

ENV SCI 22

CLIMATE CHANGE WEEK 11



Climate Change

1

Anthropogenic climate change means

- a. Anthropologists are a problem
- b. Misanthropy is a solution
- c. Caused by humans
- d. Caused by changes in the Earth's orbit
- e. Humans are problem solvers

Climate Change

2

“Global Warming” means that ...

- a. Average temperatures rise at the surface
- b. Average temperatures rise in the deep ocean.
- c. Temperatures are hotter in the Sahara
- d. We will see “global cooling” next
- e. No more cold winters

Climate Change

3

Each degree Celsius is equal to

- a. 1° Fahrenheit
- b. 33° Fahrenheit
- c. 3° Kelvin
- d. 1.8° Fahrenheit
- e. None of the above

Climate Change

4

A greenhouse gas is...

- a. A gas found in a greenhouse
- b. A gas emitted by flatulence
- c. An atmospheric gas that traps infrared radiation
- d. A fuel for running your car
- e. Found in the deep ocean.

Climate Change

5

The Earth has had a stable atmosphere for 3.6 billion years.

True or False?



Climate Change

6

James Hansen is the NASA scientist who

- a. Studied Mars
- b. Scared little children
- c. Doubted the worries about global warming
- d. Worked for the Koch Bros.
- e. Warned about accelerated global warming

Climate Change

7

Which gas is produced by microbes decomposing matter in landfills and as a metabolic byproduct of livestock:

- a) carbon dioxide
- b) nitrous oxide
- c) water vapor
- d) methane
- e) none of the above.

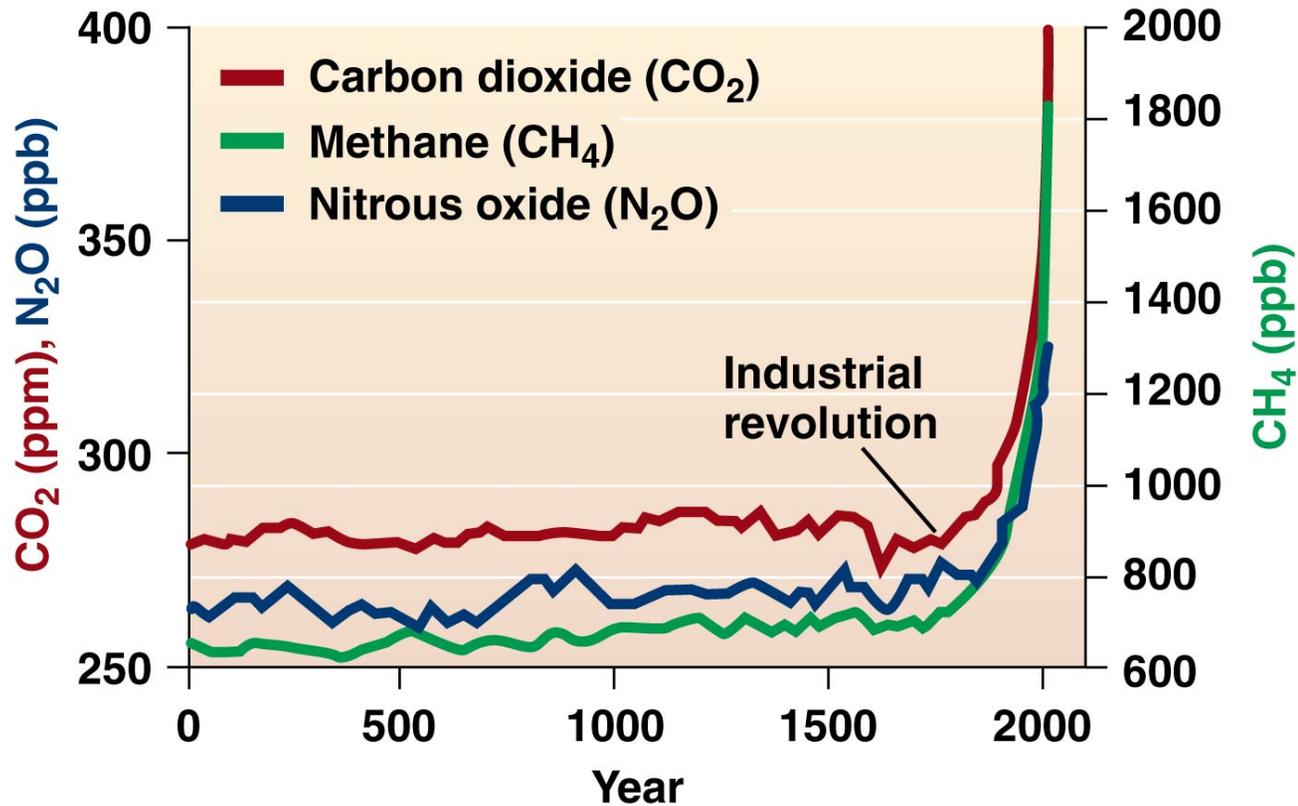
Climate Change

8

There is nothing we can do about global warming
True or False?

Climate Change

9



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Methane gas concentrations in the atmosphere are measured in parts per million. **True or False?**

Climate Change

10

Of the following greenhouse gases,
 concentrations have increased
the most since 1750.

- A) methane
- B) carbon dioxide
- C) nitrous oxide
- D) ozone
- E) water vapor

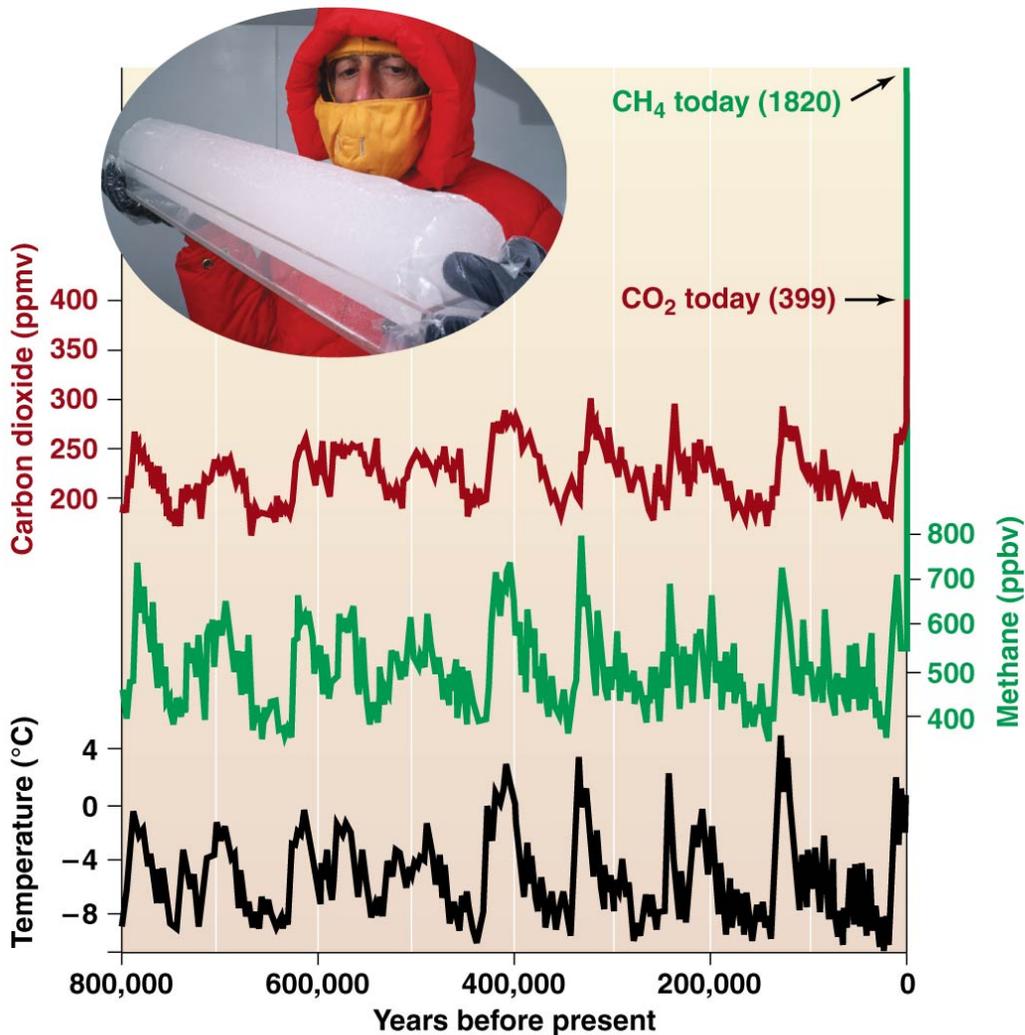
11

Keeling's reports from Mauna Loa demonstrated _____.

- A) the presence of El Niño
- B) that sediments deposited on the seafloor can yield clues about past climates
- C) that as distances from cities decreased, CO₂ concentrations increased
- D) that CO₂ levels have been stable over the last 40 years
- E) an increase in tropospheric CO₂ from the 1950s to present

12. The most recent analyses of polar ice cores have given us the ability to profile global climate change back as far as _____ years.

- A) 50,000
- B) B) 100,000
- C) 1000
- D) 800,000
- E) 300,000,000



13

In the wake of the U.S. failure to ratify the Kyoto Protocol, cities and states are setting their own programs for reducing greenhouse gas emissions. **True or False?**



14.

Recent evidence from polar ice core analysis shows that, until now, carbon dioxide levels have never exceeded _____ ppm in the last several hundred thousand years.

- A) 500
- B) 1000
- C) 300
- D) 25
- E) 200



15.

Tuvalu and the Maldives are in the international spotlight because they _____.

A) may be the first nations to be completely flooded by rising sea levels

B) are accepting climate change refugees from other nations

C) have exceeded the emissions reductions set by the Kyoto Protocol

D) are the largest emissions producers in their respective areas

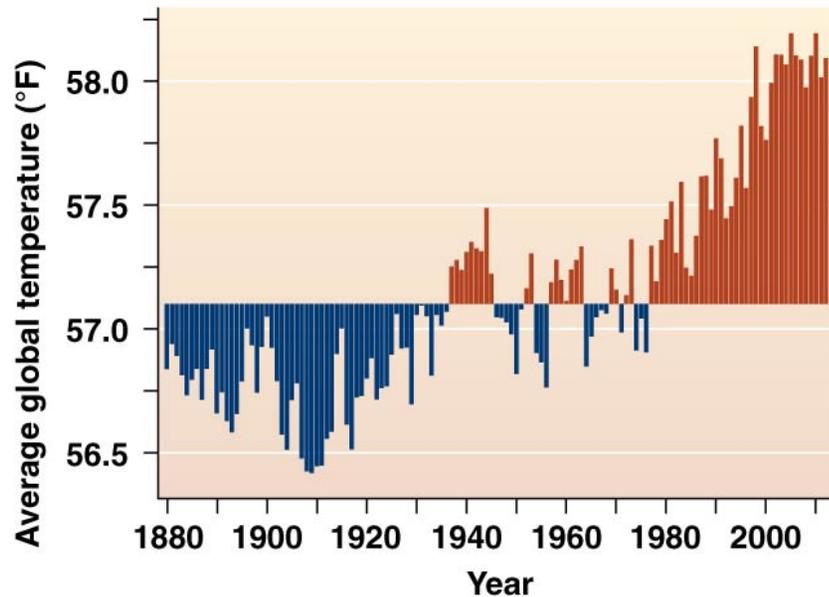
E) opposed China's proposals for global carbon neutrality at the Copenhagen Conference in 2009



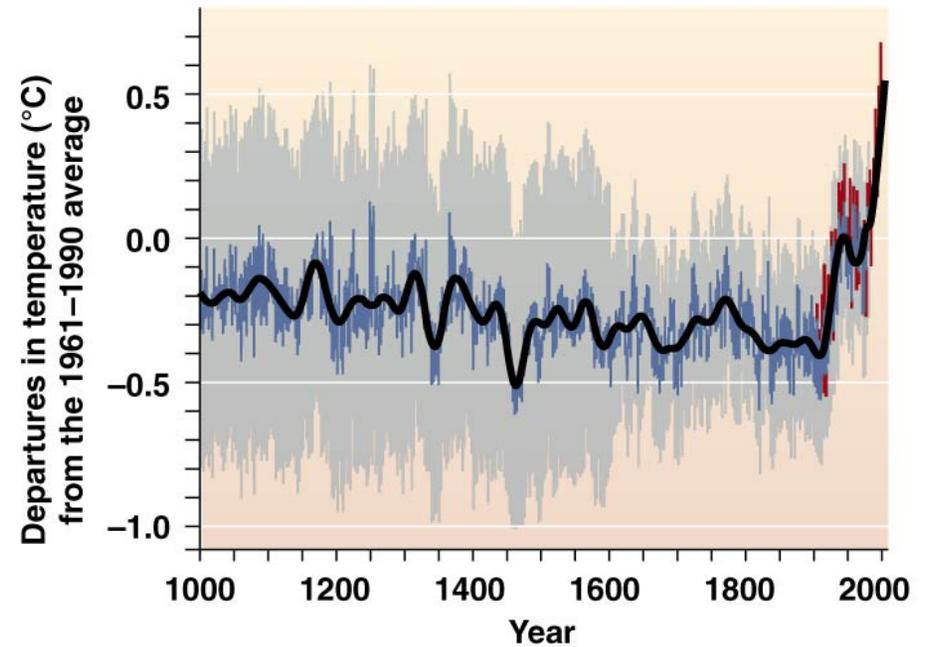
(a) Malé, capital of the Maldives

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16.



(a) Global temperature measured since 1880



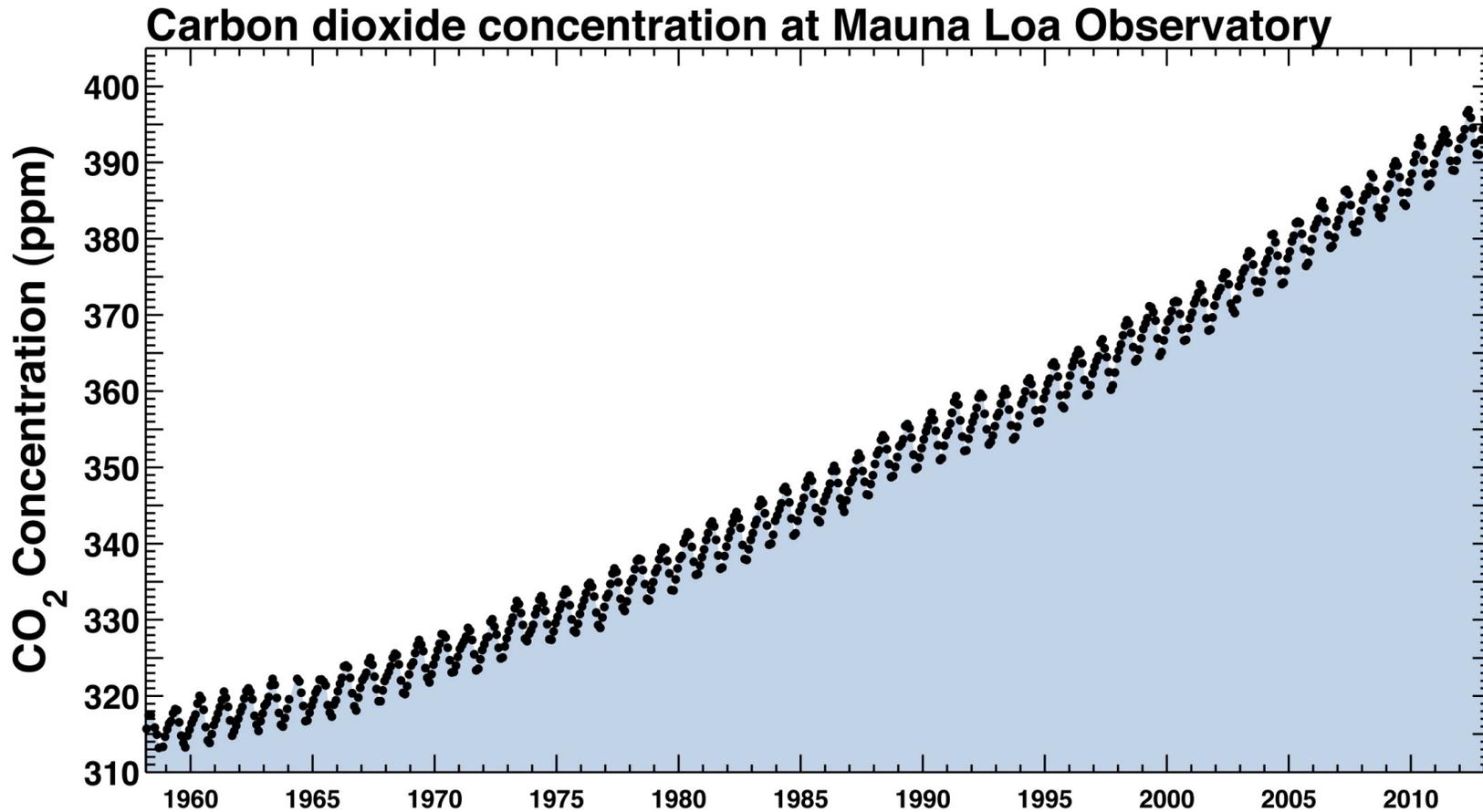
(b) Northern Hemisphere temperature over the past 1000 years

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The two slides above show that the earth is not getting warmer, it simply used to be cooler. Now it's back to normal.

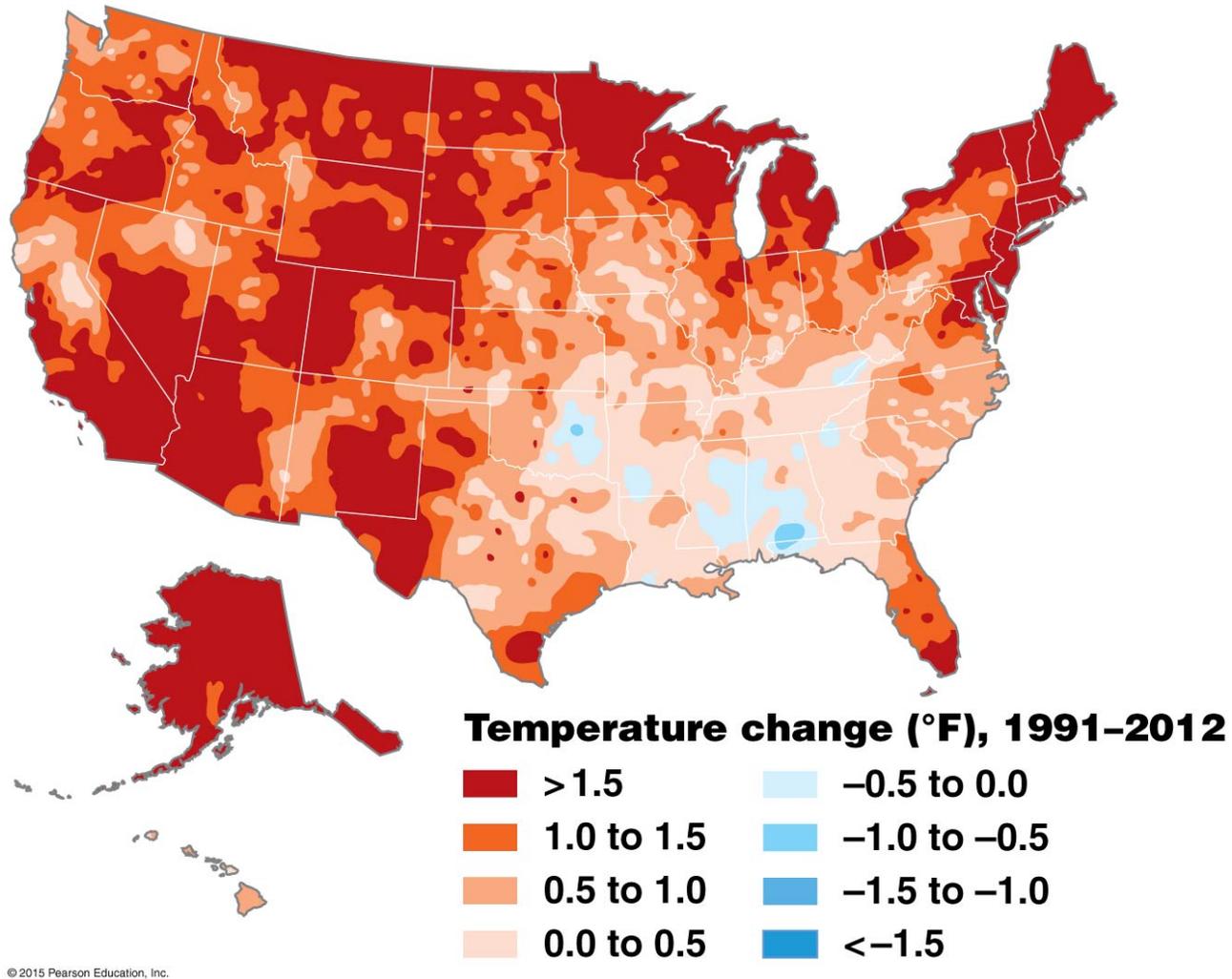
True or False?

17.



The “Keeling curve” represents CO₂ concentrations between 1959 and the present. We will never reach 400ppm
True or False?

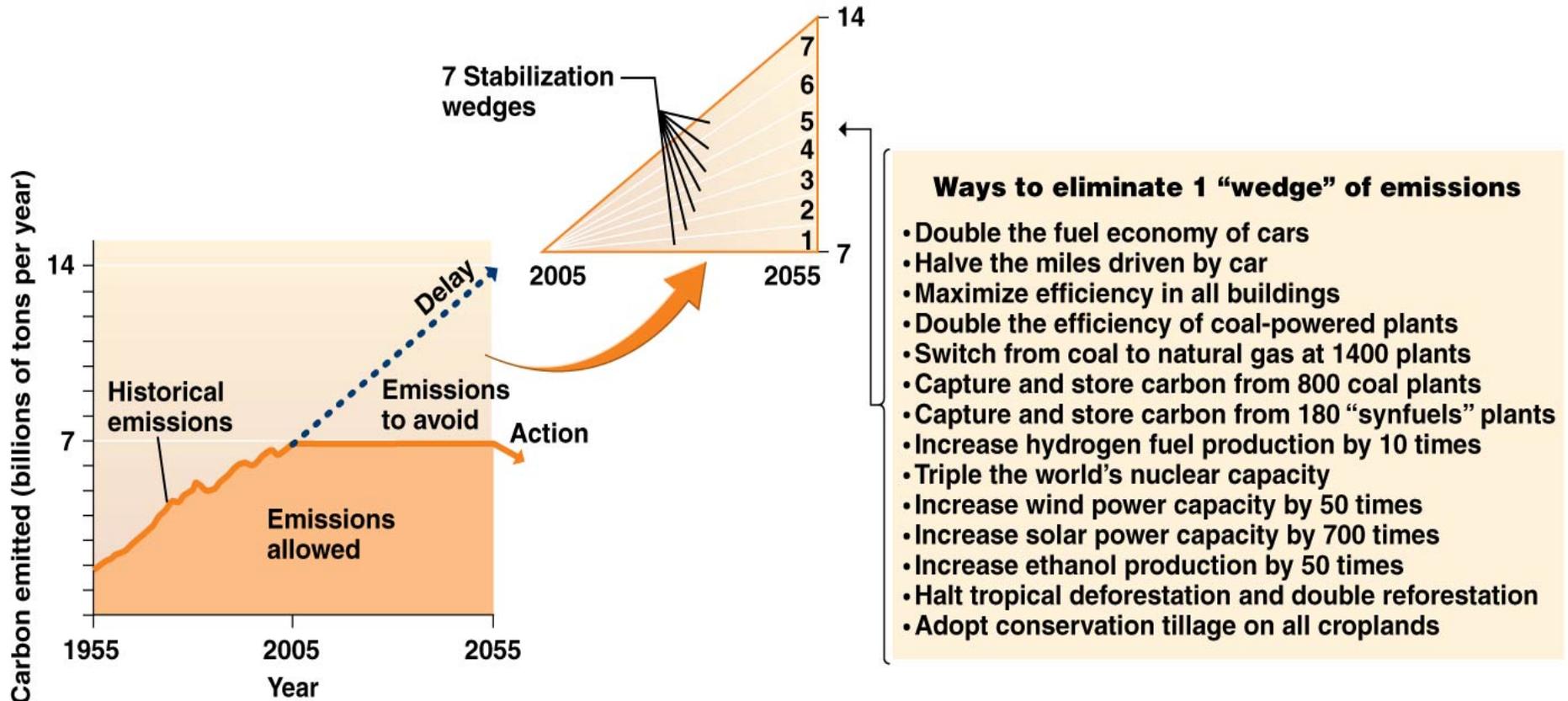
18.



This slide explains why people in Dixie are skeptical that global warming is real.

True or False?

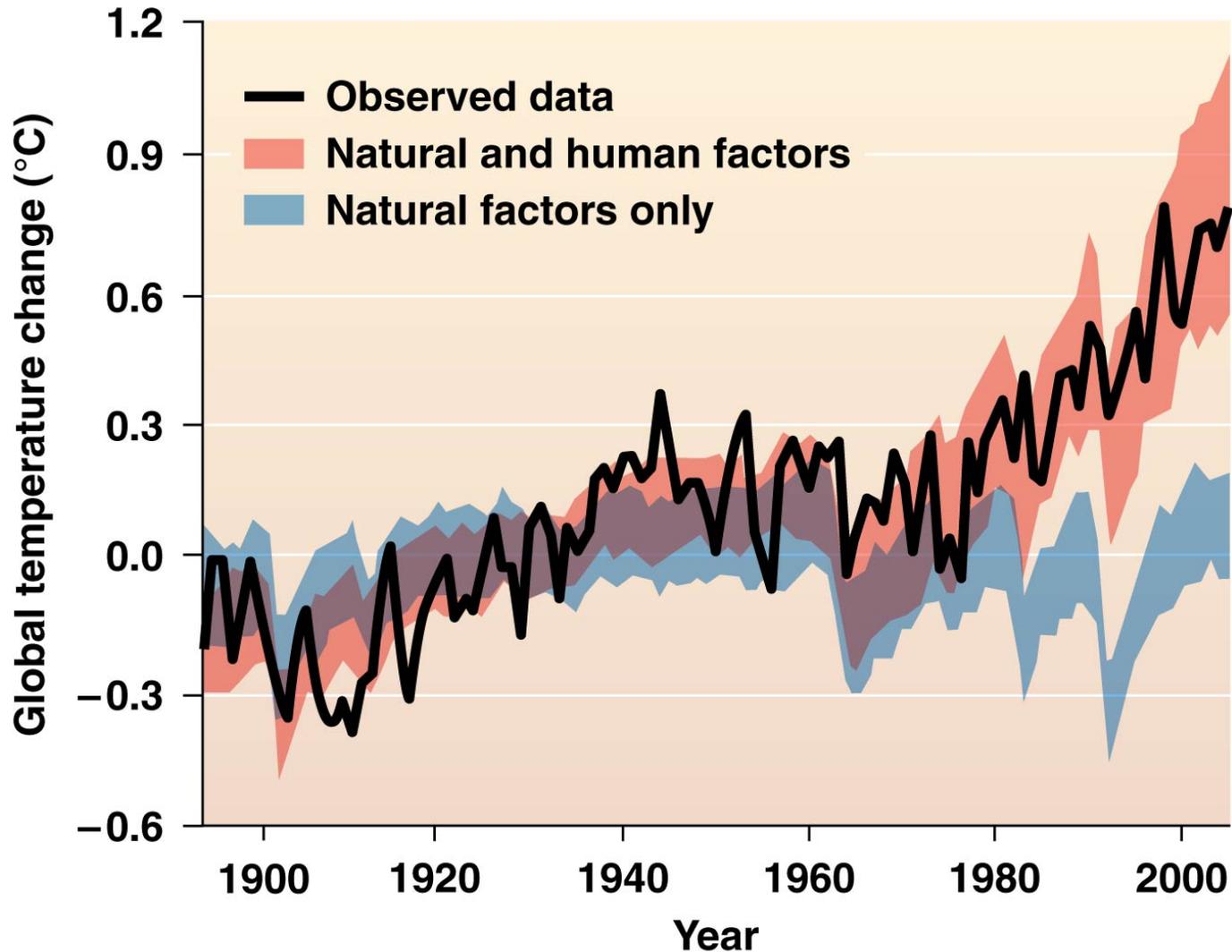
19.



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This graph shows that policy objectives addressing each “wedge” of warming causes can bring C output to 7 billion tons per year. **True or False?**

20.



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This graph shows that global warming would be happening without human presence.

True or False?



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