COP28: How 7 policies could help save 1 billion lives by 2100

November 30 2023, by Joshua M. Pearce

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In a recent review of more than 180 peer-reviewed articles—which I conducted with fellow researcher Richard Parncutt—we found that a scientific consensus has formed around the so-called *1,000-ton rule*.

The [1,000-ton rule](#) states that a person is killed every time humanity burns 1,000 tons of fossil carbon. Shockingly, we found that a 2 C temperature rise equates to a billion prematurely dead people over the next century, killed as a result of a wide range of global warming related [climate](#) breakdowns.

These findings were derived from a review of the climate literature that attempted to quantify future human deaths from a long list of mechanisms.

This is a staggering body count, though however uncomfortable it may be, it is consistent with diverse evidence and arguments from multiple disciplines.

As world leaders gather for the COP28 [climate conference](#) in Dubai from Nov. 30-Dec. 12, we would do well to remember that their decisions will be directly responsible for killing, or saving, real human lives.

How climate change will kill us

[Human-caused climate change has killed](#)—and will continue to kill—many human beings by numerous climatic breakdowns caused through a complex web of direct, intermediate and indirect mechanisms.

Direct mortal effects of climate change include [heat waves](#), which have already caused thousands of [human deaths by a combination of heat and humidity](#) and even threaten [babies](#).

Intermediate causes of death involve crop failures, droughts, flooding, extreme weather, wildfires and rising seas. Crop failures, in particular, can make [global hunger and starvation](#) worse.

More frequent and severe droughts can lead to more wildfires that also cause human deaths, as we saw in Hawaii. Droughts can also lead to contaminated water, more frequent disease and deaths from dehydration.

The 2022 IPCC Report predicted that drought would displace 700 million people in Africa by 2030.

On the other hand, climate change can also cause flooding (and crop failures from too much water), which also drives hunger and disease. Climate change drives sea level rise and the resultant submersion of low-lying coastal areas and storm surges exacerbate flood risks, which are life-threatening for billions of people in coastal cities who face the prospect of forced migration.

Climate change also increases extreme weather events, which kill and cause considerable damage to essential services such as the electric grid and medical facilities. Salt water intrusion also threatens coastal agriculture, further reducing food supplies.

Finally, climate change also indirectly increases the probability of conflict and war. Although the academic consensus on climate-change-induced war is far from settled, there is little doubt climate change amplifies stress and can cause more localized conflict.

As the number of climate refugees increases, countries further from the equator might increasingly refuse to offer asylum. In a worst-case scenario, social collapse is possible and a *Proceeding of the National Academy of Science* article reports it could be devastating.

There is still time

A billion dead bodies is a scary prospect but not all of these deaths are predicted to occur at once. In fact, many people are already dying.

However, there is still time to protect those remaining from also being killed by climate change by rapidly transitioning away from carbon energy sources.

We need to implement aggressive energy policies today to eliminate carbon emissions in energy conservation, encourage the evolution of the energy mix to renewable energy, and manage carbon waste. We are already doing a lot of this—we just need to do it faster.

Gradual decarbonization is not acceptable if it sacrifices such large numbers of human lives. And while each of these proposals may at first seem shocking, if we ask ourselves "would I accept this policy to save one billion human lives?" then I feel the answer becomes much clearer.

We must act to prevent the deaths of millions of our fellow human beings.

Not so radical

1. We must mandate all new construction be net-zero buildings or positive energy buildings. This would also have the bonus of providing building owners a positive return on investment and it is even possible to make them with no net cost.
2. Mandate mass purchases of energy conservation or renewable energy technologies and make them freely available to everyone with zero-interest loans that are easily paid back with energy savings. For example, a government could construct new factories to provide free insulation or solar panels to everyone that will take them. As an added bonus solar power will save homeowners money on electric bills as well as making major savings on energy conservation measures over their lifetimes.
3. Immediately end the sale of fossil fuel vehicles which will save considerable carbon and money as electric vehicles already have

[a lower lifetime cost than gas vehicles](#)).

4. Revoke the charters of fossil fuel companies and disperse their assets if a company or industry is responsible for killing more people from emissions than they employ. It is a sobering fact that [The United States coal industry already kills more people from air pollution per year than it employs, and that does not include climate change-related deaths](#).

5. Immediately stop investing in more fossil fuels and heavily tax all fossil fuel-related investments, and/or hold [climate emitters as well as investors economically liable](#) for harm caused by carbon emissions in the future.

6. Retrain fossil fuel workers en masse for [renewable energy](#) jobs which would help both society and workers who could expect an on average [seven percent pay rise moving to the solar industry](#).

7. Immediately ban the extraction of [fossil fuels](#) with enforced [moratoriums](#).

Each of these seven policies will prevent an escalating amount of carbon from entering the atmosphere, preventing the concomitant [climate change](#) and billion premature deaths that would be caused by the status quo.

Moving forward

These policies can be achieved by targeting those first three actions that also directly align with economic savings. As economic replacements for fossil fuel technologies scale, the need for fossil fuel investment will continue its existing decline and pushing that decline further will become more politically palatable. As this is happening it will make sense to protect fossil fuel workers by [retraining them](#) so they can help accelerate the transition until all carbon-emitting fossil fuel use is ended to enable a stable climate.

This obviously is not going to be easy, but I believe that the vast majority of human beings are good people who will accept temporary inconveniences to transition to an energy system that will prevent one billion premature deaths.

Protecting these lives instead of sacrificing them would be an outcome from COP28 that demonstrates real leadership.

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