TECHNOLOGIES

D3 · CO · NASA · NOAA · VS Code · Power BI

CONCLUSION

The Global Climate Change Dashboard visualizes key climate indicators, empowering users with data driven insights to drive awareness and action against climate change.

• Smriti Karanjit • Sarah Nasir • Sai Eshwar Reddy • Prathyusha Aitha