

Why Is Climate Action So Hard?

It's even more complex than you think

[Giulio Rocca](#)



Panelists at the COP29 UN Climate Change Conference in Baku, Azerbaijan. November 22, 2024.

Source: [COP29](#)

In the science fiction novel *The Ministry for the Future*, Kim Stanley Robinson imagines a near-future where humanity struggles with the intensifying effects of climate change. There's a heatwave in India that leaves 20 million dead; debilitating food and water shortages; eco-terrorist attacks on airlines, the cattle industry, and oil executives; and a whirlwind of other crises. Still, in the end, humanity pulls itself from the brink through a patchwork of responses that range from geoengineering projects in Antarctica to sail-driven container ships and a carbon-backed digital currency.

Despite the happy ending, it's a traumatic read — especially when you consider it isn't a far-fetched scenario. To many, especially young people with the most to lose, it's clear that we need decisive action. At COP29, held in November 2024, UN Secretary-General António Guterres told [youth climate advocates](#):

“You have every right to be angry... we are on the verge of the climate abyss, and I don't see enough urgency or political will to address the emergency.”

So why, if the risks are so great, have we dragged our feet on climate action for so long? Why do we continue to emit [record levels of CO₂](#) virtually every year? The answer, it turns out, is complex — and it starts with marshmallows.

Temporal Discounting



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In the late 1960s, psychologist Walter Mischel conducted the [Stanford marshmallow experiment](#): he set a treat (often a marshmallow but sometimes a cookie or pretzel) in front of a four-year-old and explained he or she could eat it immediately or wait 15 minutes and have two treats instead. Perhaps unsurprisingly, 70% of the 650 participants couldn't resist the temptation.

The study offered early evidence of our bias for immediate rewards over delayed gratification — a concept known in economics as temporal discounting. It's the reason why so many adults struggle with going to the gym, following a healthy diet, or saving for retirement. Climate change is no different, except the time horizon isn't measured in hours or days but decades and centuries. This effectively means that, for many people, the impacts of climate change are so heavily discounted they [don't register](#), posing an immense challenge in terms of fitting the climate agenda into existing policy frameworks and doing right by future generations.

Uncertainty and Non-linearity

Next, consider that Earth's climate is an incredibly complex system. It's the product of the interaction of the atmosphere (air), the hydrosphere (water), the cryosphere (snow and ice), the lithosphere (outermost rocky layer) and the biosphere (ecosystems) — each of which is challenging to model individually. Nevertheless, climate scientists' predictions have retrospectively [proven accurate](#). But all such projections are probabilistic, meaning they're accompanied by cones of possibilities, error bars, and confidence intervals. This messiness — a feature of modern science— complicates the message to the public and policymakers.

Climate change itself is also nonlinear, meaning that its effects snowball after reaching certain [tipping points](#), such as the melting of the Greenland ice sheet above 2C of global warming. The fossil fuel industry and skeptics of all kinds have seized on these inherent complexities to [cast doubts on the](#)

[science](#), even as [99.9% of climate scientists](#) agree that climate change is anthropogenic and dangerous.

Costly Solutions and Competing Priorities

The investment required to solve the climate crisis is considerable with some estimates putting the cost of maintaining global warming below 1.5C between [\\$10 and \\$100 trillion](#). This is fair chunk of global GDP but far less than the cost of inaction, let alone the incalculable loss of human life and ecosystems. By comparison, the COVID pandemic saw G20 countries spend [\\$14 trillion](#) over a two-year period; however, this was in response to an imminent threat that killed [18 million](#) people in a short time. Given [high national debts](#), the [cost of living crisis](#), and geopolitical tensions in Ukraine, the Levant, and the South China Sea, there's less [fiscal headroom](#) for big-ticket spending — such as on climate action. Consequently, immediate and near-term priorities receive more attention and funding.

The Problem of the Commons



Photo by [Beth Macdonald](#) on [Unsplash](#)

Under the aegis of the market economy, society often struggles to sustainably manage common resources like the atmosphere. Historically, the concern has been around over-exploitation: left to our own devices, the reasoning goes, we will plunder common resources until they are depleted. Ecologist Garrett Hardin famously called the problem a tragedy, and [warned](#) that “freedom in a commons brings ruin to all.” In many respects, Hardin was right. Short-sighted behavior of this kind isn’t hard to find from [over-fishing Pacific-blue-fin tuna](#) to [traffic congestion](#) in New York City to [cluttering Earth’s orbit](#) with space junk. When it comes to Earth’s atmosphere, we’ve shown equally little restraint and turned it into a dumping ground for CO₂ emissions.

More recently, a different interpretation has emerged about the commons and its risks. Proponents of this new approach, known as “[commoning](#),” argue that shared resources aren’t inherently susceptible to depredation; rather, it’s their privatization and commodification that spells disaster. David Bollier,

Director of the Reinventing the Commons Program at the [Schumacher Center for a New Economics](#), notes that local communities normally do a better job of stewarding shared resources than market-based approaches. For example, [community-managed water systems](#) in New Mexico based on Native American practices consume far less water than surrounding areas under privatized utilities. As Bollier explains:

“A commons has ways of dealing with people who want to appropriate them for their own gain, or free-loaders who want to use them without playing a part in their upkeep.”

Whatever the best explanation, the atmosphere as a global commons remains highly problematic and helps to explain why there is so much backsliding on climate policy— whether it’s Trump’s [withdrawal from the Paris Agreement](#), [Brazil’s surge in deforestation](#) under Bolsonaro, or China’s continued [construction of coal power plants](#).

Asymmetric Impacts and Capabilities

We know that the climate crisis will disproportionately affect the Global South. A [recent study](#) suggests that countries located within 20 degrees of the equator — overwhelmingly developing nations — face the greatest economic risks from rising temperatures. Even when rich and poor countries share the same geographic neighborhood, adaptation resources vary dramatically.

For example, Miami Beach has already invested [\\$400 million](#) to raise its streets and install pumps to protect against high tides while nearby Port-Au-Prince can’t afford such measures. This two-track system means that countries will experience climate change very differently in the coming decades, even if the final destination may be disastrous for everyone. To be fair, developed countries have committed to transfer [\\$300 billion annually](#) to developing countries for climate mitigation and adaptation efforts, but it will take time to reach this target, which, in any case, is [not enough](#).

Disinformation and Political Capture

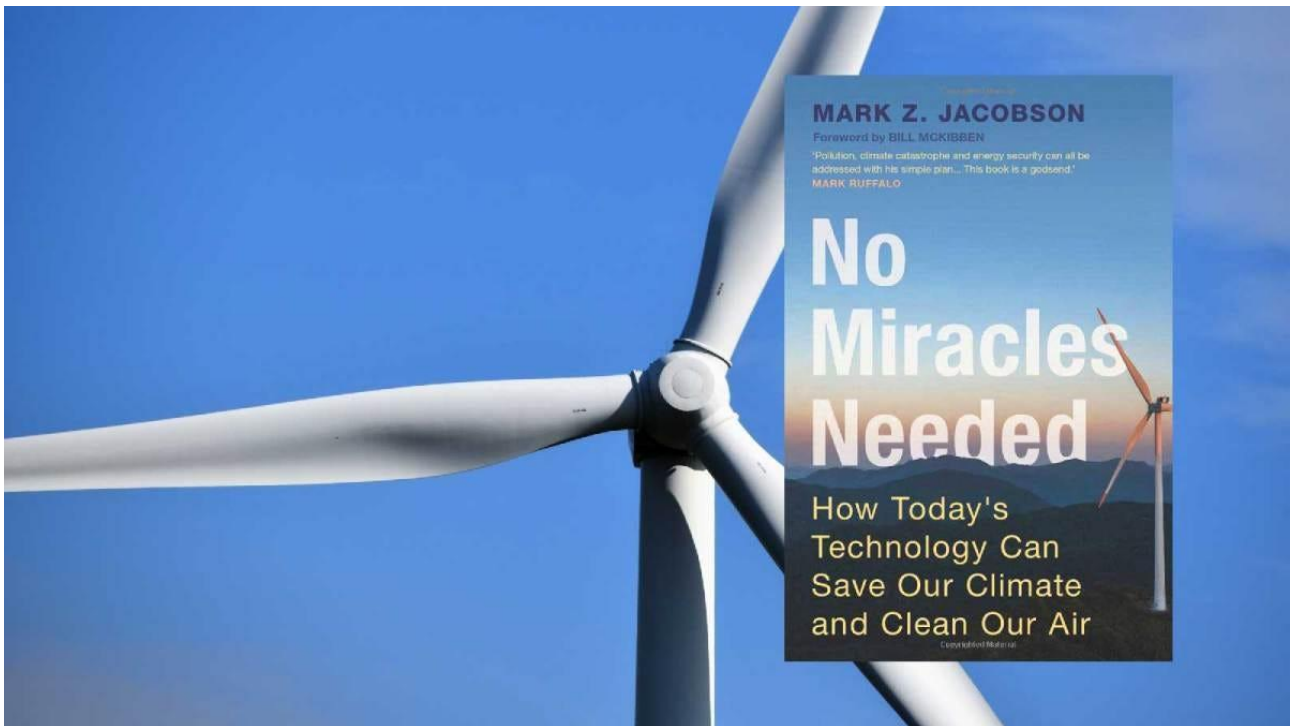
For decades, oil companies and petrostates denied climate change, even as internal documents revealed otherwise. For example, an [internal Exxon document](#) in 1979 warned that fossil fuels would cause “dramatic environmental effects before the year 2050.” Rather than phasing out drilling, Exxon borrowed a page from Big Tobacco’s playbook and denied the link between fossil fuels and global warming. Today, oil companies no longer deny climate change, but they persist in [downplaying its risks](#). Unscientific ideas about the climate have also filtered into the minds of politicians: in 2015, Senator James Inhofe famously [brought a snowball](#) into Congress to suggest that climate change isn’t real, and Donald Trump persists in calling climate change “[one of the great scams](#).” Even the EU, traditionally a bulwark of progressive climate politics, is facing increasing opposition on climate action from [right-wing populist parties](#).

Techno-optimism

Our climate apathy can also be explained by our faith in the promise of almost-here technologies. Why make costly sacrifices today when a solution might be just over the horizon? Unfortunately, none of the proposed technologies are ready for prime time, whether it’s [carbon capture and storage](#) (unproven at scale), [clean fusion](#) (likely decades away), [sea walls](#) (expensive and damaging to the environment), or [blue hydrogen](#) (too dirty).

Ironically, the tools we need to solve the climate crisis could already be staring us in the face. In his book [No Miracles Needed](#), Professor Mark Jacobson of Stanford University suggests that we can reach net zero globally by 2050 with just renewable energy. He regards potential emerging technologies as a [red herring](#) that’s delaying action:

“The challenges are getting the political willpower to focus on a narrow set of solutions that we can implement quickly. The vested interests are very much a problem because they are pushing this ‘all of the above’ approach.”



[No Miracles Needed](#), Professor Mark Jacobson. [Image source](#).

So What Now?

It can be hard to feel anything but frustration or even despair about the climate crisis given the slow rate of progress. Still, even as we are likely to [blow past 1.5C](#) of warming, there are a few reasons to remain hopeful.

For starters, the international community once overcame a similar crisis: the ozone hole. Thanks to the Montreal Protocol, ozone-depleting substances have been almost entirely phased out, even if this was a simpler and less expensive crisis and the ozone hole [won't close until 2066](#). Further, the climate actions we've taken so far have set us on a safer path: we're now on track for [2.6 to 3.1C of warming](#) by the end of the century — well below the [4 to 5C](#) once thought likely. Falling prices of green technologies represent another bright spot: the price per watt of solar panels has [fallen by 90%](#), electric vehicle sales now account for [18% of new car sales](#), and the UK recently shut down its [last remaining coal plant](#). Some countries, like the Democratic Republic of Congo and Iceland, have even successfully transitioned to [100% renewable energy](#).

To be clear, these are positive aspects of an overwhelmingly negative picture. Moving above 1.5C of warming spells [significant suffering](#) for ourselves and the planet, with every fraction of a degree bringing us closer to Robinson's climate dystopia and condemning us in the court of younger and future generations.

What's needed is a return to empiricism and coordinated global political action without exceptions or delays. That's why it's so important that we support political leaders who take climate action seriously and who can galvanize other governments and stakeholders to act urgently. Waiting for the accelerating impacts of climate change to shock us into Hail Mary projects when it's too late cannot be our strategy.