

Climate Change Roundtable

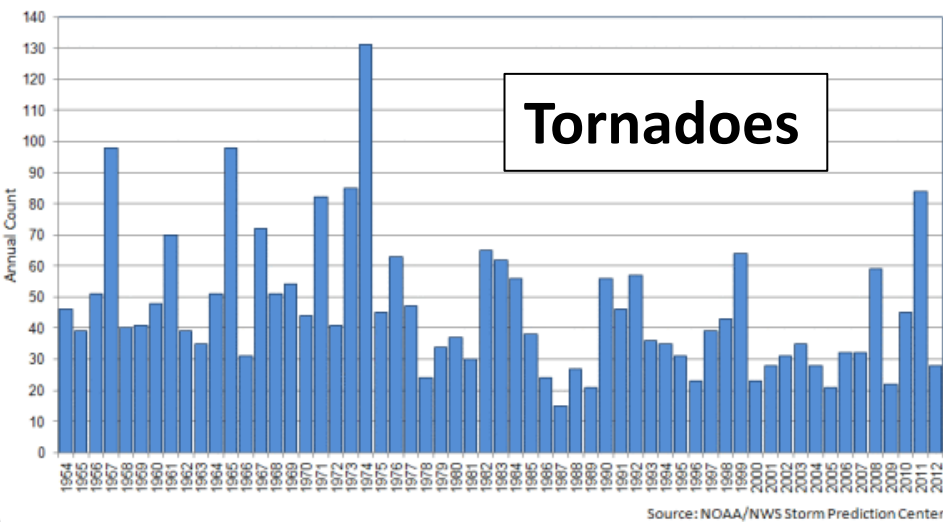
30 May 2013

John R. Christy

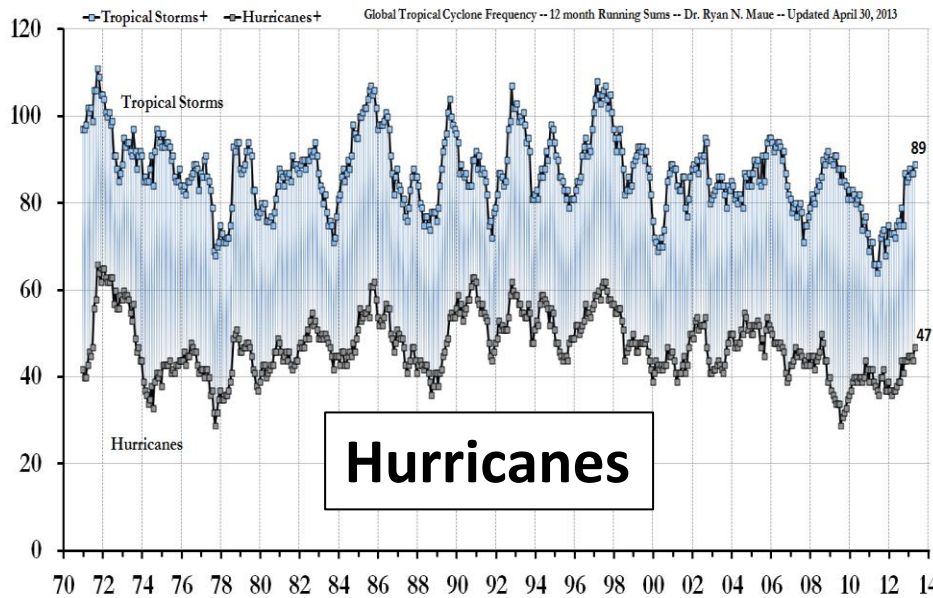
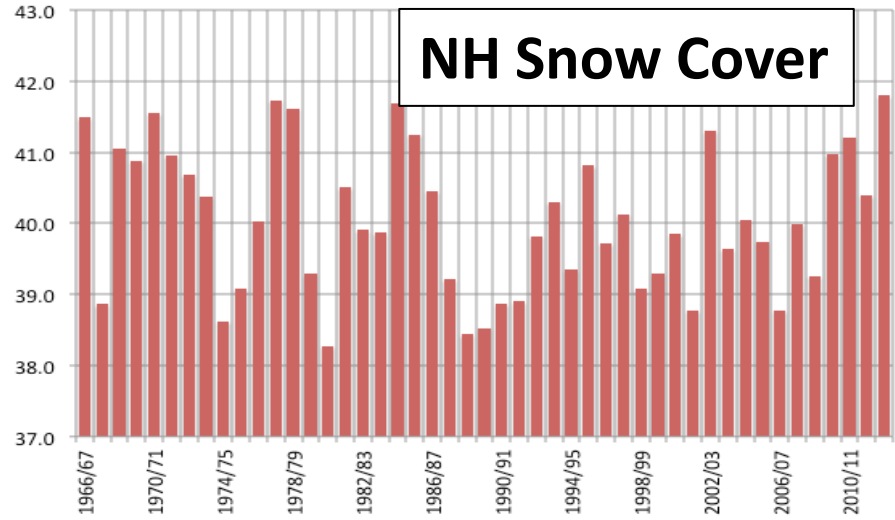
The University of Alabama in Huntsville

Alabama State Climatologist

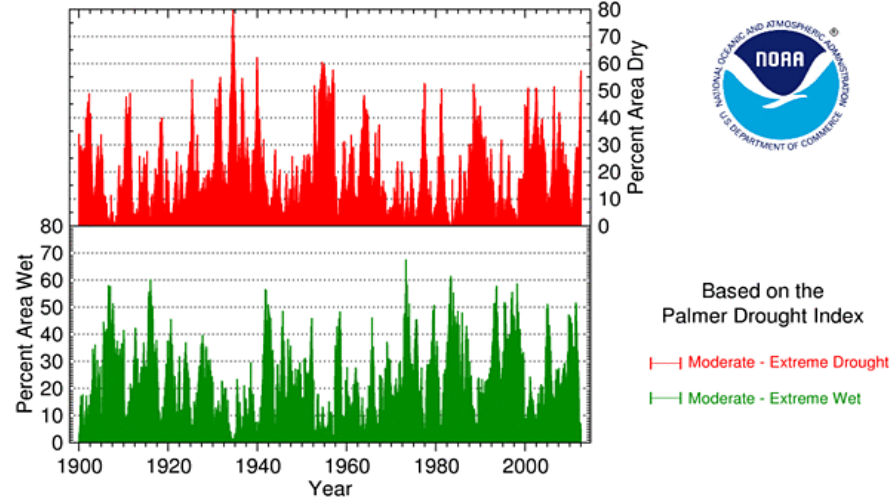
U.S. Annual Count of Strong to Violent Tornadoes (F3+), 1954 through 2012



Northern Hemisphere Snow Extent
November to April



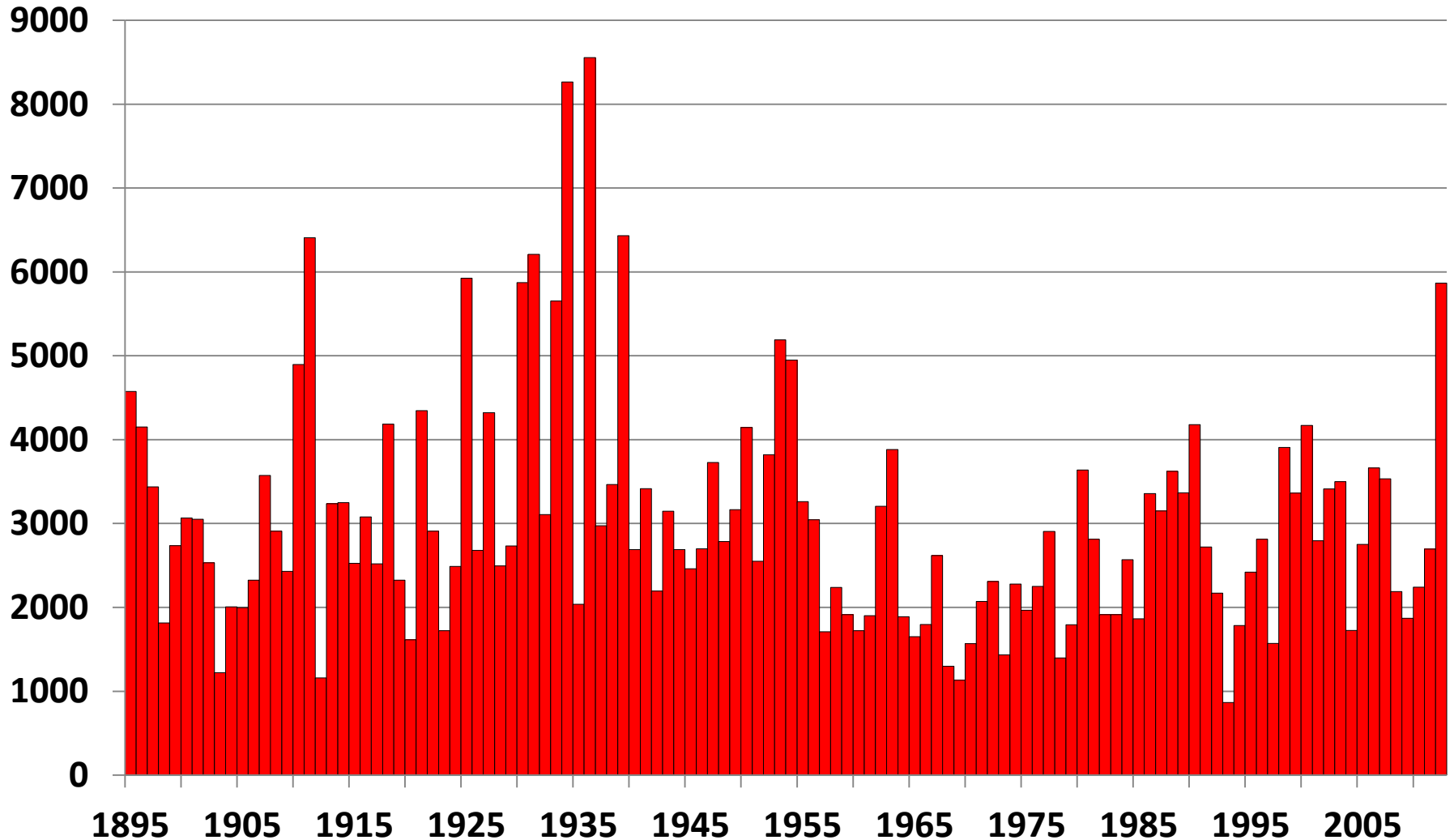
U.S. Percent Area Wet or Dry
Jan 1900 to Jul 2012



Based on the
Palmer Drought Index

- Moderate - Extreme Drought
- Moderate - Extreme Wet

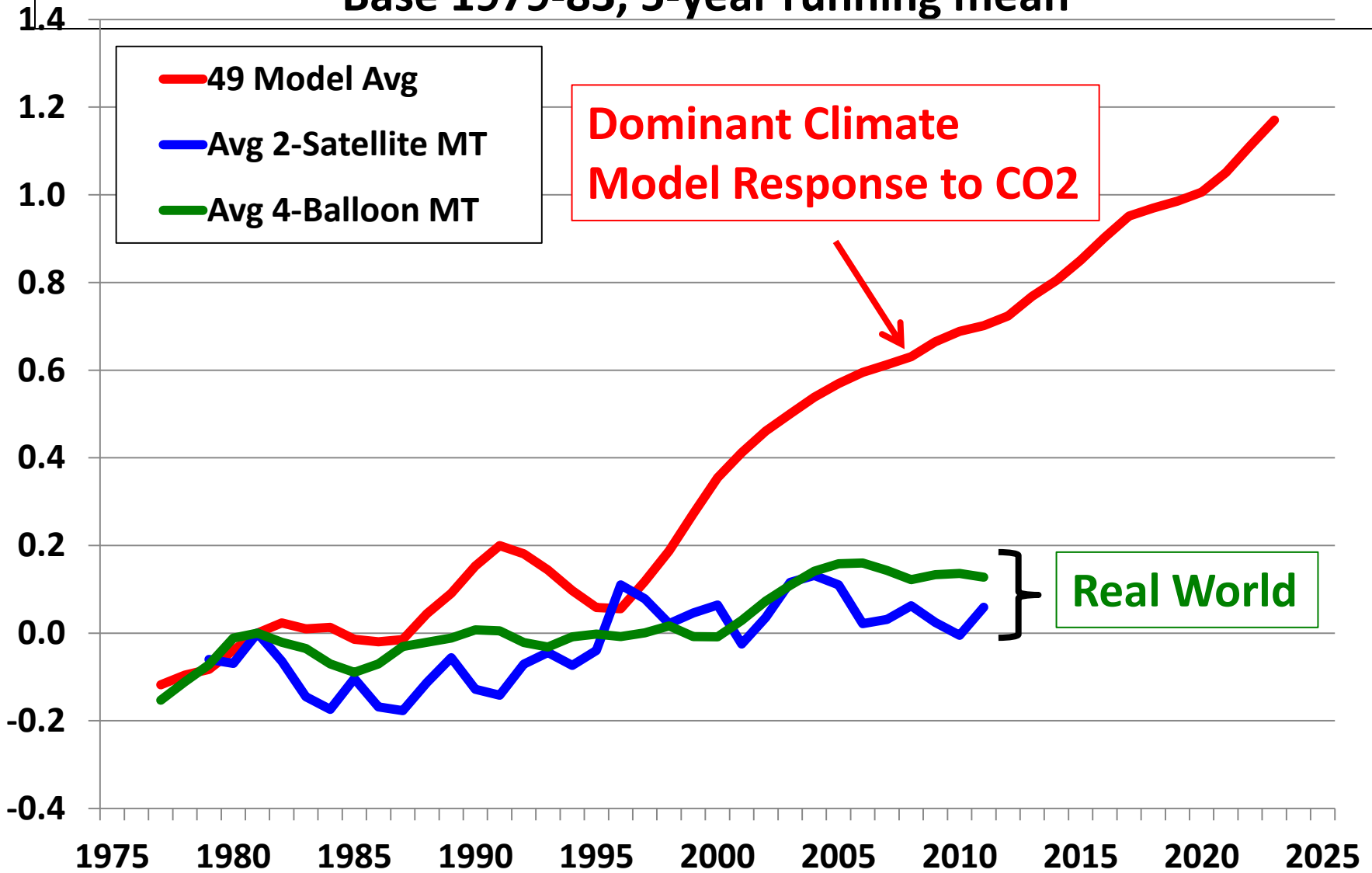
Number of Daily High Temperature Records by Year
974 USHCN stations with > 80 years data
1895-2012 (Records standing as of 31 Dec 2012)



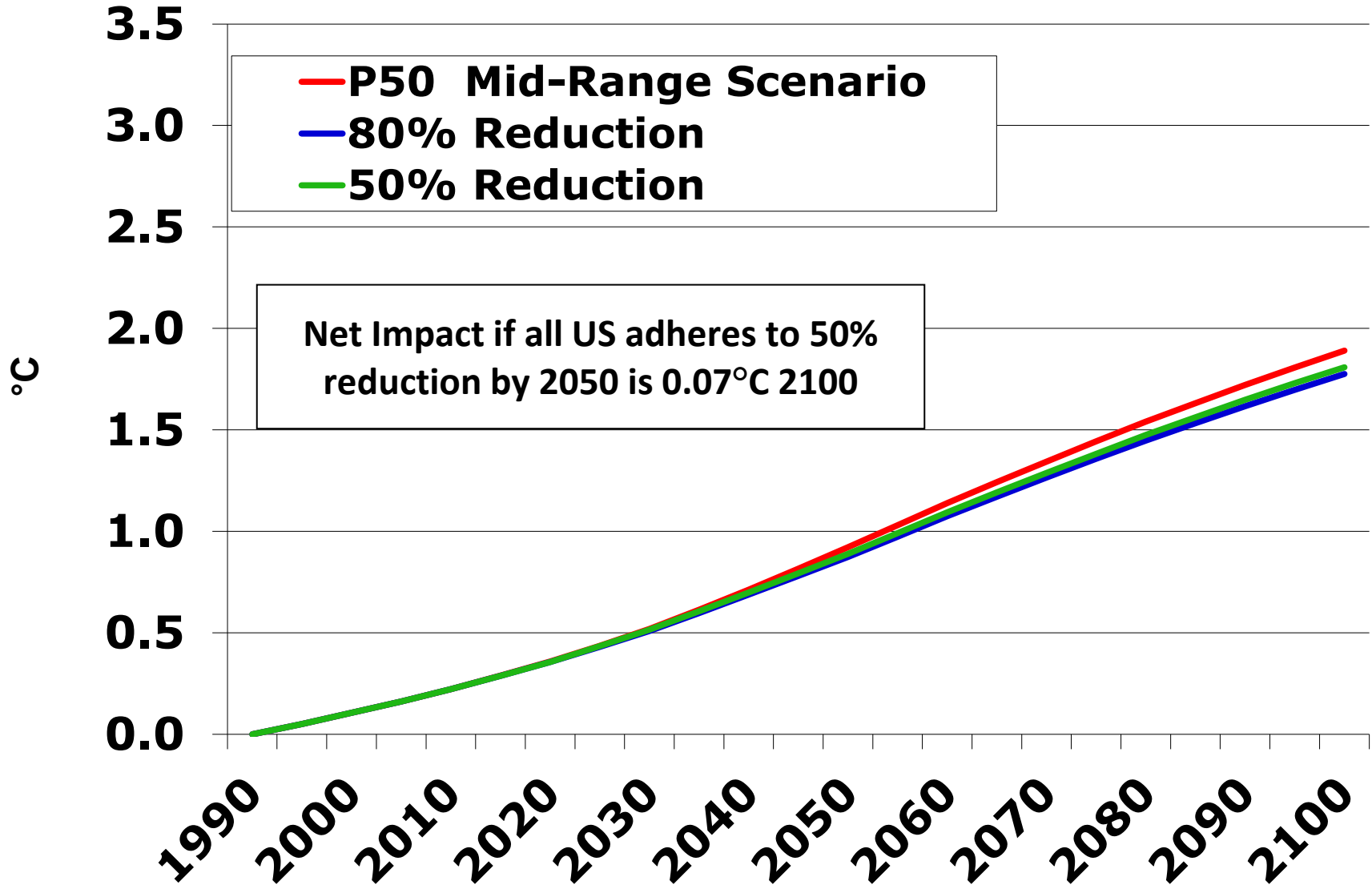
Tropics: IPCC CMIP-5 Models vs. Observations

Mid-Tropospheric Temperature

Base 1979-83, 5-year running mean



Scenario: 50% and 80% reduction in US CO2 emissions by 2050 Climate Sensitivity of 1.5° C (Similar to Waxman-Markey)



Law of Sustainability

**If it's not economically
sustainable,
it's not sustainable.**

Affordable Energy

**Electrification
Transportation
Industry**

Carbon 87%
(coal, natural gas, oil)

Nuclear 9%
Hydroelectric power 3%

CO2: Non-toxic
Invigorates Biosphere
Increases food production
Climate?????

Present Energy Enables:

Long life (near double life expectancy)
Good health/Medical advances
Technological Progress
Affordable Services
Freedom of mobility
Abundant and affordable food
Natural landscapes (vs. deforestation)
Clean Water/Air