The climate crisis is a crisis of inequality

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Our collective inaction on climate breakdown reflects in part our failure to acknowledge that the climate crisis is a crisis of inequality, and that solving the climate crisis is inextricably tied with the politics and economics of inequality. Put simply, redistribution from rich to poor, whether domestically or internationally, is a climate policy, and climate policies that inadvertently raise inequality are likely to be less effective than those that purposefully reduce it.

Historically, the premise that economic growth "lifts all boats" has justified maximizing growth, which "free market" proponents often interpret as demanding minimal regulation and redistribution. But this growth requires energy, which largely comes from burning fossil fuels, the major cause of the climate crisis. And thus far, markets have largely failed to price the social cost of carbon. Economic and climate inequality are tightly linked, within and across countries, with richer nations and individuals appropriating vastly more fossil fuels while rarely paying the social cost of carbon and often assuming that they can shield themselves from the adverse consequences of

their fossil fuel use.

Meanwhile, globally, poverty closely corresponds with climate shock sensitivity. The world's poor are more likely to reside in climate-vulnerable countries and have fewer resources to guard against and recover from climate shocks. Their food and water are threatened by climate breakdowns. Poorer people—those who work outdoors, live in households without air conditioning, or cannot migrate from flood or fire-prone locations—will pay the highest price for climate disruption in even rich nations.

Even if those with economic power believe that there may be a hard limit to carbon emissions, they have incentives to act swiftly to appropriate most of those resources, profit from them, and develop their economies, leaving behind those less equipped, creating a vicious circle that increases inequality. Rising inequality undermines democracy as the richest wield considerable influence over politics, which can diminish policy efforts on redistribution, climate regulation, and carbon pricing. This may explain why global oil and coal use and carbon dioxide emissions are at record highs, despite humanity having known for 30 years the potentially disastrous climate impacts of greenhouse gases.

Within countries, rising individual inequality increases overall emissions. Income increases happiness before plateauing for many. The same is likely true for energy use and individual well-being. If redistributed to the poorest, the same proportion of the carbon budget would likely improve welfare more than if spent by richer people in

pursuit of high-carbon lifestyle choices. Such redistribution would likely lower aggregate high-carbon goods consumption and help the poor to protect themselves from climate breakdown by allowing mobility, insurance, and other services. On a global scale, redistribution across nations may provide lower-income countries the financing they need to invest in low-carbon energy and cleaner growth pathways.

However, policies to minimize economic or climate inequality, nationally or internationally, must be perceived as both fair and justifiable by a majority of voters in democracies to receive adequate support. How can policy-makers in free market economies achieve this when fairness is frequently defined as market outcomes and there is less support for financial sacrifices or regulations that don't achieve immediate, visible returns?

To begin, equality is increased by more than direct redistribution to the poor. Taxes can fund high-quality, universally accessible public goods. People who can avoid car ownership with safe and reliable public transport very often benefit from lower pollution. Well-managed town centers and strong social safety nets can entice residents from energy-hungry suburbs to compact, efficient downtowns.

One can regulate carbon within markets through a state-mandated tax on greenhouse gas emissions. A carbon tax, however, does not prevent economic elites from disproportionately appropriating or exceeding the carbon

budget; it simply slows the process. And although efficient, a carbon tax is at best moderately progressive, and possibly regressive, depending on the economy's structure. Unless indexed to relieve the burden on the poor or deliberately banded to be more progressive, populist economic elites can, by describing the tax as an unaffordable tax on the poor, create a political alliance between rich and poor individuals and prevent implementation, as happened in France. Identifying the optimal tax is also complicated by our having limited estimates of the carbon tax elasticity of emissions, and those that do exist suggest that carbon tax elasticity of demand cannot be inferred from price elasticity.

By contrast, carbon markets underpinned by emissions trading schemes (ETS) allow governments to set and hit credible emissions targets. Carbon emitters are given and can trade permits for a certain use level. Those best able to limit emissions can profit by selling their excess permits, whereas those who profit by producing more emissions can buy permits to exceed their initial allocation. By limiting total available permits, overall carbon emissions are capped. In 2022, 22 operational ETSs covered 17% of global greenhouse gas emissions.

One concern is that paying to pollute may reduce the moral misgivings of firms and elites about polluting. Therefore, some argue that carbon pricing should be implemented as an equal, free, nontradable carbon ration for all individuals rather than through the market. However, the productivity costs of such a rationing

system are likely to outweigh its fairness appeal.
Climate and equality outcomes are also affected by fossil fuel subsidies, which amounted to more than $1 trillion globally in 2022 and reduced fossil fuel prices, incentivizing increased usage. Although often described otherwise, in reality these subsidies are rarely progressive because the rich use substantially more fossil fuels and are more likely to both benefit from low prices and invest in production. Yet as with carbon taxes, proposals to remove these subsidies can provoke an apparent common political interest between economic elites and the poor because both benefit from them, albeit to different degrees, slowing climate progress. In low-income countries in particular, where fossil fuel subsidies are seen as an important element of poverty relief, ensuring that subsidy removal is accompanied by increased direct transfers to the poor is likely essential to ensuring that the poor are supportive of the removals.
Highly subsidized and/or lightly regulated fossil fuel extraction industries can be very disequalizing, causing local health and environmental devastation—and increasing vulnerability to climate breakdown, even as profits accrue to corporations outside the area—while still providing diminishing numbers of valued local jobs. Again, without adequate compensation, fossil fuel corporations can use the political cost of job loss to prevent change.
Last, generous tax credits for green investments—such as those offered by the US Inflation Reduction Act—can effectively avoid democratic opposition but again risk

advantaging richer individuals who pay more tax and so have the opportunity to invest, and save, more. And, like carbon taxes, tax credits aren't a mechanism that sets a hard limit to emissions.

Some argue that only deliberate "degrowth"—a purposeful reduction in resource usage, notably fossil fuels—can prevent climate breakdown. However, degrowth remains a near-impossible sell politically despite its climate logic. Very few will vote to become poorer. Deliberately progressive carbon taxes, cap-and-trade markets, or direct transfers could have a comparable beneficial effect to degrowth by compelling richer individuals to invest in low-carbon, low-resource technologies at lower political cost.

No international democracy exists, only unequal nations competing for economic and political supremacy. How can those who want to reduce poverty and global carbon emissions implement an equalizing climate policy worldwide faced with voters who don't want to give up their relatively high incomes and ability to appropriate the carbon budget? Here are three possible steps.

First, policies that lower domestic emissions from affluent nations improve international climate equality by minimizing economic damage to poorer countries from climate breakdown, or freeing up carbon budget space for them to use fossil fuels to grow. An effective investment in local carbon reduction may benefit the impoverished more than a financial transfer. It's important that such initiatives

are seen both to be deliberately progressive and not to directly reduce income and welfare for the least well-off. The California Climate Investments program, for example, puts cap-and-trade dollars to work reducing greenhouse gas emissions, strengthening the economy and improving public health. Proposals for a frequent flyer levy are another example.

Second, redistribution to enhance public good provision in higher-income countries itself would help lower climate inequality worldwide by reducing low welfare-increasing excess carbon use in these countries and allowing the poor in these countries to better protect themselves against climate breakdowns. The same logic extends to emerging economies such as India and China, where inequality is fast rising.

Third, direct investments in renewable energy, mitigation, and adaptation in lower-income countries could increase income and welfare, without increasing carbon emissions. However, such initiatives often lack transparency and accountability. Policy-makers should ensure that climate financing reduces international inequality and does not increase it as some loan structures might, and that financial investments are accompanied by technical support in implementing technologies that can credibly verify emissions reductions from these investments and in building institutions that can efficiently and credibly control pollution. Robust research funding for effective adaptation mechanisms could help those in lower-income

countries, especially the rural poor, to adapt. Recent advances in drought-resistant seeds is a promising example. Another promising area for investment is user-inspired design; for instance, researchers estimate that an optimal bus network in Jakarta would increase rapid-transport access from 73 to 91% of all Jakarta resident trips.

These strategies go some way to help, but not enough. Richer individuals and countries won't give up privileges without good reason. The poor will understandably always want economic progress in order to afford the high-carbon luxuries the rich already have. However, carbon equality where everyone achieves living standards of the rich is unattainable without blowing through our allowable budget of carbon emissions.

Therefore, to prevent further climate breakdown, economic elites—who include both a substantial proportion of the population of richer countries and, now, the most affluent in very unequal middle-income countries—must take the lead and cut their own carbon use rapidly. This requires the rich to abandon their almost certainly erroneous belief that their wealth will shelter them from the climate breakdown that they primarily caused. This year's record heat, fires, and flooding may finally lead to an understanding of the ubiquity of the threat. Historically, in wartime, when a threat has been visible and immediate, entire societies have accepted rationing for the common good. Perhaps, eventually, when the climate threat cannot be denied, they will accept caps

on emissions—through either cap-and-trade systems or direct rationing—which may be the only credible way to meet safe emissions targets.

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