



Climate change is an existential crisis hitting closer and closer to home. We see the consequences in our daily lives: devastating floods, droughts, heat waves, and wildfires; famine and food insecurity; air pollution that harms our health; climate migration; biodiversity loss; economic instability; and many other challenges. Scientists and affected communities have sounded the alarm, and we cannot wait any longer to act. Climate change isn't only an environmental issue—it's a human issue that deepens existing problems like poverty and negatively affects our health.

The world needs massive transitions. **We must cut our global carbon pollution in half by 2030 and reach "net-zero" by mid-century** to prevent even worse outcomes. This is the only way to ensure a more sustainable future—and better lives for us all.

Tackling climate change creates a ripple effect, yielding positive benefits for almost every aspect of life on our planet, now and in the years ahead. The choices we make today can lead to two very different tomorrows. In one, continued unfettered emissions and destruction of nature will intensify harm to people and the planet. In the other, our transition away from the carbon-intensive status quo will make the climate crisis more manageable and allow future generations to thrive.

Source: ClimateWorks Foundation, October 2021 FOR CLIMATE **MITIGATION**

2020 TOTAL PHILANTHROPIC GIVING \$750 billion

> **CLIMATE CHANGE** MITIGATION PHILANTHROPY \$6-10 billion

WE NEED THOUGHTFUL, EQUITABLE CLIMATE SOLUTIONS

Applying thoughtful climate solutions, we can improve air quality and eliminate toxins, produce healthy food, provide reliable and clean energy, and protect nature so that it can, in turn, sustain us. We can build more resilient economies and create new jobs. Many climate strategies offer significant additional benefits, such as reducing poverty, improving health, ensuring food security, reversing historical inequities, and conserving biodiversity, habitats, and Earth's natural beauty.

However, climate solutions will not automatically help the poor, marginalized, and vulnerable populations who are least responsible for climate change. For this to happen, we need to make equity a priority. We can no longer disadvantage communities who bear the brunt of fossil fuel pollution and other inequities. Not only should solutions be sustainable; they must benefit all members of society in an equitable way.

PHILANTHROPY ACCELERATES CHANGE

Achieving these climate goals requires significant transitions in every sector and corner of the globe — how we grow food, travel, produce things, and power our lives. Philanthropy can be nimble and take risks, supporting organizations working to bring about the change we need.

Examples of Outcomes Philanthropy Makes Possible:

- · Win hearts and minds to push forward the changes we need.
- Generate the political will to effect changes in policy.
- · Spark innovation that leads to new solutions.
- · Inspire market action.
- Leverage additional funding and capacity from the government and private sector.
- Bring technological solutions to scale at the speed required.
- Ensure that transformation happens in a just and equitable way.

The good news is that more donors are engaging; however, as of 2020, philanthropy for climate mitigation comprised only 2 percent of all global philanthropic giving. A dramatic increase in climate philanthropy is necessary to move at the speed and scale this crisis requires.

Photo: Ryan Lash/TED



This is the decisive decade for humanity.
What we do now will have consequences centuries and millennia from now.

Johan Rockström, Scientist



GET STARTED NOW

This *Guide for Action* provides a framework and some considerations for getting started on your climate philanthropy journey quickly and with confidence. In the sections that follow, we will:

- Give an overview of the science.
- Illustrate how philanthropy can move the needle to effect systemic change.
- · Provide sectoral and geographic perspectives.
- Offer best practices for high-impact climate philanthropy.

Inspiring stories from the field illustrate how these elements combine to promote change and create impact.

A better world is possible—but science tells us to move with urgency. Many solutions already exist, and people around the world are working to discover and create new ones. Together, we can slow climate change and ensure a more sustainable, healthy, and equitable future.

¹ www.climateworks.org/report/funding-trends-climate-change-mitigation-philanthropy/



OUR PLANET IS AT A TIPPING POINT

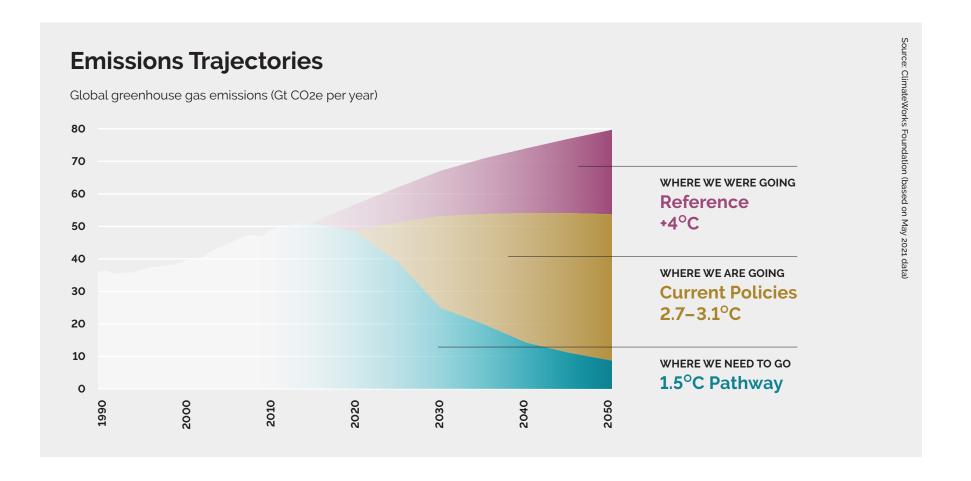
Historically, our stable planet has enabled humanity to evolve and modern society to flourish. However, the exponential growth in human-caused greenhouse gas emissions and the degradation of nature have threatened this stability and brought us to the brink of destruction. Of the 15 natural systems that regulate climate and contribute to the earth's stability—things like coral reefs, the Greenland ice sheet, and the Amazon Rainforest—nine are approaching tipping points that could trigger unprecedented disaster and accelerate the overheating of our planet. And the interconnectedness of these systems is such that failure in one creates feedback loops that speed warming and put others at risk.²

OUR NORTH STAR: NET-ZERO

Our actions during this decade are absolutely critical to ensure we can avoid the worst impacts of our overheating climate and protect our future.

The goal of the 2015 Paris Agreement, a legally binding international treaty on climate change, is to limit global warming in 2100 to well below 2 degrees Celsius, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.³

Achieving this ambitious temperature goal will require us to cut carbon emissions in half by 2030 and, by mid-century, to achieve net-zero—the point at which there is an overall balance between greenhouse gases produced and taken out of the atmosphere.







GREENHOUSE GASES ARE DRIVING THE CRISIS

From burning the fossil fuels that power our cars, to manufacturing steel for homes and buildings, to growing food that feeds an expanding population—these activities are the **sources** of greenhouse gas emissions that drive the climate crisis.

Greenhouse gases are gases in the earth's atmosphere that trap heat. Carbon dioxide makes up the bulk of greenhouse gases emitted through human activities—mostly through the combustion of fossil fuels (coal, natural gas, and oil) and deforestation. Some carbon can be absorbed by land, forests, and oceans, which act as nature's "sinks" to store carbon, but greenhouse gases that are not absorbed can remain in the atmosphere for up to 1,000 years. We need to act immediately to reduce emissions, given how long they will continue to affect the climate.

There are many other greenhouse gases that are even more potent at heating the planet than carbon, even though they remain in the atmosphere for shorter periods of time. For example, nitrous oxide is 300 times more powerful than carbon dioxide and has a life span of just over 100 years. Methane has 25 times the warming potential of carbon dioxide over a 100-year period.⁴ Others include black carbon, ozone, and hydrofluorocarbons (HFCs). Many of these greenhouse gases, some of which are called "super pollutants," are associated with industrial processes, diesel vehicles, agriculture, refrigeration, and air-conditioning, among other sources. Curbing super pollutant emissions is a critical, high-impact path for limiting climate change in the near-term that can help prevent tipping points and benefit both public health and food security.⁵

Achieving net-zero means minimizing all these dangerous gases by addressing the sources of emissions and protecting nature's ability to store carbon. New methods of removing carbon and other greenhouse gases from the atmosphere are necessary to meet the goals that keep us—and future generations—safe.

² www.ted.com/talks/johan_rockstrom_10_years_to_transform_the_future_of_humanity_or_destabilize_the_planet/transcript

³ www.unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

⁴ www.epa.gov/ghgemissions/overview-greenhouse-gases#methane

⁵ www.worldbank.org/en/topic/climatechange/brief/short-lived-climate-pollutants



PHILANTHROPY CAN ACCELERATE AND AMPLIFY SOLUTIONS

Tackling the climate challenge requires many actors and major systemic transformations—fundamentally shifting and realigning how the world functions at all levels, from our economies to our institutions to our lifestyles.

Philanthropy can unlock systemic change by influencing governments, businesses, and markets, and activating people who can compel action. It can invest in organizations that:

- Influence financial flows.
- Advocate for policy change.
- Employ legal strategies.
- Use strategic communications to reach broader audiences.
- · Develop capacity.
- Build coalitions and movements.
- Undertake research.

These "levers" drive progress from all angles and catalyze the massive transitions we need to move beyond fossil fuels — politically, economically, and socially.







USING LEVERS FOR GLOBAL IMPACT

Consider philanthropy's support for groups advocating for changes in public policy and how this can be particularly impactful. As an example, the dramatic drop in the price of solar energy is a product of smart, market-shaping public policies bolstered in the early years by philanthropic investments. These policies—like tax credits for investments in solar power and grants for research and development—enabled the technology to get to the scale at which the market drove wider adoption, despite opposition from incumbent energy providers. Philanthropy has invested in groups working to create a strong evidence base for policies and their effectiveness, those building public support, and organizations educating decision makers. Once adopted and implemented, climate policy can have a powerful impact on greenhouse gas emissions, whether at the local, state, provincial, national, or global level.

Coalition- and alliance-building is another example of a powerful lever that philanthropy can support. Diverse groups of people and organizations uniting to advocate for clean air, green jobs, safe drinking water, and other rights and benefits are powerful voices for change and are better able to overcome opposition from incumbent industries or the status quo. Resourcing efforts to bring together unlikely allies—like health professionals and climate advocates, or labor unions and environmental groups—helps counter the false "environment versus the economy" narrative and can get the attention of policymakers, business leaders, and the public.

Unfortunately, there is no silver bullet: Success requires pulling many levers. While the impact of any one of these strategies alone can't always be measured in emissions reductions, leading philanthropists have learned that they are essential to success. They can accelerate shifts, amplify solutions, scale innovations, and ensure fair and equitable outcomes.

PHILANTHROPY IN ACTION



Paving the Way for Zero-Emission Trucks

Philanthropy is accelerating a global campaign to electrify all vehicles for health and climate benefits—bringing together proven strategies for amplified impact, such as enacting policies that require business action and encourage consumer demand. California's experience shows how philanthropy can make this happen.

In 2019, zero-emission technology was ready, and prices had dropped, making it possible for heavier and bigger trucks to go electric. The state was considering a standard for trucks, but the proposal was weak.

Philanthropy mobilized to fund **research and analysis** convincing policymakers that a strong rule was feasible, cost-effective, and necessary to meet clean air and climate goals. It also supported a **diverse coalition** that influenced the **policy** process, challenged industry, and advocated for a stronger rule—helping to ensure that the government would make this legislation a priority.

The outcome: a final rule that doubled the initial ambition, requiring at least 50 percent of all trucks sold within the state to be zero-emission by 2035. The governor followed with an executive order requiring 100 percent of trucks to be zero-emission by 2045.

Within a month of the rule's adoption, more than 15 states representing 40 percent of the U.S. market joined in committing to a target of 100 percent zero-emission trucks; China and the EU are considering similar policies, illustrating the potential for rapid transfer and scaling of these wins to the global stage.

LEVERS USED:



RESEARCH AND ANALYSIS

Nonprofit organizations and universities helped make the case: Their analysis found that the new rule would generate billions in savings, create a market for up to 300,000 new electric trucks, and reduce carbon emissions by more than 17 million metric tons, creating significant public health benefits and saving lives.



DIVERSE COALITION

Environmental groups, businesses, health and environmental justice advocates, organized labor, the clean-tech industry, and communities living along polluting truck routes joined together to advocate for the rule.



POLICY

This first-in-the-world rule is a major policy victory that will help California meet its climate goals and federal air quality standards and yield huge health benefits, especially in neighborhoods suffering from the highest levels of air pollution in the nation.



While levers can bolster solutions that move us toward a more climate-friendly future, philanthropists also need to determine which parts of the economy they seek to influence. This requires an understanding of the **sectors** that are the **sources** of emissions and the **sinks** that can absorb greenhouse gases. Geography, discussed in the following section, also plays an important role, since regions contribute to and are affected by climate change in different ways and have different priorities for adapting to it.

Achieving a climate in balance involves tackling the climate crisis on all fronts—stopping sources of emissions and protecting and enhancing nature's ability to store carbon dioxide. We also must ensure equity and justice considerations are at the center of all solutions.

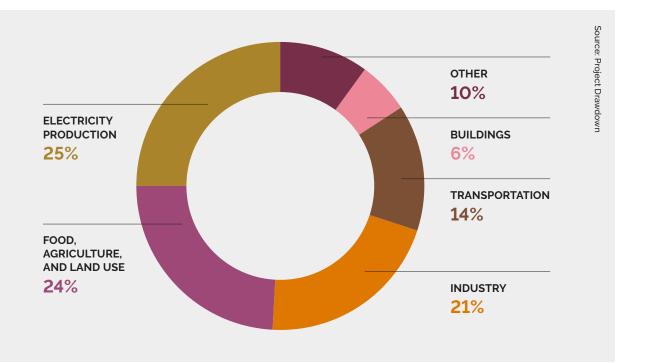
ELIMINATE SOURCES OF EMISSIONS

Getting to safer levels of warming requires us to transition away from polluting fossil fuels that generate power, fuel our transportation systems, and manufacture things (like cement, steel, and plastics). And we must reduce emissions caused by cutting down forests, destroying peatlands and coastlines, and growing food.

In 2018, total human-caused greenhouse gas emissions amounted to roughly 52 billion tons worldwide.⁶ Where do these greenhouse gases come from? Today, five sectors make up 90 percent of global emissions. **Meeting our climate goals requires us to exponentially reduce emissions in each of the following sectors.**



The data in the "sources and sinks" sections come from Project Drawdown and represent one of many different estimates of greenhouse gas sources and sinks. While estimates vary based on methodology, all are directionally similar. The sources for Project Drawdown are the IPCC (2014) and the Global Carbon Project (2019).







Greenhouse gases come from many sources, and solutions need to be equally wide-ranging to make a difference. Philanthropy can support many different groups who are working to reduce these emissions. The examples that follow are only a few of the many pathways to impact that may be pursued.



ELECTRICITY

Burning coal or natural gas in power plants to produce electricity and generate heat is responsible for approximately **one-quarter** of global greenhouse gas emissions. To date, most climate philanthropy has been directed to this sector because renewable energy sources are foundational to other industries' transitions away from fossil fuels (e.g., transportation and buildings). This area will continue to grow in importance, given that 840 million people worldwide still lack access to energy, and more power will be needed as we lift people from poverty.

Solutions Philanthropy Makes Possible:

- Enact renewable energy requirements at national and local levels.
- Build renewable generation capacity and utilization.
- Catalyze public and private financing for community-based solar in low-income communities and countries.
- Fight regulatory decisions on new oil and gas permits, pipelines, and infrastructure.
- Mobilize frontline communities and advocates to stop new oil and gas extraction.



FOOD, AGRICULTURE, AND LAND USE

Collectively, these categories contribute roughly **one-quarter** of global emissions. Deforestation—burning and clearing forests to harvest timber, create new agricultural land, or raise cattle—is a major driver, turning ecosystems that could be natural carbon sinks into sources of carbon emissions. Meat- and dairy-intensive diets are a significant source of greenhouse gases, since cattle and other ruminants emit large quantities of methane, in addition to being a major driver of deforestation.





Unsustainable agricultural practices, like excessive tilling of soil and fertilizer use, release greenhouse gases. There is growing public interest in sustainable food, which is a tangible, accessible climate solution that people interact with daily. Because philanthropic attention to food and agriculture is at an early stage, there is plenty of room to shape and scale the infrastructure needed for action.

Solutions Philanthropy Makes Possible:

- Encourage individuals, institutions, and governments to shift from animal-based meat and dairy toward plant-based diets and alternative sources of proteins.
- Incentivize farming methods that benefit nature and climate, like cover crops and crop rotation, better use of fertilizer and manure, and enhanced soil health.
- Lift smallholder farms out of poverty.
- Work with households, businesses, and governments to measure and reduce their food waste and loss by fostering innovation and changing policy.



INDUSTRY

Industrial processes and manufacturing, as well as managing and processing waste, make up about **one-fifth** of global emissions, with certain industries—such as steel, cement, oil and gas refining, petrochemicals, and plastics—being particularly polluting. Philanthropy in this sector is in its early stages, and there are many opportunities to influence industrial operations at scale.





Solutions Philanthropy Makes Possible:

- Reimagine manufacturing processes that emit carbon and improve materials that are carbon intensive (such as cement and steel).
- Build markets for low-emitting materials though public pressure and government mandates.
- Promote innovative ways to reuse or use less of these materials.
- Stop new construction of highly polluting petrochemical and plastics industrial infrastructure.

14

TRANSPORTATION

Transportation is responsible for producing **14 percent** of global emissions. About two-thirds of these emissions come from road transportation that rely on fossil fuels to move people and goods. The balance (slightly under a third of all transportation emissions) comes from airplanes, ships, and trains and is growing rapidly. From a philanthropic perspective, some strategies (e.g., transition to electric cars, trucks, and freight vehicles) are ready to scale while other means of long-haul transit—like shipping and long-distance aviation—have some solutions but require more research and development.

Solutions Philanthropy Makes Possible:

- Promote the uptake of electric buses, two- and three-wheelers, freight and delivery trucks, and cars so transport is carbon-free.
- Mobilize diverse people-powered coalitions to demand a cleaner transportation future.
- Advocate for the necessary infrastructure and zoning to make cities more walkable and public transit-friendly.
- Accelerate development of cleaner aviation fuels and transition shipping to zero-emissions fuels.







BUILDINGS

Through furnaces, boilers, hot-water heaters, and refrigerants, buildings are responsible for **6 percent** of global emissions. In addition to these direct emissions, buildings use more than half of all electricity currently created. Because stakeholders in the building sector are fragmented and decentralized, current policies, programs, pilot projects, code updates, and other aspects of emissions reductions in residential, commercial, and industrial buildings are inadequate to achieve systemic change. Retrofitting existing buildings and making new buildings more energy-efficient is a priority, as is stopping other on-site sources of emissions. Like the industry category, we must determine how to use high-carbon products like cement and steel more efficiently in buildings, even as we seek new ways to make green alternatives. Philanthropy in this sector is nascent, but there are strategies and organizations that can absorb significant investment now.

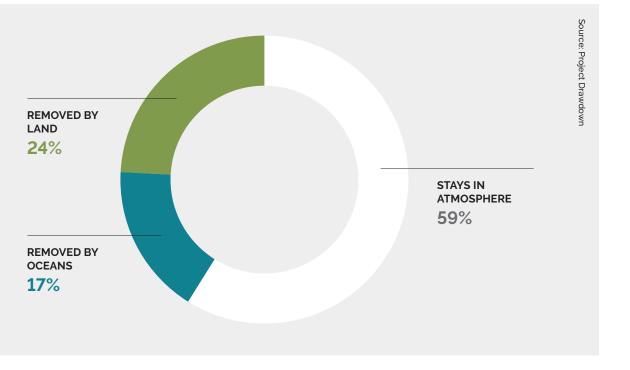
Solutions Philanthropy Makes Possible:

- Require new buildings to be carbon neutral and retrofit existing ones to become carbon neutral, such as by eliminating gas appliances.
- · Move to highly efficient heat pumps for heating and air conditioning.
- Encourage manufacturers, builders, and regulators to use clean power.
- Increase access to cooling, particularly for vulnerable populations, thus advancing racial and social justice in an overheating world.

PROTECT AND ENHANCE NATURE'S ABILITY TO STORE GREENHOUSE GASES

Approximately **41 percent of emissions** are absorbed and stored by nature: in plants, soil, and oceans. These natural sinks support the natural carbon cycle, so it's essential for forests, peatlands, oceans, and coastal areas to stay healthy and intact. We may add new sinks — for example, by restoring forests—but it can take a long time for them to be able to absorb ("sequester") significant amounts of greenhouse gases.









There are two categories of natural sinks:



LAND SINKS

Land sinks absorb and store roughly **one-quarter** of all human-caused carbon emissions in the soil, grasses, plants, and trees in systems throughout the biosphere—from forests and peatlands to wetlands and tundra. The solutions outlined in the Food, Agriculture, and Land Use section above not only help to reduce emissions; they can also help protect and sustain land sinks. Philanthropy can help to halt the clearing of these vital resources—all of which store carbon—and restore and protect them.



OCEANS AND COASTAL SINKS

Oceans and coastal sinks absorb and store approximately **17 percent** of human-caused carbon emissions through natural processes like photosynthesis and by directly dissolving carbon dioxide in seawater. This makes the water more acidic and decreases the amount of carbonate—which sea organisms like oysters, sea urchins, and corals use to form calcium carbonate, their major mineral building block. As the planet warms and oceans become more acidic, it is more difficult for these creatures to build their shells and parts of their skeletal structures.

Warmer temperatures and increased sea levels make oceans less hospitable for organisms of all kinds and reduce the ocean's ability to be part of our carbon solution. Like land sinks, ocean-based solutions have dual benefits, both reducing carbon emissions and improving the ocean's ability to absorb carbon. Philanthropy can help restore and protect important ecosystems like mangrove coasts, coral reefs, and sea beds—which both naturally store carbon and nurture aquatic life.





REMOVE CARBON REMAINING IN THE ATMOSPHERE

Eliminating emissions from fossil fuels and natural systems by 2050 Is the essential first step to avoiding dangerous climate change. However, because carbon emissions remain in the atmosphere for so long—up to 1,000 years—we will still experience warming from the emissions that have been accumulating since the start of the Industrial Revolution. A new field of carbon dioxide removal (CDR) is developing to identify natural and technological systems that can draw large amounts of carbon from the atmosphere and permanently store it, a process sometimes called "negative emissions."

Many new approaches are being developed for CDR. In addition to the natural methods described in the land and oceans and coastal sinks sections, there are also engineered CDR solutions, which capture carbon directly from the air and either transform that pollution into a product or store it. There are many types of technological CDR, in varying stages of maturity, and none have achieved significant deployment thus far. Most still require research and technological advances to become practical, usable solutions. Philanthropy is new in this area.

While there is increasing corporate and governmental interest in developing CDR solutions, philanthropy is important in helping to shape how the field develops. In particular, philanthropic funding can accelerate research, development, deployment, and scaling; ensure that development and scale-up of CDR solutions deliver benefits to the communities in which projects and the related supply chains are deployed; and do not result in additional fossil fuel extraction.

⁶ PBL Netherlands Environmental Assessment Agency (2019) *Trends in Global CO2 and Total Greenhouse Gas Emissions*.



PHILANTHROPY IN ACTION

From Coal to Clean Energy

Coal emits toxic pollutants that make people sick, contaminate water, and drive planet-heating emissions. To eliminate this threat, a **diverse coalition** led by the Sierra Club launched the Beyond Coal Campaign in 2002 to stop proposed new coal plants, retire the existing dirty fleet, address the impacts of coal mining, and replace coal with clean energy.

What was initially a state-based effort seeded by a group of small foundations grew to a national campaign and collaborative philanthropic investment of more than \$250 million as more people joined the fight.

Philanthropy enabled campaign activities at all levels, including **grassroots organizing**, **legal strategies**, **finance**, and **training and outreach**. **Research and analyses** helped determine that many plants were no longer economically viable and highlighted coal's negative health impacts. **Advocacy** was critical to influencing policy and leaders—especially locally. So was ensuring a just transition that supported workers and local economies.

The campaign has stopped more than 200 coal plants from being built and helped retire two-thirds of the plants operating a decade ago. U.S. plant closures have prevented disease and thousands of premature deaths and saved nearly \$14 billion in health care costs. Retiring plants and transitioning to renewable energy helped reduce 605 million metric tons of carbon from the air by 2020—roughly three-quarters of U.S. greenhouse gas reductions in the past decade—and improved air quality and health outcomes nationwide. Coal's share of electricity in the U.S. has fallen from 50 to less than 20 percent, and the U.S. now gets more power from renewable energy than from coal. This work has scaled and is now part of a series of global coal campaigns.

LEVERS USED:



DIVERSE COALITION GRASSROOTS ORGANIZING

Activists and organizers representing diverse groups united against a common enemy.



LEGAL STRATEGIES

Permits were challenged and clean air and water laws enforced to restrict coal projects.



FINANCE

The divestment movement led coal-financing institutions to recognize their risks.

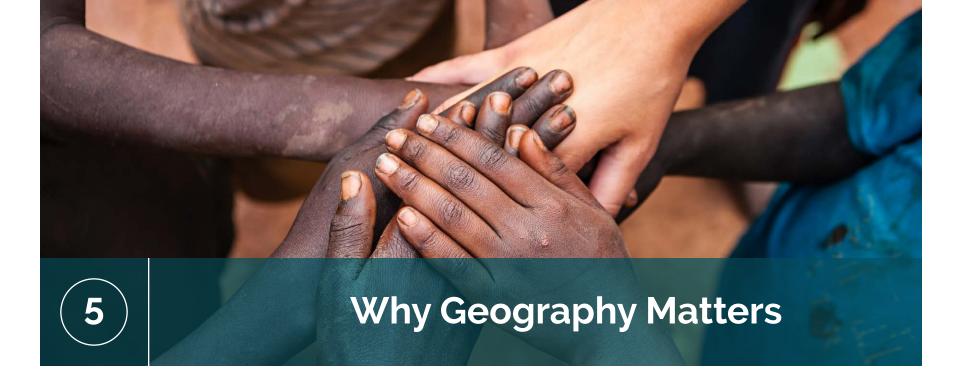


TRAINING AND OUTREACH

Lawyers and volunteers learned how to block coal permits and about health and economic impacts. Learnings were shared with other communities.

RESEARCH AND ANALYSES

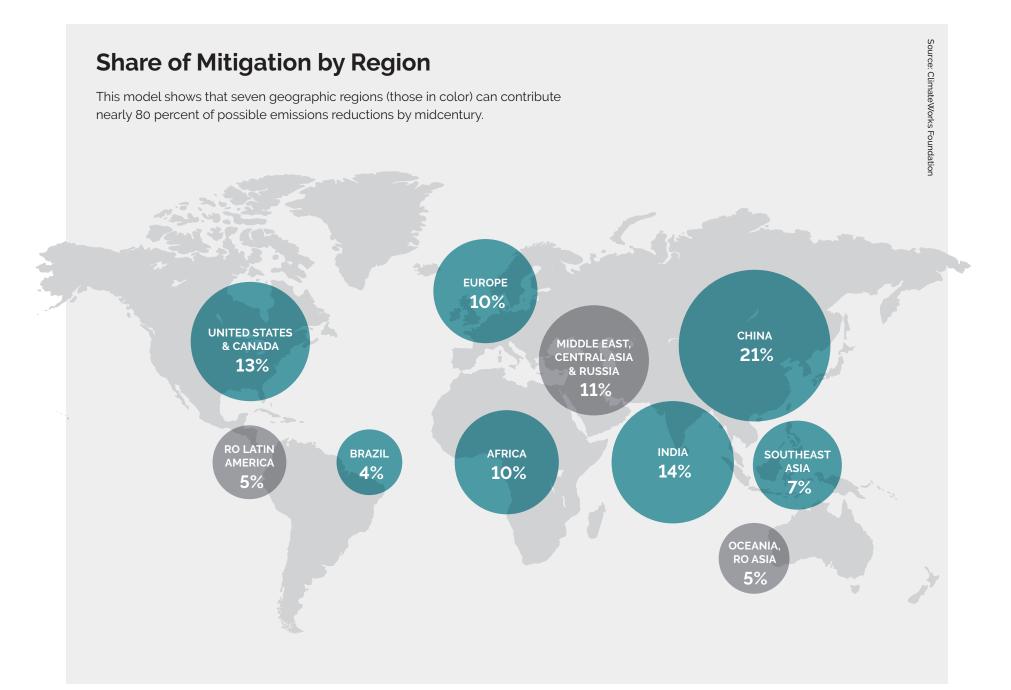
ADVOCACY



The places *where* philanthropists choose to focus are also very important. Countries experience climate in different ways and take varied approaches to the climate challenge. Some nations are championing more aggressive strategies while others must be pressured to act. Climate impacts are often felt most acutely by the people least responsible for creating the problem. This is particularly true in developing countries.

Currently, half of the world's climate emissions come from four economies—China, the United States, the European Union, and India—so philanthropic investments in these regions can result in outsized impact in reducing pollution. Emerging economies and developing countries—especially in Africa and South Asia—need a path to prosperity that is not based on fossil fuels, and philanthropic support can help ensure that countries do not lock in emissions as they develop.

For example, between 2015 and 2019, philanthropy enabled civil society to bring new coal plant construction in Southeast and East Asia almost to a standstill. Increasingly, coal plant developers are having more difficulties finding financing and insurance for new facilities, and banks from Singapore and Japan have enacted policies eliminating support for new coal power plants. However, there is still much work to be done to bring the region's energy sector in line with global climate goals.







Geography matters to advancing equity. The impacts of climate change are often felt most acutely in poor, developing countries and island nations—countries that have played a minimal role in causing the crisis. These nations need global support to reduce their emissions and adapt to the impacts of climate—another reason for philanthropists working in climate to consider giving globally.

This can easily be done in collaboration with others and through vetted organizations including regional climate foundations, which have extensive geographic knowledge and relationships. Philanthropic giving to these intermediaries—called regranters—supports many smaller groups.

REGIONAL CLIMATE FOUNDATIONS

These regranting entities take a regional approach to climate solutions, funding strategies that take regional contexts and needs into account. They can help donors navigate the complexities of international giving, such as legal requirements, and identify local organizations, connections, and movements.

African Climate Foundation

www.africanclimatefoundation.org

Energy Foundation (United States)

www.ef.org

Energy Foundation China >

www.efchina.org/Front-Page-en

European Climate Foundation

www.europeanclimate.org

Iniciativa Climática de México >

www.iniciativaclimatica.org

Instituto Clima e Sociedade (Brazil)

www.climaesociedade.org/en

Shakti Foundation (India) >

www.shaktifoundation.in

Tara (East, Southeast, and South Asia, excluding India and China)

www.taraclimate.org



PHILANTHROPY IN ACTION

Climate-Friendly Cooling for Human Health and Welfare

Since 2015, the world has experienced the six warmest years on record. Heat stress is especially pronounced in developing countries. Air conditioning and refrigeration are critical, not only for comfort, but for all aspects of life: hospitals, for example, need precise temperature and humidity controls for operating rooms and storing medicines. Cooling is energy-intensive and relies on HFCs, the super-polluting greenhouse gases that are a major cause of warming.

In 2016, a group of philanthropists collaborated and pledged \$51 million to create an action fund for cooling. The Clean Cooling Collaborative (CCC)—formerly the Kigali Cooling Efficiency Program (K-CEP)—provides countries with **technical**, **policy**, **and financial support** for efficiency and refrigerant improvements. The Kigali Amendment, an **international agreement** to reduce the consumption and production of HFCs, was a major diplomatic breakthrough in eliminating these dangerous chemicals, and the philanthropic action fund helps countries committing to make these transitions under the ambitious timeline.

Backed by philanthropy, CCC has helped to develop 27 national cooling policies and plans and catalyze additional financing. More than 190 countries have agreed to a fast phase-down of HFCs through the Kigali Amendment. In Rwanda, 40 percent of the harvest historically has been lost annually from spoiling, and rising temperatures and unpredictable weather put the food supply at greater risk. Efficiency standards for cooling can help keep food fresh and citizens healthy.

CCC's past efforts are expected to reduce carbon dioxide emissions by 4.4 billion tons by 2050, and the program continues to work for climate-friendly cooling for all. More countries acting will help to curb global emissions and create greater resilience.

LEVERS USED:



TECHNICAL, POLICY, AND FINANCIAL SUPPORT

Technical assistance grants lead to faster implementation of solutions and additional public and private investment. More than \$600 million in financing for efficient, climate-friendly cooling has been mobilized to date for implementers across many developing countries and sectors, from commercial and industrial applications to public and residential buildings.



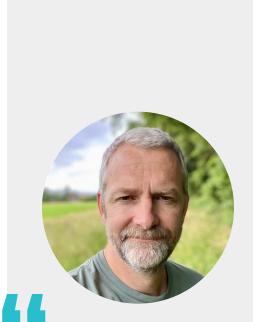
INTERNATIONAL AGREEMENTS

Multilateral treaties and global agreements motivate government action, and philanthropy helps educate stakeholders about the issues in those agreements. The Kigali Amendment updates the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, pairing the HFC phase-down with energy efficiency improvements, and targets an 80 percent reduction in the production and use of HFCs by midcentury.



Achieving net-zero emissions by mid-century requires rethinking "business as usual" and charting a bold new path forward at this crucial moment. A collective, global transformation is needed, and philanthropy can catalyze this change.

During the past decade, funders have learned a great deal about how to most effectively deploy philanthropy to tackle climate change, including what works and what does not. Based on their experience, here are some considerations to guide new climate philanthropists.



The biggest risk in climate philanthropy is sitting on the sidelines.

Kristian Parker, CLI Ambassador, Vice-Chair, Board of Trustees of the Oak Foundation

Act quickly while continuing to learn

Philanthropists must act expediently. You don't have to be an expert to begin giving. Pick a path that interests you and get started, learning and iterating on your approach along the way. There are strategies at many different phases of evolution. You may choose to invest in nascent areas where there is tremendous need for research, innovation, and discovery. Early contributions can seed important work and leverage additional resources. Alternatively, some philanthropists focus on existing, high-impact strategies or proven solutions that can immediately deploy new funding to scale results—like electric vehicles, which are close to a tipping point toward mass adoption.

Make a long-term commitment

Donors empower meaningful change when they commit to multi-year, core support that allows organizations to set ambitious goals, hire great people, pursue long-term strategies, and attract additional funding. Highly restricted, short-term investments typically produce highly restricted, short-term ideas and outcomes, especially given how little philanthropy has invested in this work so far.

To solve complex challenges, look at multi-faceted solutions

Comprehensive strategies—reflecting diverse contributions of organizations and individuals who are thinkers, financiers, scientists, practitioners, communicators, and movement builders committed to shared goals—can more effectively solve problems and achieve greater impact than individual organizations working on their own. Consider supporting a range of stakeholders and organizations working together on solutions that incorporate communications, education, and advocacy.

Join forces to bolster impact

Collaboration is key to making the massive transitions required to protect our future, and the growing community of new and experienced climate philanthropists can be a valuable resource as you chart your path toward climate action. Working with other philanthropists can help get solutions to scale faster. There are decades of shared experience and success to build upon and deep knowledge about where to go from here. As a new climate donor, you can bring fresh perspectives and new ideas that will benefit existing funders.

Center equity and justice in your giving

People of color and poor communities around the world often live the closest to pollution sources, are the most intense supporters of climate action, and have a clear and urgent vision for responding to the climate emergency in ways that build a more just society. Yet these communities are consistently under-resourced by philanthropy. Embedding racial and gender equity into climate action enables everyone to win faster and better: as people see the fruits of their efforts in tangible improvements in their lives and communities, organizations expand power and consolidate wins in virtuous cycles.

Making Equity a Core Value



There are many things that philanthropists can do to make equity a guiding principle for their giving, including:

- Recognize the power and expertise of Black, Indigenous, and people of color (BIPOC) and those in developing countries.
- · Support multi-issue groups that "multi-solve" problems affecting their communities.
- Resource BIPOC- and women-led organizations for success—providing substantial multi-year funding and general operating support. Expect non-linear progress and adaptive strategies that capitalize on wins and rethink setbacks in real-time, which flexible funding makes possible.
- Back local and regional climate campaigns that center equity to gain broad support, build public traction, and provide a strong foundation for national policies—essential to building the civic power needed to transition to a clean and equitable economy.

Empower those closest to the challenges

The best solutions are informed—and often led—by those closest to the problem. Some organizations prefer to receive funding directly from philanthropists. Another option to get funding to a broad array of groups is giving through re-granting intermediaries ("regranters"), which serve as hubs in geographic or focus areas and help donors learn together and align with others for

greater impact. Regranters have deep geographic, cultural, and issue-specific knowledge and can help donors strategize on how to support the diverse landscape of climate players. These include many groups working at the intersection of climate and other areas such as health, poverty, equity, and education.

Beyond philanthropy

While giving is the focus of this guide, philanthropists have the flexibility and are uniquely positioned to strategically deploy all types of capital toward solving the climate crisis. A portfolio approach can augment and leverage philanthropic investments to achieve even greater impact. Potential considerations include the following.

- Invest for impact: There are many opportunities to accelerate climate action through impact investing across asset types. Patient, risk-tolerant capital is needed for early-stage research and development, bringing transformative clean energy innovations to market and scaling solutions. Additionally, aligning portfolios with "climate-safe" principles and seeking positive environmental, social, and governance (ESG) impact as well as financial returns are critical to meeting the climate challenge and fueling the climate transformation we need.
- Engage in politics: Passing, implementing, and ensuring the durability of public policy requires elected leaders and policy makers who are committed to climate action. In addition to directly supporting candidates across all parties who make tackling climate change a priority, individuals can support groups engaged in issue advocacy, political organizing, and voter mobilization (in the United States, 501(c)(4) or 527 organizations). And elected officials at the national level are not the only focus; subnational leaders, like governors, mayors, state officials, and city councils also wield influence over climate policy and are accountable to voters.
- Ensure your business's practices support a cleaner, healthier planet: Businesses are stepping up by adopting science-based targets, assessing carbon footprints, using renewable resources, reducing their emissions, and eliminating harmful environmental practices. Increasingly, companies are factoring climate risk into decision making and playing a role in the policy arena.
- **Use your voice and connections:** By strategically tapping networks, connecting people, and engaging peers, philanthropists can be effective influencers and advocates. They also have the ability to exert power and inspire change as customers, shareholders, board members, and citizens.

Photo: Tenure Facility

PHILANTHROPY IN ACTION

Recognizing and Protecting Community Land Rights

Destroying forests is a significant cause of carbon emissions. More than 26 million hectares of forests are destroyed every year (comparable to 50 soccer fields per minute). While 2.5 billion people, including more than 470 million Indigenous Peoples and local communities (IPLC), customarily claim at least half of the world's lands and forests, they legally own only 10 percent, hindering their attempts to protect it. Strengthening the land and resource rights of populations whose well-being is tied to their forests is a vital opportunity to support communities and combat climate change.

The evidence is powerful: when the rights of IPLC are recognized and secured, deforestation rates are two to three times lower and carbon stocks are higher than in forests managed by other actors. Secure rights for these stewards improves ecosystem integrity, protects biodiversity, and even reduces the risk of emerging disease and future pandemics — making this approach more effective than almost any other strategy.

Philanthropy is helping to catalyze this idea through organizations like the Tenure Facility, an organization conceived of, by, and for IPLC that focuses on securing land rights. By providing financial resources and technical assistance and building grassroots capacity and political will, the Tenure Facility is helping IPLC secure the lives of the millions of people and hectares of forest at risk.

Since launching in 2015, the Tenure Facility has advanced collective security over more than 14 million hectares and is on track to secure 20 million by 2023 — benefiting 7.3 million IPLC in at least 12 countries, and helping to save at least half a billion tons of emissions in the next decade.

LEVERS USED:



FINANCIAL RESOURCES

The Tenure Facility provides financing at scale — more than 80 percent of its budget flows directly to community-led projects, growing capacity to secure land rights for Indigenous Peoples and local communities.



TECHNICAL ASSISTANCE

Technical assistance includes upgrading community knowledge and tools, including technologies for mapping territories and methodologies for land titling to make the case for legal land rights and improve land management



POLITICAL WILL

Philanthropic support helps communities build political will by developing relationships and improving collaboration with local and national governments, the private sector, and philanthropy which also helps leverage additional funding.



The evidence is irrefutable: human influence has warmed the climate at a rate that is unprecedented in at least the past 2,000 years. The negative impacts of climate change are already severe and widespread, and they will continue to escalate the longer we delay acting.

If we move quickly, we have the power to change course. The more we can expediently and proactively support the changes we need, the more we can reduce and prevent the disastrous harm of climate change on countries, economies, communities, nature, and people.

We have the knowledge we need, and solutions are increasingly affordable, but our greatest threat is inaction. The most impactful thing we can do is to act now. Philanthropy has an important role to play by effecting incredible positive change in all aspects of life, and the actions you take today will determine our future.

ADDITIONAL RESOURCES

For more about the science of climate change, the role of different sectors and geographies, and how we can reduce emissions sources and support sinks, please refer to the following resources:

Video of climate scientist Johan Rockström on how we have 10 years to avoid destabilizing the planet. **>**

Documentary: Breaking Boundaries: The Science of Our Planet

The Project Drawdown Framework shows how we can solve climate change with the technology we have today and outlines impactful options.

The National Academy of Sciences and the Royal Society: Climate Change Evidences and Causes, 2020 Update details the current state of climate change science from the leading governmental science organizations of the United States and the United Kingdom.

The Intergovernmental Panel on Climate Change (IPCC) Special Report (Summary for Policymakers) addresses the impacts of global warming of 1.5 degrees Celsius. The IPCC is the United Nations body for assessing the science related to climate change, and its data is used by many science-based organizations to model emissions and solutions.

The IPCC's **Sixth Assessment Report**, *Climate Change 2021: The Physical Science Basis*, addresses the most up-to-date physical understanding of the climate system and climate change, bringing together the latest advances in climate science, and combining multiple lines of evidence from paleoclimate, observations, process understanding, and global and regional climate simulations.

Inside Climate News Climate 101 is a database of answers to commonly asked questions.

ABOUT THE CLIMATE LEADERSHIP INITIATIVE (CLI)

The Climate Leadership Initiative's mission is to rapidly and exponentially increase climate philanthropy by connecting donors with the peers, experts, and high-impact solutions working to restore our planet and build a healthy and equitable future for all.

CLI provides philanthropists with expert guidance and insights into impactful climate solutions sourced from the broader climate community. We advise new climate philanthropists and engage those with experience to collaborate with their peers—so they can share insights and best practices, and join forces to scale big ideas. CLI helps donors connect the dots between climate and other areas where they may already be giving—such as poverty, health, education, conservation, and science, as well as in specific geographic regions.

Because CLI is fully funded by leading philanthropies, we do not charge for advisory services, nor do we raise money for our own operations or any one organization. This frees us to help philanthropists find the smartest path that addresses their interests and needs.

Examples of Advisory Services CLI Offers

- Empowering philanthropists to get started quickly.

 We enable donors to see and navigate the full climate map. CLI serves as a guide, helping philanthropists understand a solution's potential impact and accelerating the learning journey that gives philanthropists the confidence to act.
- Connecting new and experienced philanthropists with peers, experts, and leading funders. The climate challenge requires collective action. We cultivate a community where donors can learn from one another and work collaboratively to scale big ideas.
- Curating impactful giving opportunities that match interests and passions with ready-to-scale solutions.

As a trusted adviser, we help donors optimize their giving, targeting philanthropic investments to specific sectors, geographic regions, or influential levers.

