

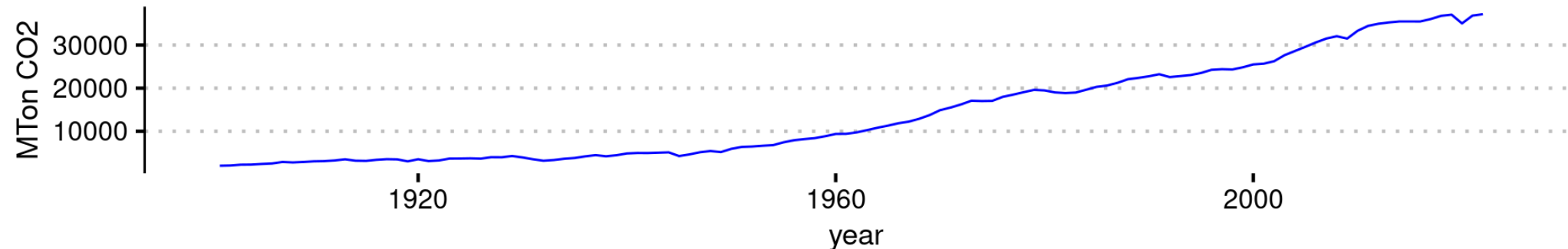
Electricity and Carbon Over Time

George I. Hagstrom

We are changing the planet

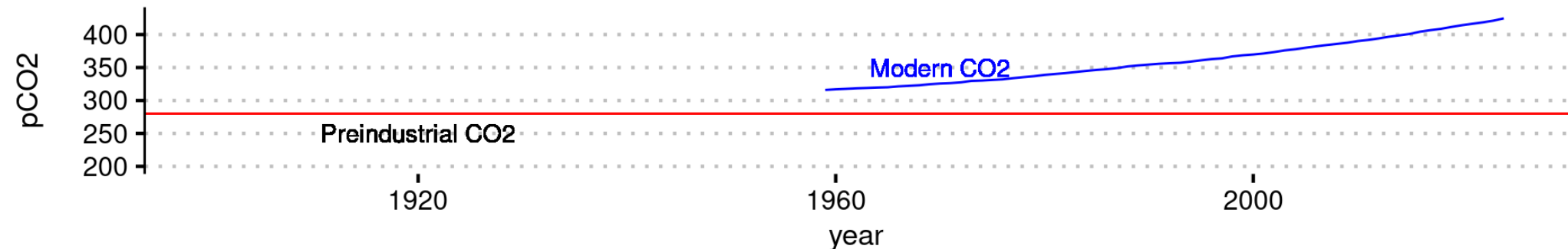
Electricity Emissions are Rising Each Year

Source: OWID



Emissions Cause Atmospheric CO2 to Rise

CO2 Measured at Mauna Kea

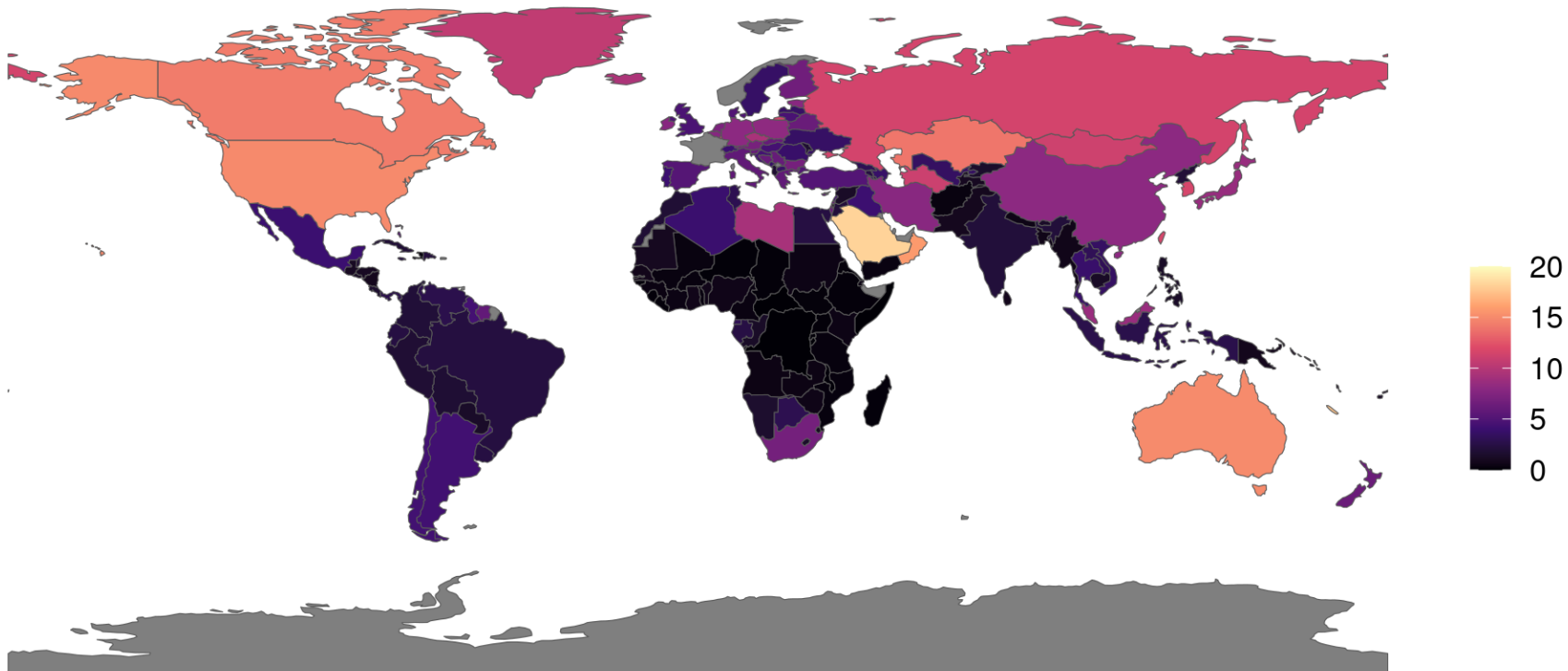


Inequality Suggests Emissions Rise

- In an equitable world emissions will be even across the globe

Some parts of the world pollute more than others

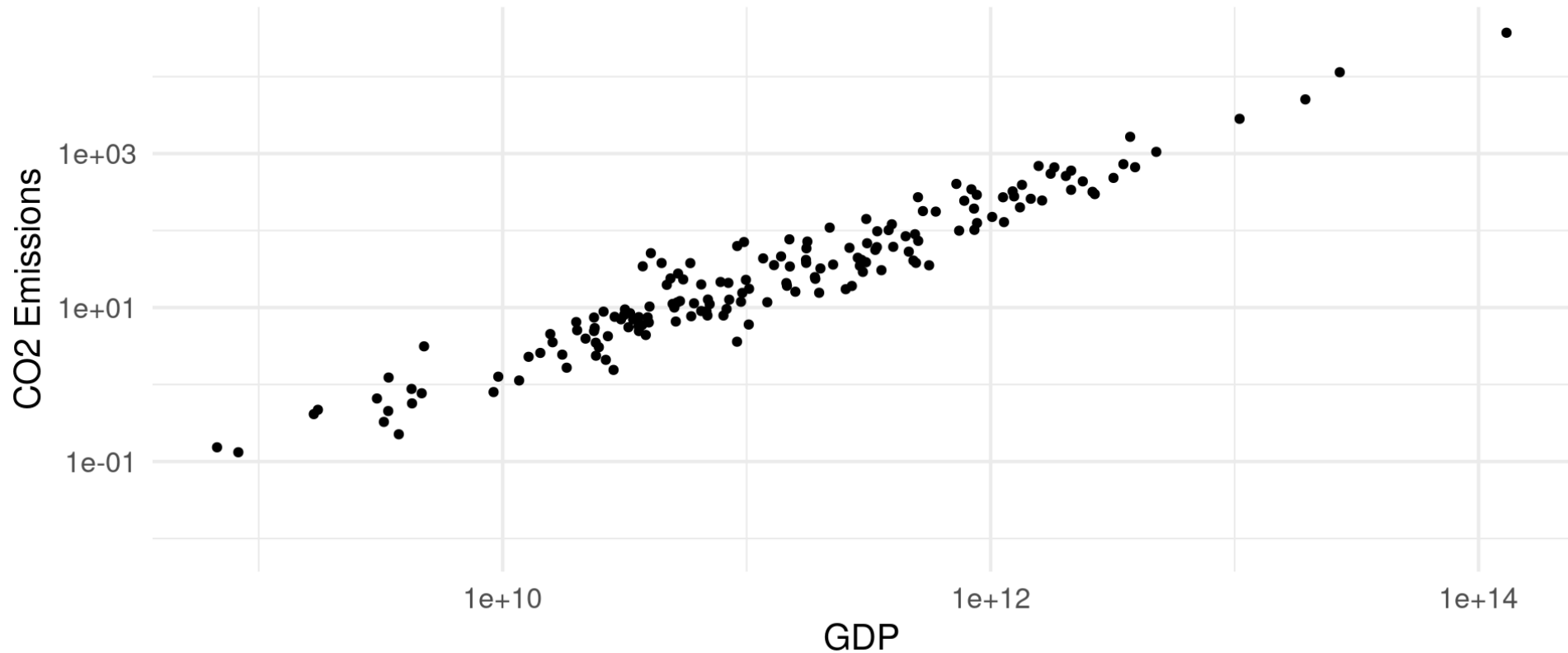
2022 Per Capita CO2 emissions



Humankind's Challenge: Reduce Emissions While Allowing Growth

GDP Drives Emissions

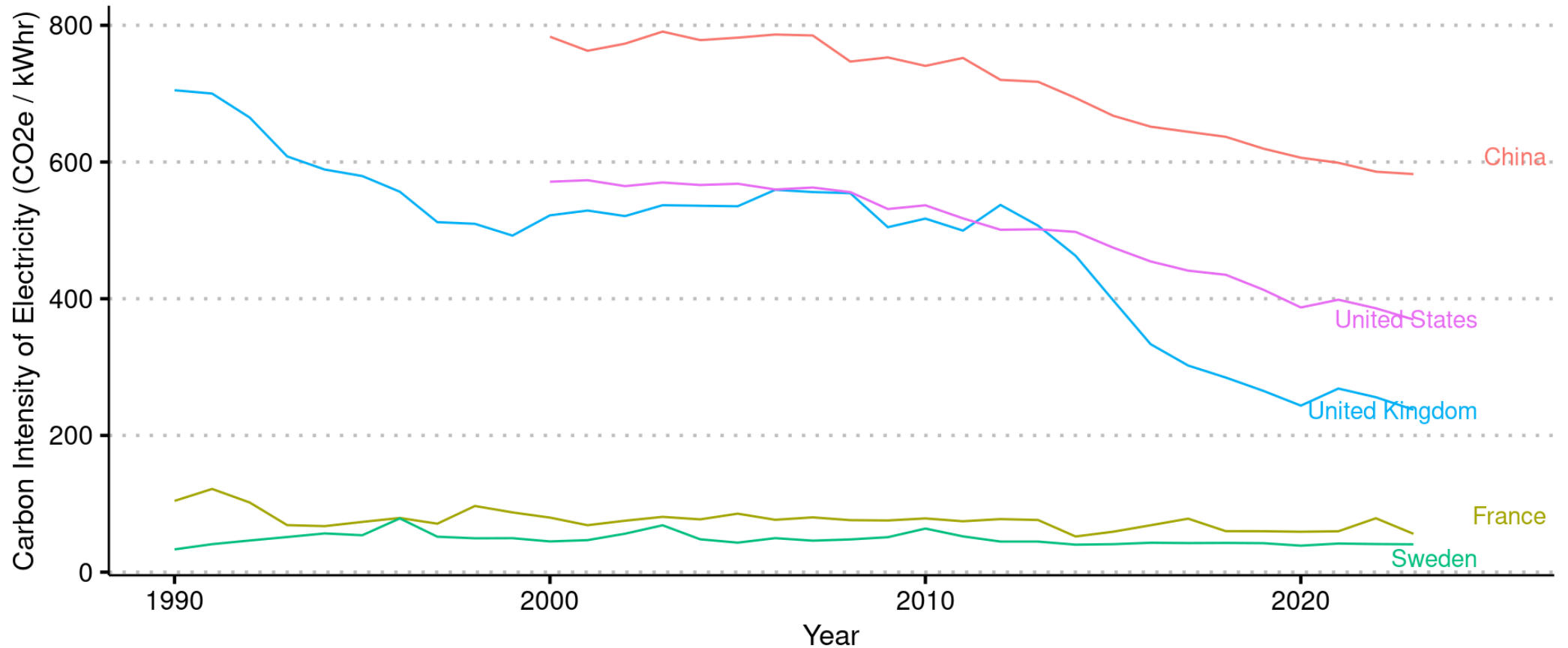
2022 Emissions and GDP data. In the modern world, narrowing inequality will make emissic



Hope? Emissions Intensity Falling!

Carbon Intensity Is Dropping in Several Countries

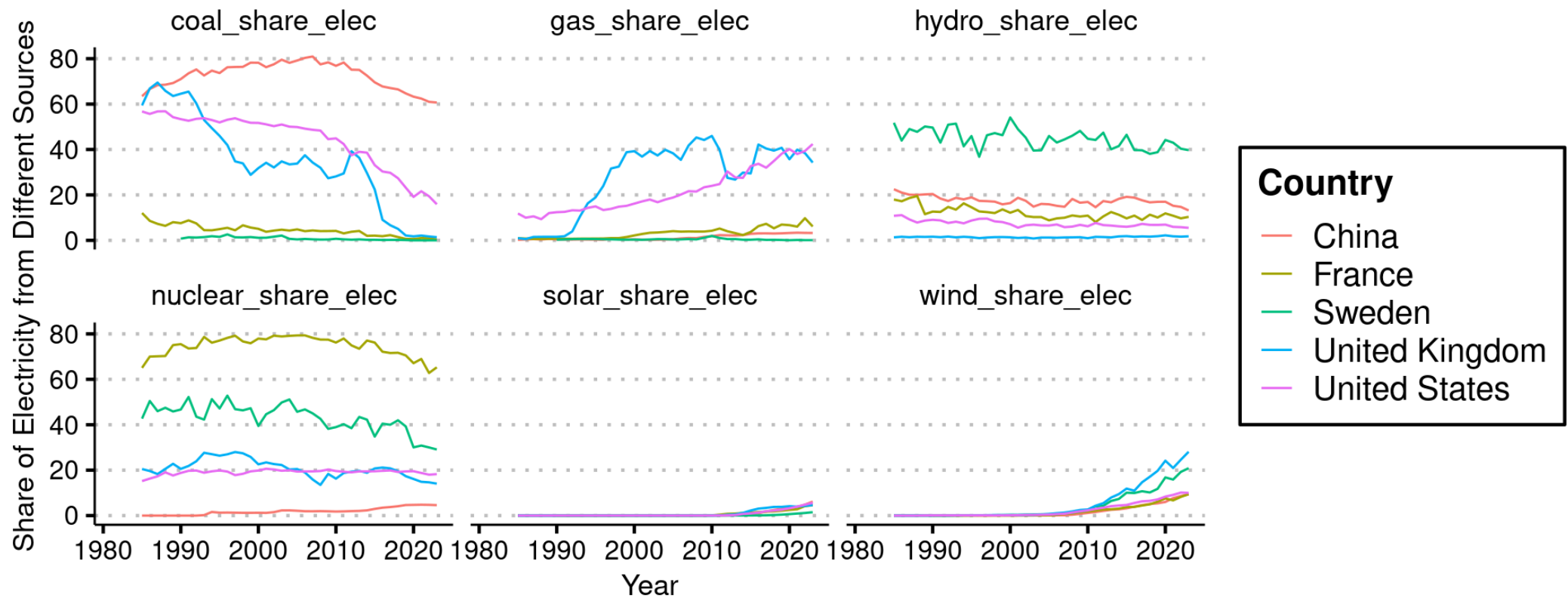
Carbon Intensity of Electricity Production



How? Adoption of Clean Energy

Clean Energy is Displacing Dirty Energy

Hydro and Nuclear enabled decarbonized electricity in the 1970s, gas is displacing coal, and wind and solar are growing fast



Net Zero Won't Be Easy

Emissions growth slowed recently but remains sky high

