**CAUSE**

 While there is considerable disagreement about the causes of climate change, different parties are on either side of the debate. More than 99% of scientists, as well as the National Aeronautics and Space Administration (NASA), agree that climate change is primarily caused by human actions.[[1]](#footnote-1) Climate change seems to have begun in the 1830s during the industrial revolution, and accelerated since the mid-twentieth century. The pace of change largely tracks the pace of human release of greenhouse gasses like carbon dioxide from burning fossil fuels. This “greenhouse effect” occurs because carbon in the atmosphere traps and re-radiates heat.

 A motley crew of politicians, journalists, attorneys, and other professionals populate the other side of the climate debate. They include two vocal scientists, physicist Fred Singer and climatologist Roy Spencer. They draw attention to the potential of natural phenomena, such as volcanic eruptions, tectonic shifts, and fluctuations in solar radiation, to impact climate.[[2]](#footnote-2) They also call into question the accuracy of models and data that most scientists use to study climate change.

 Isolating the causes of climate change is critical because it determines what, if anything, can be done to reverse course. The present administration in the U.S. follows scientific consensus. For example, in April 2021, President Biden formalized a national goal to reduce emissions by 50-52% from 2005 levels by 2030 as a nationally determined contribution under the Paris Agreement.[[3]](#footnote-3)

What do you think? Is climate change primarily caused by humans?

*Scientific evidence has overwhelmingly shown that the extreme rates of climate change of the past 1-2 centuries, but especially the past 30 years, were caused by human activity.*

*“I don’t think humans have done anything wrong related to climate change.*

**ECONOMICS**

The story of climate change and human economic progress have run in parallel for nearly two-hundred years. Many of the advancements that propelled the world’s most advanced economies into the modern era are also responsible for the steep increase in greenhouse gas emissions. According to the Center for Global Development, developing countries presently account for 63% of annual emissions worldwide.[[4]](#footnote-4) That figure is expected to increase as energy demand in these countries increase alongside higher standards of living. As the United Nations Conference on Trade and Development has noted, developing countries “face severe challenges accessing climate finance,” so pollution-heavy sources of energy are often their only option.[[5]](#footnote-5)

Even developed countries often face a trade-off between economics and climate-mitigation measures. According to FEMA, “Agriculture [in the U.S.] generates approximately $190 billion in cash receipts a year, of which just over 50 percent are generated from livestock agriculture. ”[[6]](#footnote-6) Yet, according to a biochemistry professor at Stanford University: “If animal agriculture were phased out over 15 years, . . . [that] would create a 30-year pause in net greenhouse gas emissions and offset almost 70 percent of the heating effect of those emissions through the end of the century.”[[7]](#footnote-7)

What do you think? Should people sacrifice economic progress for the sake of slowing climate change?

*Yes, for a couple reasons. Climate change (and environmental degradation) are the single largest economic threat to us. Additionally, it’s important to consider our assumptions that growth is good for people at the time that it occurs, and, moreover, whether our discount rates are reasonable.*

*I think my opinion is that we should sacrifice some economic benefit for the effort of mitigating climate change. I think it should hurt but we shouldn’t ignore the millions lifted out of poverty because of economic progress.*

**COST**

During a 2020 survey conducted by the Pew Research Center, 60% of Americans described climate change as “a major threat to the well-being of the United States.” In that same survey, 65% indicated the federal government did “too little to reduce the effects of climate change.” Disagreement over which countries bear fiscal responsibility for climate change took center stage during the 2022 U.N. Climate summit. Poor nations, especially those in the developing world, face the most dire effects of climate change, while having contributed the least to it. The World Bank estimates that the impact of extreme weather results annually in the loss of $520 billion and pushes an additional 26 million people into poverty.

During the 2015 Paris Climate agreement, developed countries promised $100 billion annually to aid developing countries in switching to renewable energy, adapt to the impacts of climate change, and limit their emissions. However, they have yet to fully deliver on this goal. Heavily impacted developing nations argue that developed countries should contribute to an additional monetary loss and damage fund. This fund could aid in the cost of rebuilding, replacing lost or damaged crops, relocating at-risk communities, or pay for things “irrevocably lost,” such as the extinction of species. More industrialized countries worry that committing to such a fund could lead to them bearing “legal liability for the impacts of climate change.”

Following climate disasters, the Federal government typically sends in aid, often through the Federal Emergency Management Agency (FEMA). FEMA, however, has repeatedly provided more support to predominantly white communities than African American.[[8]](#footnote-8) Thus, white communities are more likely to see increased levels of investment in their communities following a climate disaster. Low-income communities, however, are more likely to suffer from the consequences of climate disasters because of a lack of proper insurance and inadequate infrastructure.[[9]](#footnote-9)

What do you think? Should people who are suspected of contributing the most to climate change pay for losses caused by climate change?

*Any basis where we penalize countries should be based on historical overall damage. Developing countries should not be punished for current pollution when developed countries already polluted.*

*I believe that climate change is not preventable on an individual level, it requires widespread regulatory support and administration. However, if we are categorizing corporations/businesses as ‘people,’ then yes.*

**SURVEY**

Add the numbers of your responses together. This will help us pair people up for discussion.

**Prompt A**: Climate change is primarily caused by humans.

1. I agree. 2. I have no opinion or my opinion is conflicted. 3. I disagree.

**Prompt B**: People should sacrifice human progress for the sake of slowing climate change.

1. I agree. 2. I have no opinion or my opinion is conflicted. 3. I disagree.

**Prompt C**: People who are suspected of contributing the most to climate change should pay for losses caused by climate change.

1. I agree. 2. I have no opinion or my opinion is conflicted. 3. I disagree.

**Total: \_\_\_\_\_\_\_\_**

1. *The Causes of Climate Change*, National Aeronautics and Space Administration, https://climate.nasa.gov/causes/. [↑](#footnote-ref-1)
2. *What Are the Causes of Climate Change?*, the National Resources Defense Council, https://www.nrdc.org/stories/what-are-causes-climate-change#natural. [↑](#footnote-ref-2)
3. Dan Lashof, *Tracking Progress: Climate Action Under the Biden Administration*, World Resources Institute, https://www.wri.org/insights/biden-administration-tracking-climate-action-progress. [↑](#footnote-ref-3)
4. *Developing Countries Are Responsible for 63 Percent of Current Carbon Emissions*, Center for Global Development (2023), https://www.cgdev.org/media/developing-countries-are-responsible-63-percent-current-carbon-emissions. [↑](#footnote-ref-4)
5. *Smallest Footprints, Largest Impacts: Least Developed Countries Need a Just Sustainable Transition*, UNCTAD (Oct. 1, 2021), https://unctad.org/topic/least-developed-countries/chart-october-2021. [↑](#footnote-ref-5)
6. *Importance of Livestock Agriculture to the U.S.*, FEMA, https://training.fema.gov/emiweb/downloads/is111\_unit%202.pdf; *see also* Chris Hurt, *The Economic Importance of U.S. Animal Agriculture*, Purdue University (Aug. 26, 2019), https://ag.purdue.edu/commercialag/home/resource/2019/08/the-economic-importance-of-u-s-animal-agriculture. [↑](#footnote-ref-6)
7. Ker Than, *Replacing Animal Agriculture and Shifting to a Plant-based Diet Could Drastically Curb Greenhouse Gas Emissions, According to New Model*, Stanford News (Feb. 1, 2022), https://news.stanford.edu/2022/02/01/new-model-explores-link-animal-agriculture-climate-change. [↑](#footnote-ref-7)
8. Christopher Flavelle, *Why Does Disaster Aid Often Favor White People?*, NPR (Oct. 27, 2021), https://www.nytimes.com/2021/06/07/climate/FEMA-race-climate.html?referringSource=articleShare. [↑](#footnote-ref-8)
9. Aneesh Patnik, Jiahn Son, Alice Feng & Crystal Ade, Racial Disparities and Climate Change, Princeton Climate Change Initiative, (Aug. 15, 2020) https://psci.princeton.edu/tips/2020/8/15/racial-disparities-and-climate-change [↑](#footnote-ref-9)