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One Nuclear War Can Ruin the Whole Climate

Greenhouse-gas emissions get all the attention, but their effect is manageable and unfolds over decades.



Activists rally to demand peace amid India-Pakistan tensions in Lahore, Pakistan, May 6. PHOTO: RAHAT DAR/SHUTTERSTOCK

Full text :

The world is on the brink of a climate apocalypse—one caused not by gradual greenhouse emissions but by a sudden exchange of nuclear weapons, a possibility made more salient by the current conflict between India and Pakistan. While the long-term effects of emissions are uncertain, we know that a nuclear war would result in an immediate nuclear winter.

When we think about nuclear apocalypse, we tend to think of the immediate effects: thermonuclear explosions that incinerate cities and vaporize populations. But the worst consequences unfold long after the weapons have detonated. A major thermonuclear exchange would shroud the atmosphere in soot, plunging the world into darkness and ushering in a decadelong winter. While hundreds of millions of people would likely be killed in the initial conflagrations, most of the human population—including those in the combatant nations—would likely die in the subsequent winter famine.

It's comforting to think that an exchange of nuclear warheads in a regional conflict such as that between India and Pakistan might be more limited. The death toll from the detonation of a few dozen weapons might only number in the low millions, and there would be little effect on planetary temperatures.

But if India bombed Islamabad and Pakistan bombed Mumbai in retaliation, it would be hard to prevent further escalation. Moreover, once intercontinental ballistic missiles are in the air, it's virtually impossible for other nuclear-armed nations to determine where they're headed. Leaders in Washington, Moscow and Beijing would need to make decisions in a matter of minutes about whether to launch their own weapons.

Midrange scenarios involving a few hundred weapons would cool the climate enough to decimate global food production and trade and would likely kill hundreds of millions.

Under worst-case scenarios, droughts and crop failures would quickly spread across the globe. Hundreds of millions of refugees would cross continents in search of food, safety and shelter. Some would die of disease and illness, most of starvation. Human civilization would be over.

In comparison, there's no conceivable global-warming scenario that would kill off most of the world's population in only a few years. Climate change damages natural systems such as coral reefs and the Arctic and will increasingly stress human societies, but it isn't an existential risk akin to nuclear war.

Unless we reduce and ultimately eliminate greenhouse-gas emissions, global temperatures will continue to rise. Climate change could lead to abrupt changes in earth's ecosystems, such as irreversible melting of the ice sheets in Greenland and Antarctica. While these changes will be fast on geological time scales, they'll be slow on

human time scales, unfolding over decades and centuries. Humanity will have time to adapt food production to climate change and become more resilient to extreme weather and sea-level rise. We also have many available off-ramps, from nuclear energy to solar geoengineering, that can limit future warming.

Nuclear winter, by contrast, would destroy civilization beyond repair within months or years. Yet unlike climate change, which has preoccupied activists for decades, it is largely ignored. Politicians, journalists and activists don't travel by the tens of thousands every year to attend conferences on the threat of nuclear annihilation. Philanthropists such as [Bill Gates](#) and [Jeff Bezos](#) don't spend billions on efforts to eradicate the threat. There's no nuclear equivalent to Greta Thunberg lecturing the United Nations General Assembly about its failure to assure our survival. The antinuclear movement has bizarrely focused on eliminating clean power-generating nuclear reactors instead of city-incinerating nuclear weapons.

Arguably, President Trump is the most prominent figure warning of nuclear war, with his frequent invocations of World War III. Mr. Trump was also an advocate for arms control in the 1980s.

The arms-control regime that world leaders painstakingly built during the latter stages of the Cold War is in tatters. The New Strategic Arms Reduction Treaty, an accord signed in 2010 that limits Russia and the U.S. to 1,550 deployed warheads each—still plenty to destroy civilization—expires next February. Russia and the U.S. each hold more than 5,000 additional warheads in reserve. China is rapidly building its nuclear inventory.

Against this backdrop of rising economic and geopolitical instability, the contrast is stark between the genuinely existential—but largely ignored—threat of nuclear warfare and the immense amount of attention and political effort lavished on the climate issue. Climate change is real, and there's much that we can and should do about it. But nuclear war is the far more imminent threat.

Whatever else one thinks about the current administration's novel approach to longstanding geopolitical alliances, Mr. Trump deserves some credit for pushing Russia and Ukraine to agree to a cease-fire and appears to have played a significant role in brokering a cease-fire between India and Pakistan over the weekend.

Conflicts between nuclear-armed adversaries remind us that no other risk to human societies remotely rivals nuclear warfare. Zero nuclear weapons may be as much a pipe dream as net zero, but there should be no higher priority for politicians, philanthropists and civil society leaders, whatever their political stripe, than to de-escalate that threat.

Mr. Nordhaus is director of the Breakthrough Institute. Mr. Lynas is author of "Six Minutes to Winter: Nuclear War and How to Avoid It."