

Powers of 10 - History of the Climate

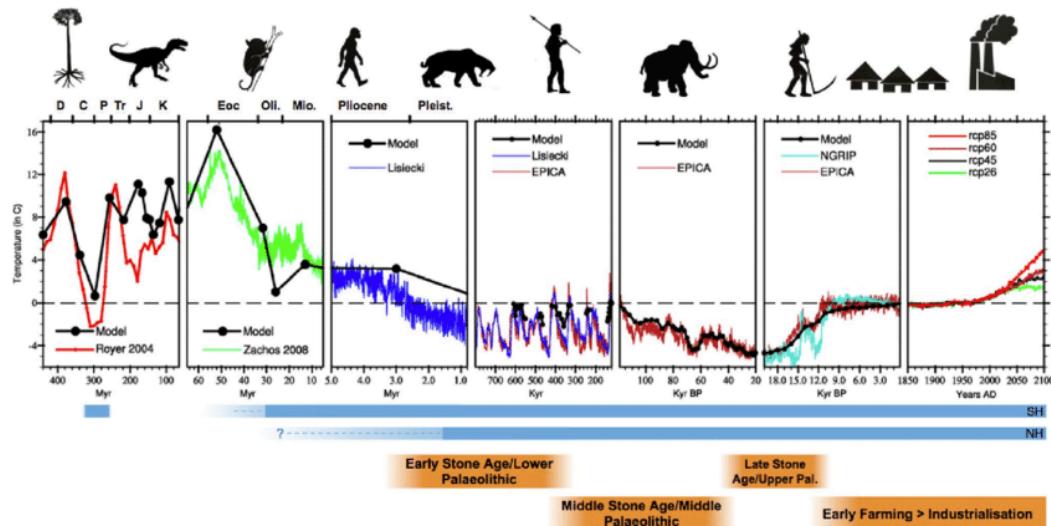
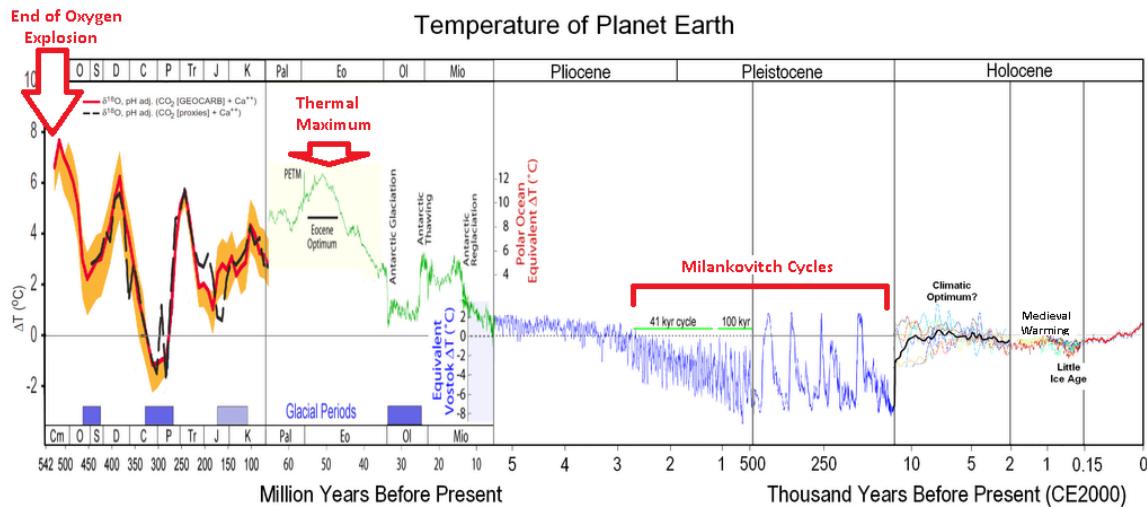
Principle Sources and Resources for this Study

Climate Powers of Ten History of Climate from FIU 2023

Others of Interest

In our early studies of the Big Picture, graphics like these two helped to put things into perspective. In particular, you might look back at:

- ▀ CSSG-2.2 Paleo Part 1 - the last 800,000 years
- ▀ CSSG-2.3 Paleo Part 2 - the first 4.6 Billion years less 50 million years
- ▀ CSSG-2.4 Paleo Part 3 - the latest 50 million years - the Big Cooldown



Another way to get the Big Picture

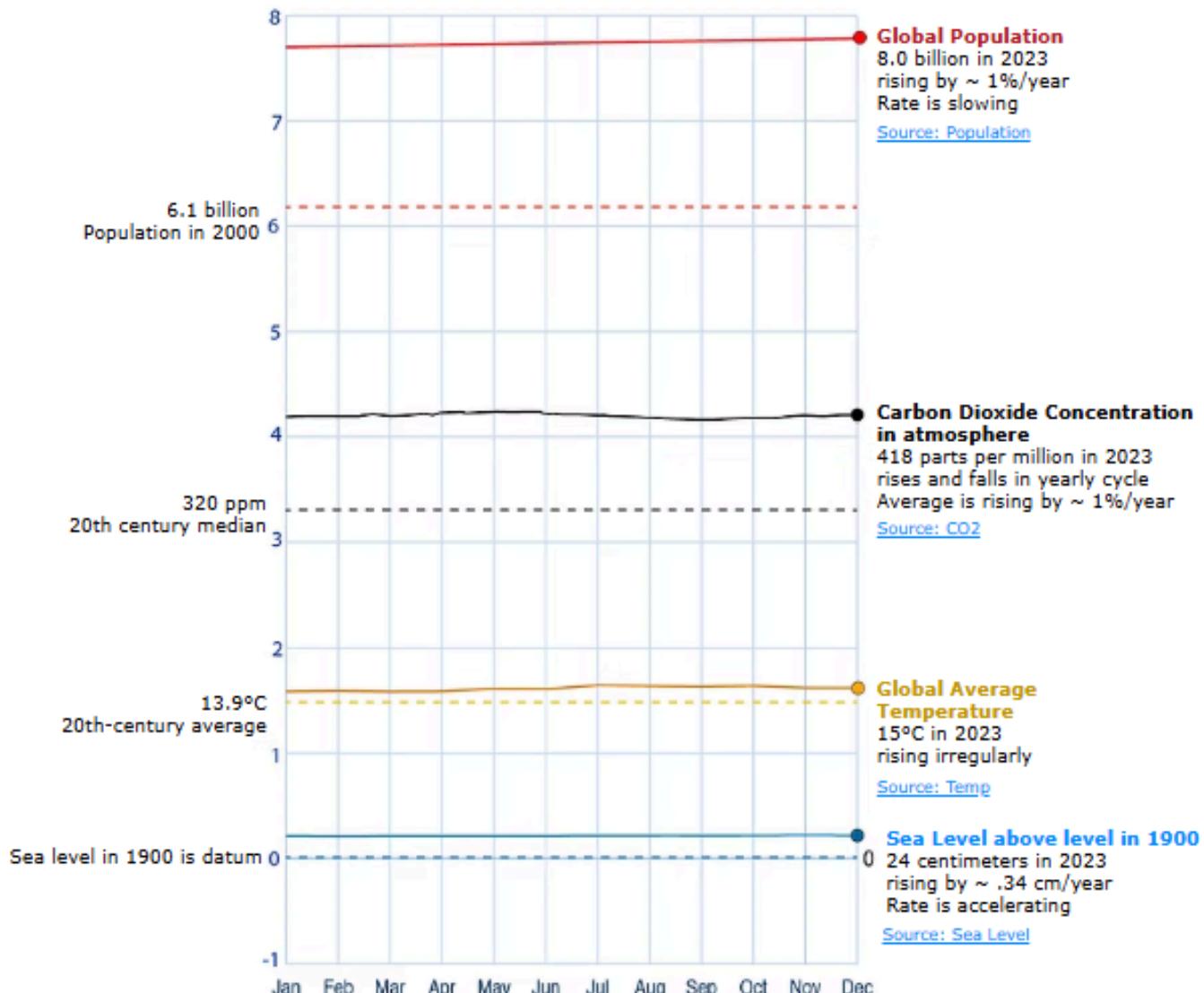
Florida International University published in 2023 a neat “Powers of Ten” presentation of the Climate History. It ranges from 1 Billion Years ago to Last Year and to 1000 years into the future. I’ll show only the time graphs, but this is a great resource! Much more is to be found in the Reference:

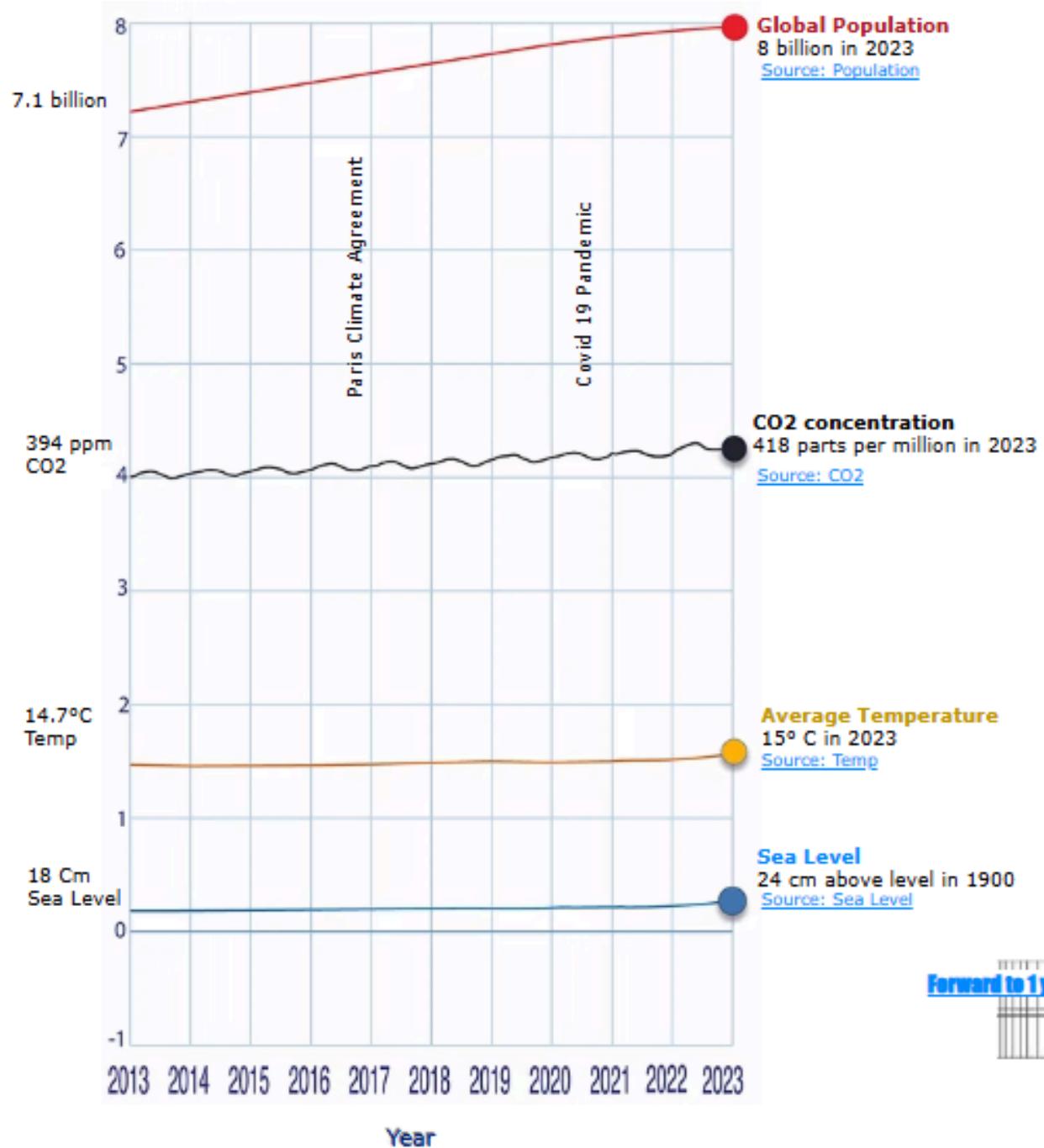
Climate “Powers of Ten History of Climate from FIU 2023”



1 year ago

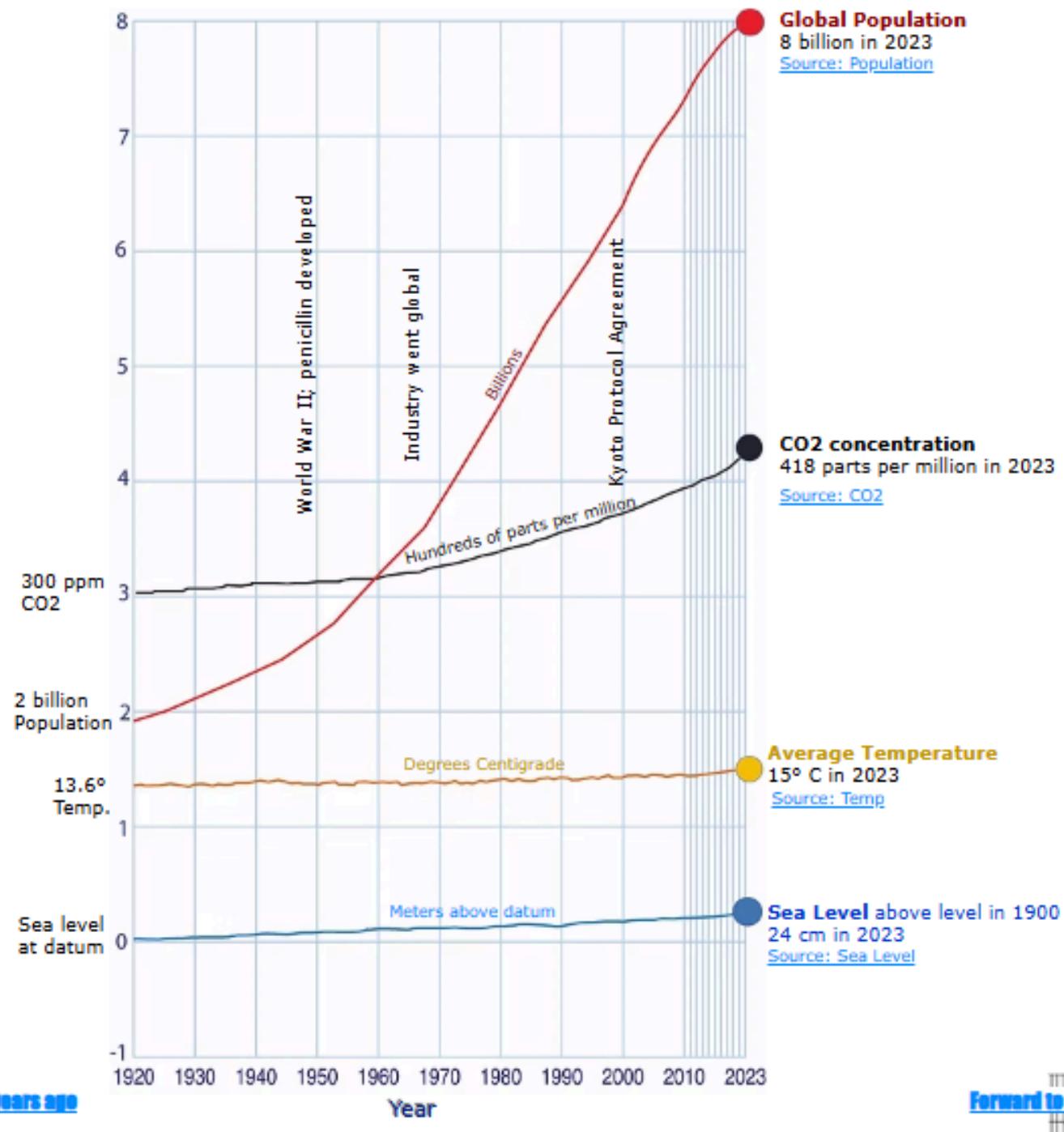
Measures over one year compared with recent benchmarks



*10 years ago***Measures**

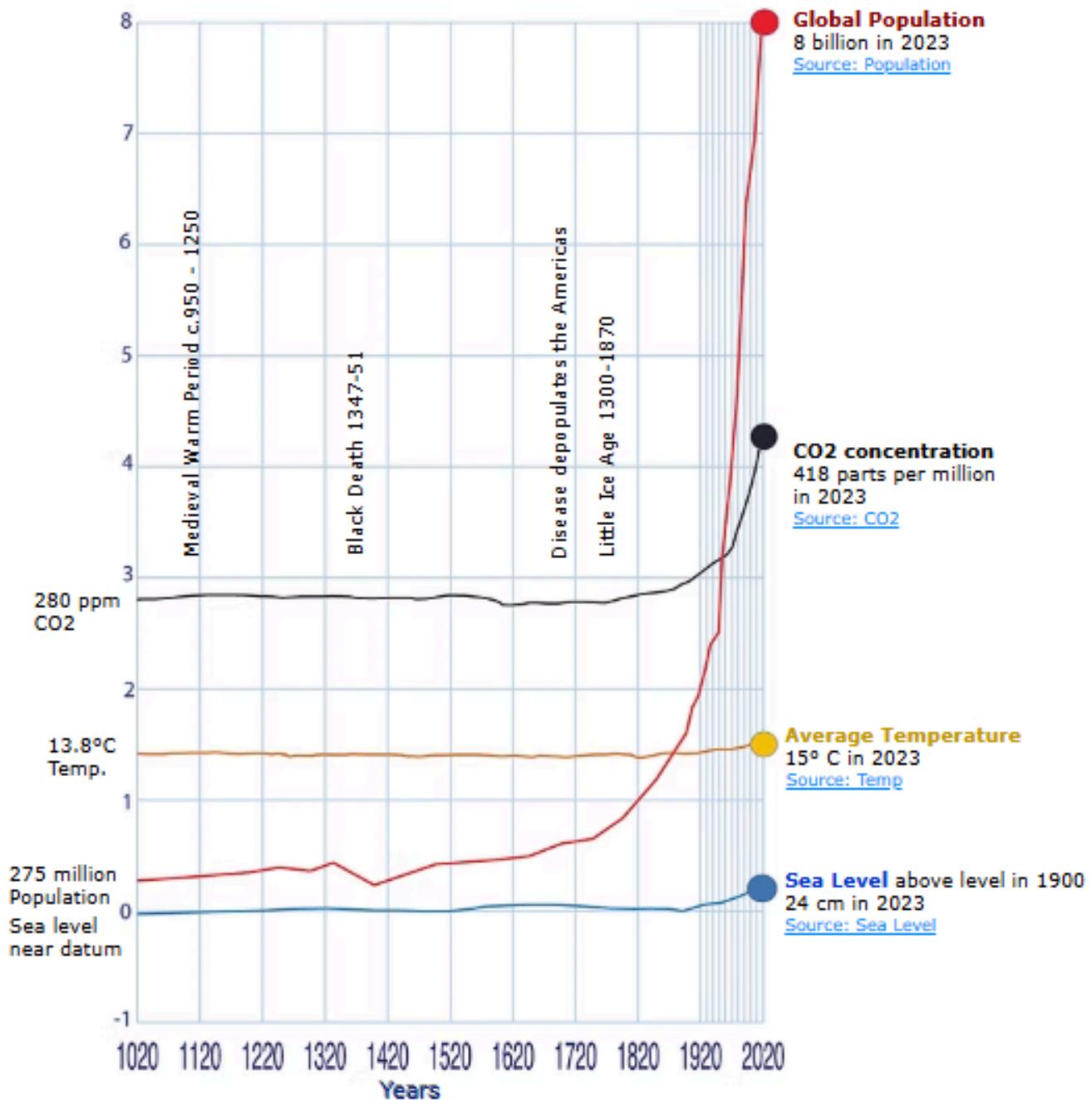
100 years ago

Measures



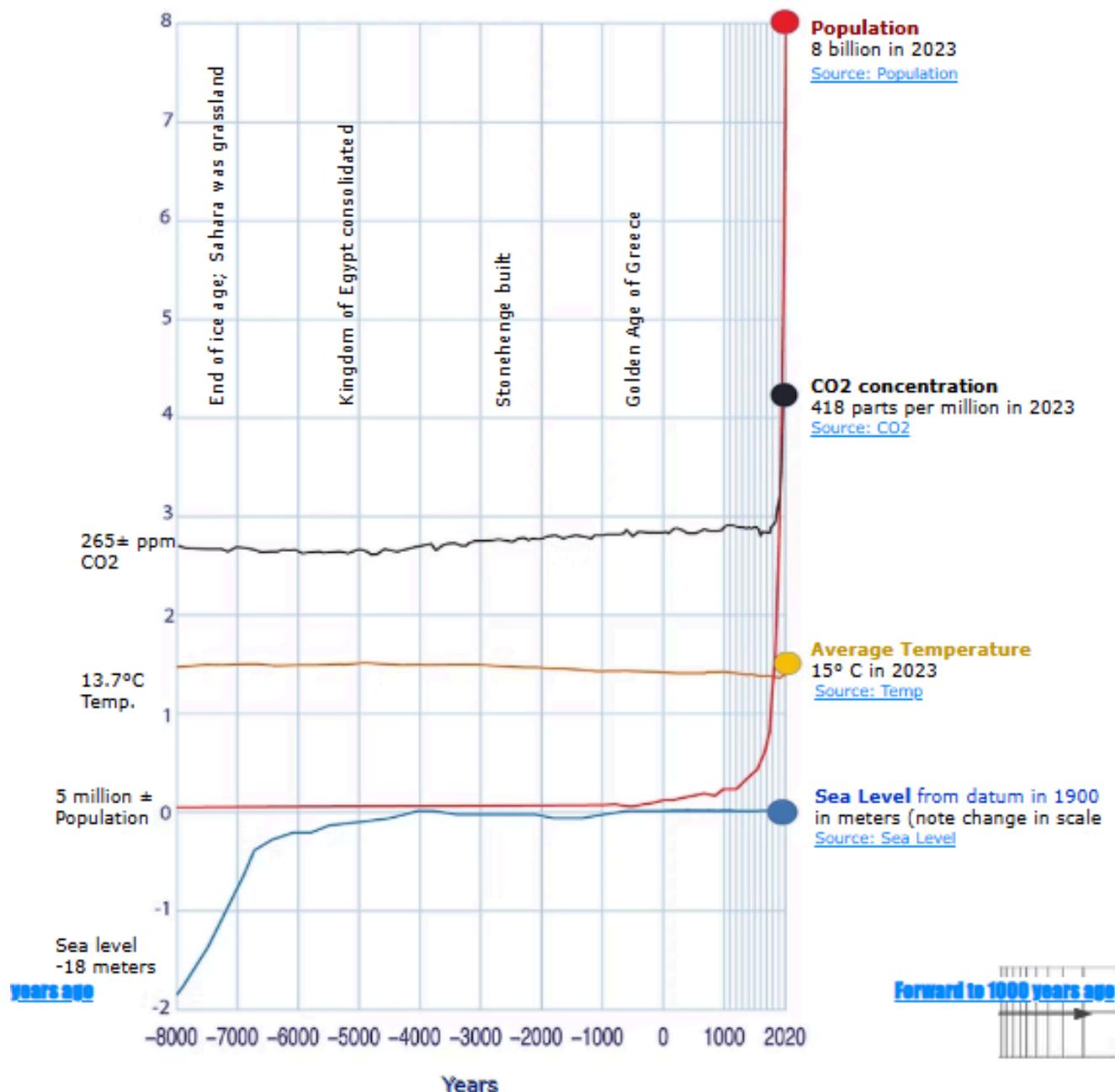
1000 years ago

Measures

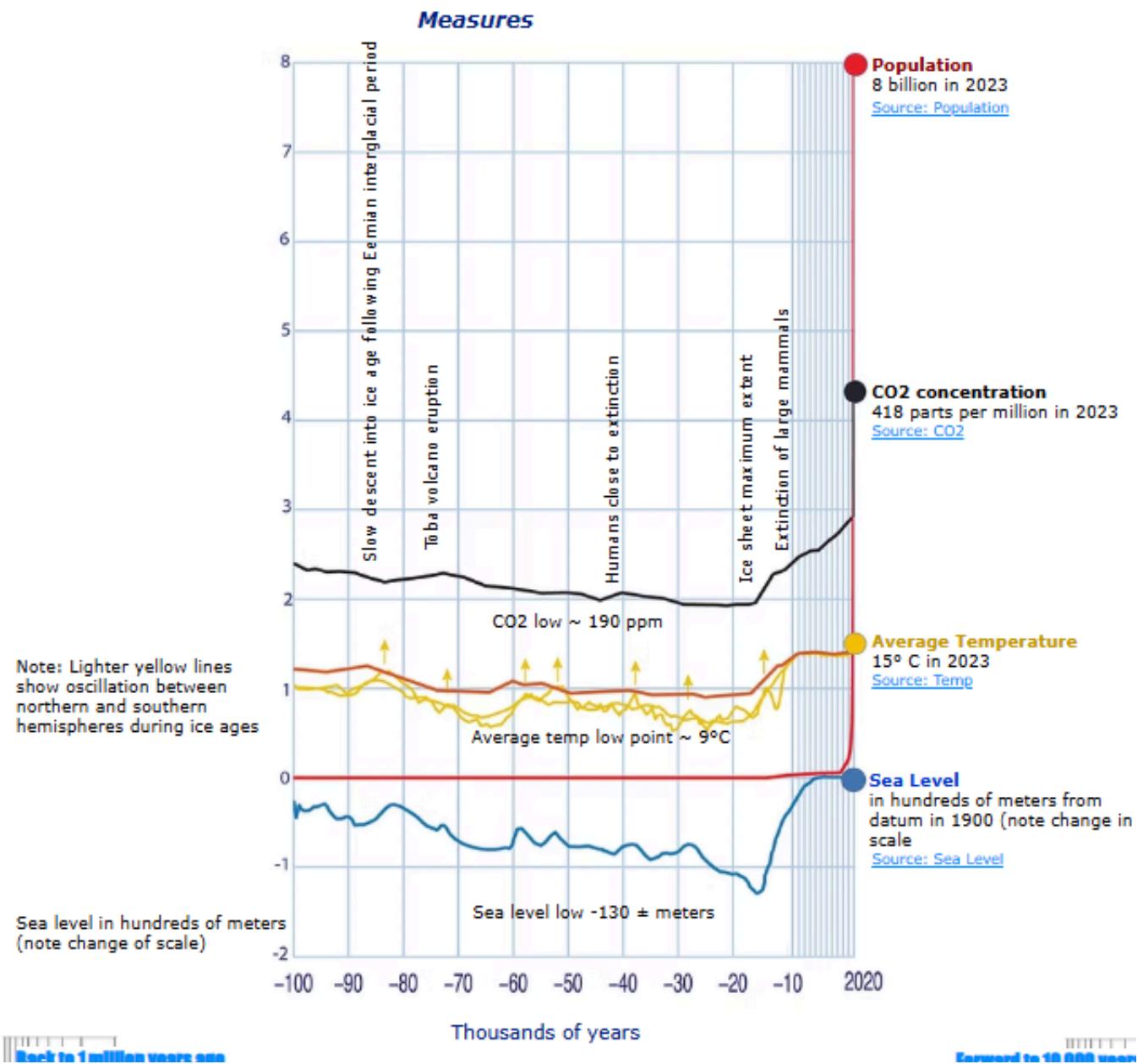


10,000 years ago

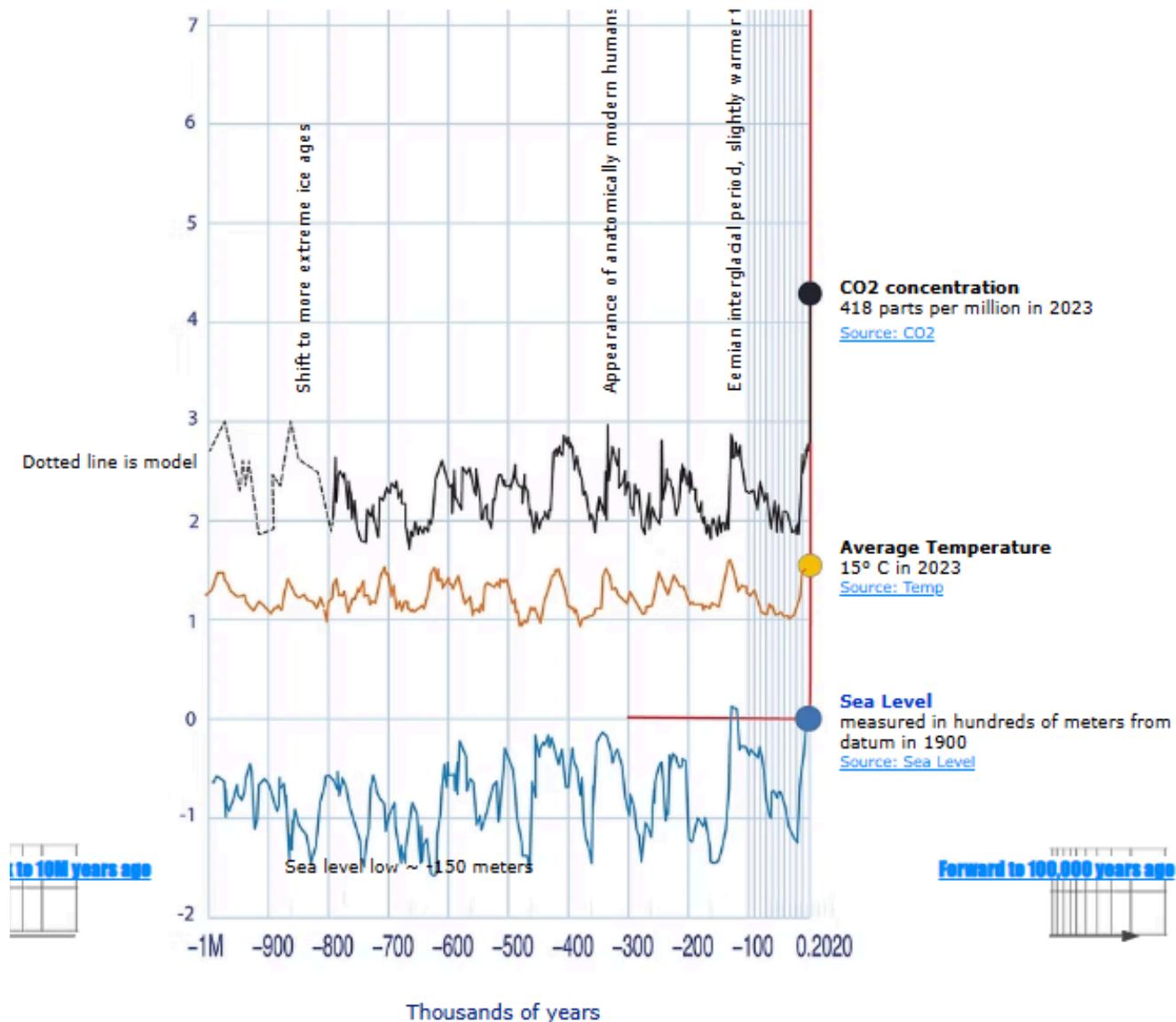
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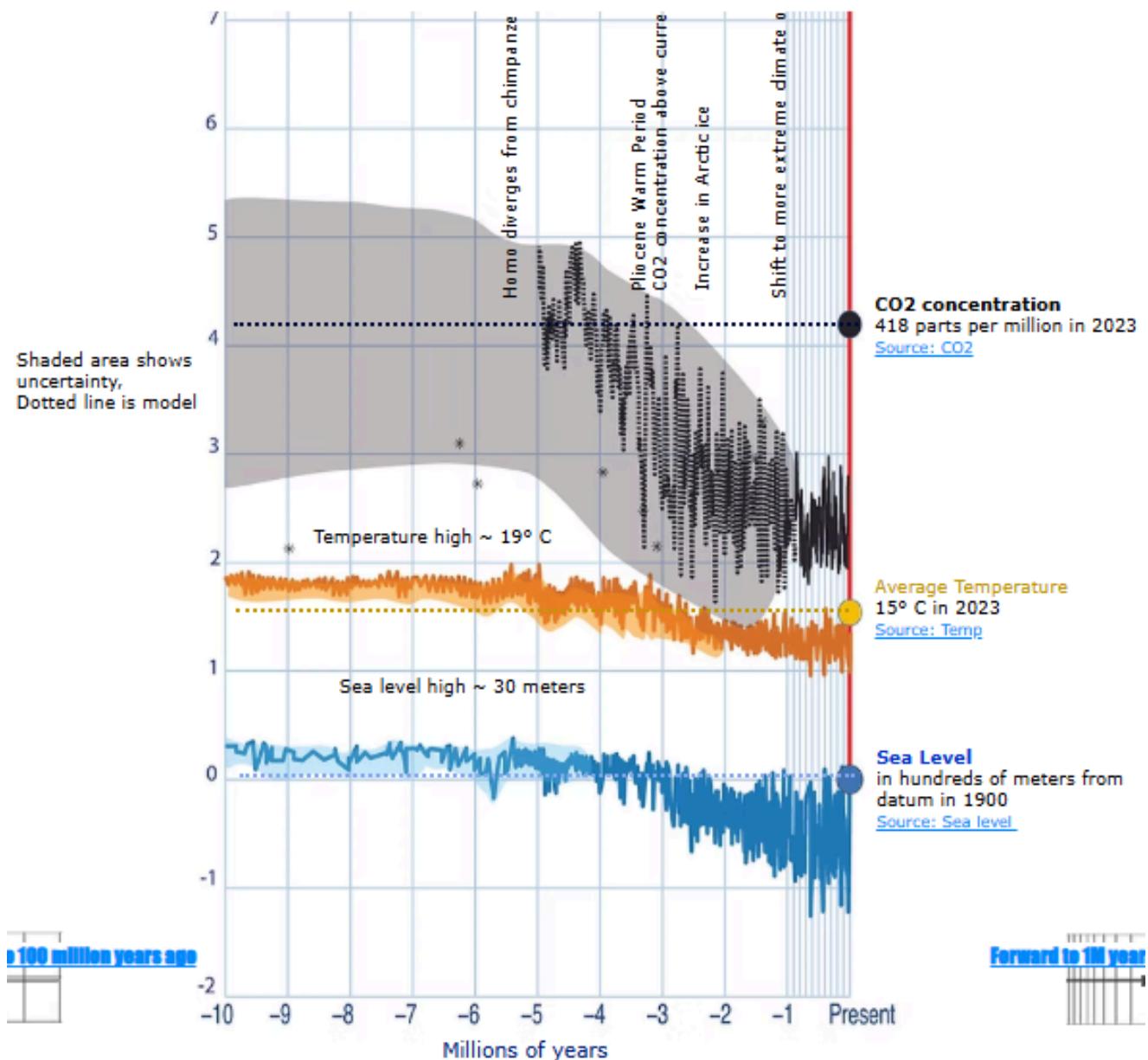


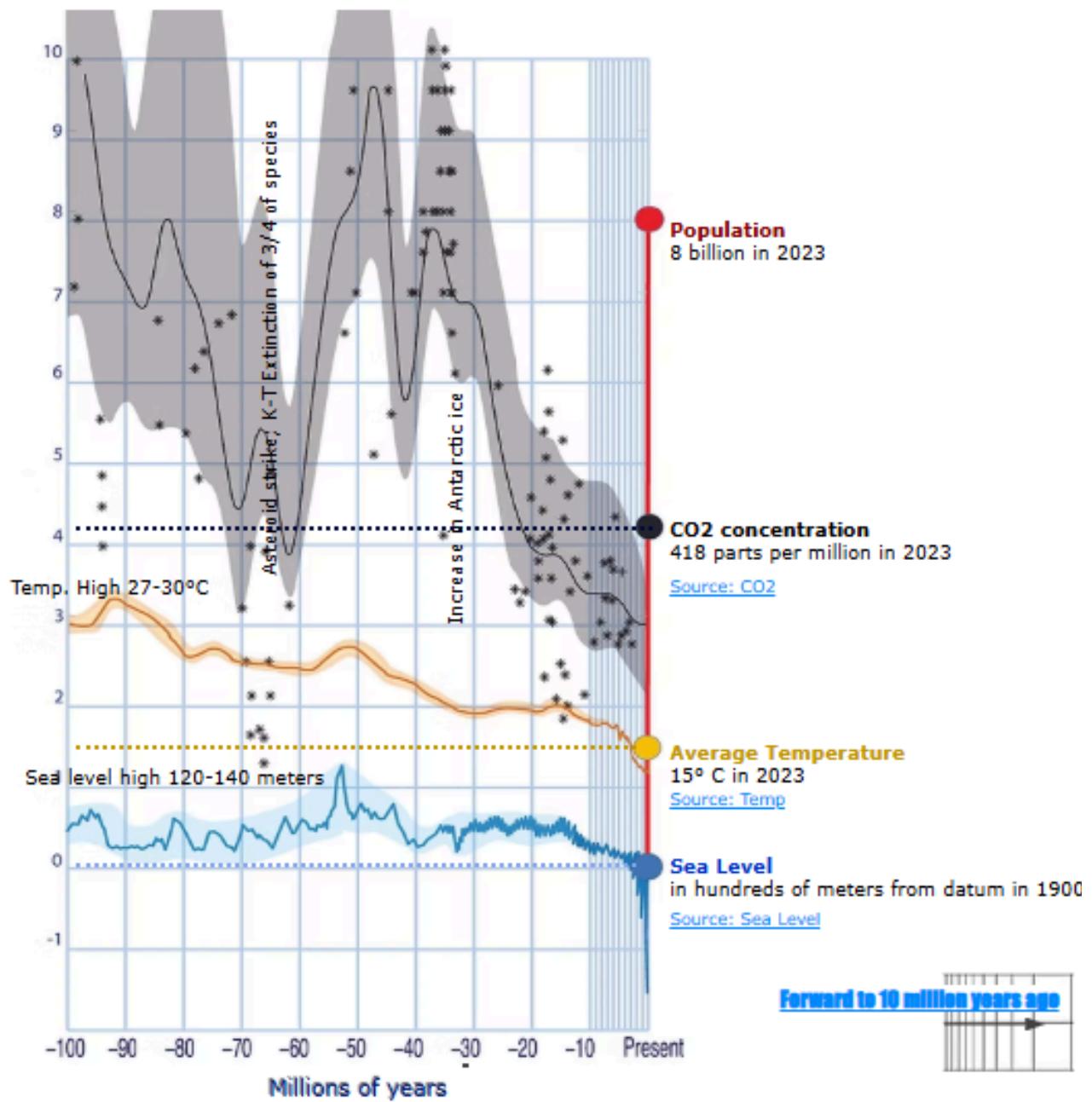
100,000 years ago



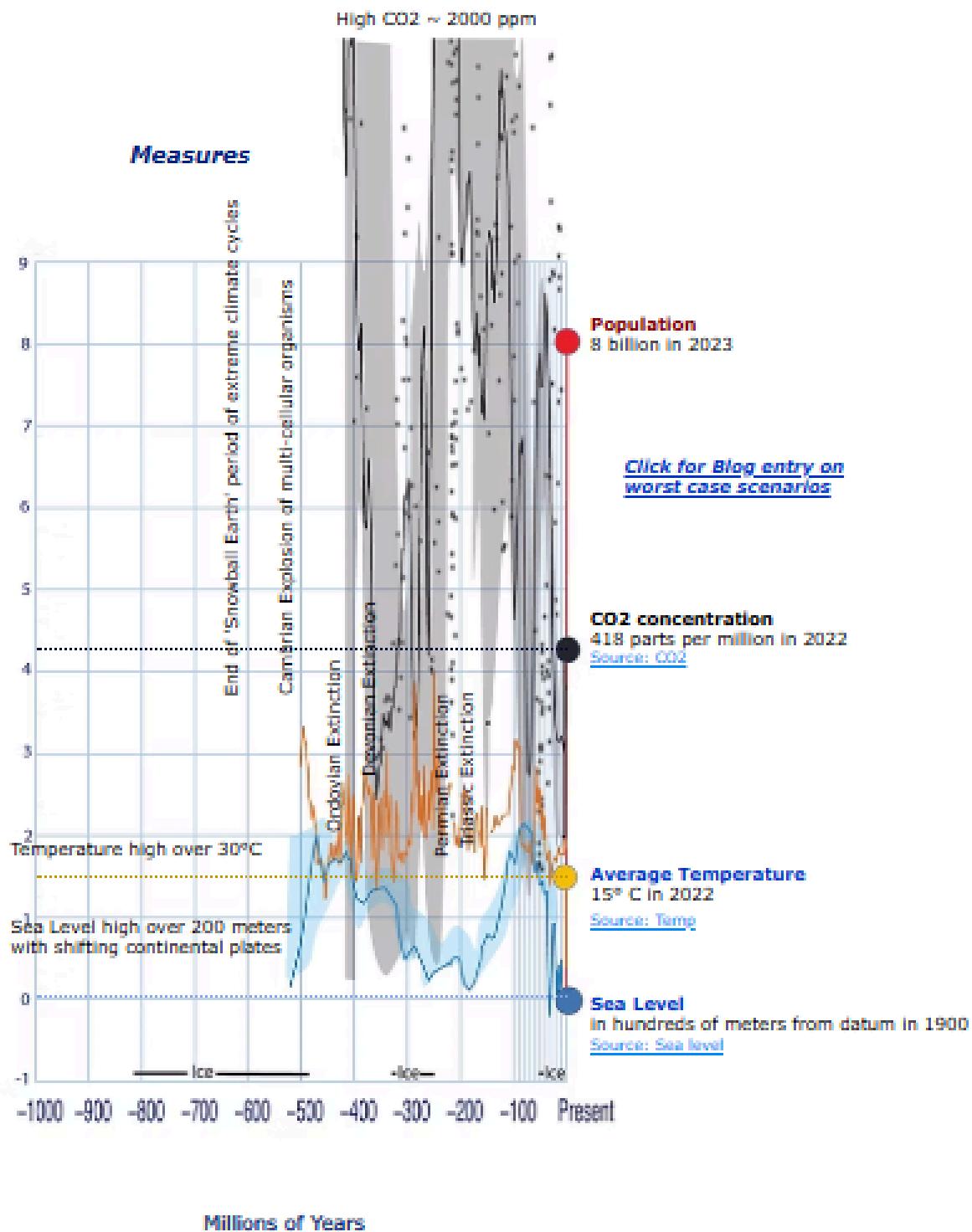
1 Million years ago



10 Million years ago

100 Million years ago

1 Billion years ago



PUNCHLINES

- When you look at just the last 1 or even 10 years, change is not so evident.
- Over the last 100 years , change is mind-boggling.
- Over 10,000 and 100,000 and 1,000,000 years, the big stories are temperature and sea level change.
- We're now at the highest temperature in 120,000 years, and the highest CO₂ level in 3 million years.