

Historical Milestones in Climate Change Science and Policy

Climate Change · Answer Key · 15 Questions

1. What was the first significant international agreement to address climate change, signed in 1992?

- A) The Kyoto Protocol
- B) The Paris Agreement
- C) The United Nations Framework Convention on Climate Change (UNFCCC)**
- D) The Montreal Protocol

2. Which scientific body, established in 1988, provides policymakers with regular scientific assessments on climate change?

- A) The International Panel on Climate Science (IPCS)
- B) The Intergovernmental Panel on Climate Change (IPCC)**
- C) The World Meteorological Organization (WMO)
- D) The Global Climate Research Programme (GCRP)

3. Svante Arrhenius, in 1896, published a paper calculating the expected temperature increase due to a doubling of atmospheric carbon dioxide. What was the primary focus of his concern regarding this phenomenon?

- A) Increased frequency of extreme heatwaves
- B) Potential for a new ice age due to atmospheric cooling
- C) Widespread flooding from melting glaciers
- D) The possibility of a warmer climate leading to agricultural benefits**

4. The 'Year Without a Summer' in 1816 is often attributed to a massive volcanic eruption. Which volcano is most widely believed to be responsible?

- A) Mount Vesuvius
- B) Mount Tambora**
- C) Krakatoa
- D) Mount St. Helens

5. What significant event in 1958, led by Charles David Keeling, began a continuous measurement of atmospheric CO₂ concentrations at Mauna Loa Observatory?

- A) The launch of the first weather satellite
- B) The establishment of the Global Carbon Project
- C) The Keeling Curve project**
- D) The International Geophysical Year

6. The Kyoto Protocol, adopted in 1997, committed industrialized countries to reducing greenhouse gas emissions. Which of these countries did NOT ratify the Kyoto Protocol?

- A) Canada**
- B) Germany
- C) Japan
- D) Australia

7. In what year did the United States formally withdraw from the Paris Agreement, only to rejoin later?

- A) 2017
- B) 2019
- C) 2020**
- D) 2021

8. The concept of the 'greenhouse effect' was first described by Joseph Fourier in 1824. What did he hypothesize was responsible for warming the Earth?

- A) The reflection of sunlight by clouds
- B) The absorption and re-emission of infrared radiation by atmospheric gases**
- C) The Earth's internal geothermal heat
- D) The presence of ozone in the upper atmosphere

9. What was the primary environmental concern driving the negotiation of the Montreal Protocol in 1987, which has a significant indirect link to climate change?

- A) Acid rain
- B) Ozone depletion**
- C) Deforestation
- D) Ocean acidification

10. The first major international conference explicitly focused on climate change, the World Climate Conference, took place in 1979. What was a key outcome of this conference?

- A) The establishment of the IPCC
- B) The signing of the Paris Agreement
- C) The declaration of climate change as a global crisis
- D) Recommendations for systematic observation of climate and climate change**

11. Which major scientific study, published in 1970, provided early evidence of anthropogenic warming and linked it to industrial CO2 emissions?

- A) The Manabe and Wetherald 1D radiative-convective climate model**
- B) The NAS Report on Global Warming
- C) The Hansen et al. 1988 NASA study
- D) The Charney Report on CO2 and Climate

12. The Copenhagen Summit in 2009, intended to be a successor to the Kyoto Protocol, resulted in a significant political agreement but lacked legally binding targets. What was this agreement commonly known as?

A) The Copenhagen Accord

B) The Copenhagen Declaration

C) The Copenhagen Mandate

D) The Copenhagen Protocol

13. The melting of the Larsen B ice shelf in Antarctica in 2002 was a dramatic event. What scientific significance did its rapid disintegration hold for climate change research?

A) It proved that all ice shelves are unstable

B) It demonstrated the potential for rapid, cascading ice loss due to warming

C) It had no significant impact on sea level rise

D) It was primarily caused by seismic activity

14. In 1908, an event in Siberia caused widespread devastation and is now thought by many scientists to be a result of an extraterrestrial impact. What is this event commonly called?

A) The Tunguska Event

B) The Siberian Blast

C) The Baikal Impact

D) The Omsk Anomaly

15. The concept of 'climate forcing' became a key term in understanding climate change. Who is widely credited with developing the mathematical framework for calculating radiative forcing in the early 20th century?

A) Emil Wiechert

B) Nils Ekholm

C) Albert Einstein

D) Arthur Schuster