

Program strategy brief: Transportation

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Why transportation matters

Functioning transportation systems are fundamental to modern, prosperous societies. They provide a means to get to work, connect with friends and family, enable the efficient movement of goods, and catalyze economic activity. But today's transportation system also carries a large societal cost by generating roughly one-fifth of global greenhouse gas emissions causing accidents and congestion that affect lives and cost billions of dollars, producing air pollution that contributes to health problems for millions of people around the world, and leading to environmental damage due to the extraction and transportation of fuels.

This brief highlights the ClimateWorks Transportation Program strategy to transform the global transport system over the coming decade, in order to reduce its emissions to meet the goals of the Paris Agreement by 2050 — limiting global temperature rise to 2° C, while making efforts to limit it to 1.5° C. This document and others to come make up a follow-up series building upon two recent ClimateWorks Foundation publications: [Achieving global climate goals by 2050: Actionable opportunities for this decade](#) and [Funding trends: Climate change mitigation philanthropy](#).



The ClimateWorks approach to climate strategy development

Addressing a global problem on the scale of the climate crisis is an immense and complex challenge, even when only focusing on one sector. Our three-part strategy development process provides a holistic approach that can drive systemic solutions to this systemic challenge. This process starts with the **“mechanics of mitigation”** — the economic, technological, and sometimes behavioral aspects that inform a pathway toward achieving the goals of the Paris Agreement. Next we seek input from **“field intelligence”** — unique data and insights that ClimateWorks collects from the climate change mitigation philanthropy and grantee fields more broadly. We round off the process with an examination of the **“enabling levers,”** or tools, used by philanthropy and other actors to develop and implement emissions reduction strategies (see Table below for descriptions). These three key elements are vital to any climate philanthropy strategy.

What's inside this brief








In this brief, we outline climate philanthropy strategies to effectively decarbonize the transportation sector, across road transport, aviation, and shipping. Looking at greenhouse gas emissions data and modeling, field intelligence from around the world, and various levers available to philanthropy, this brief includes:

- A creative vision of what sustainable transportation can look like in 2050.
- A breakdown of where we are today, including a close examination of the mechanics of mitigation that add up to the full solution space across the transport sector.
- An exploration of the enabling levers and how they can be applied specifically to philanthropic work on transport.
- Field intelligence on how ClimateWorks and the climate philanthropy ecosystem are poised to build on recent momentum toward a more sustainable global transport system.

This brief provides a framework for philanthropic strategy development and is intended to help funders make effective investment decisions.

Definitions of philanthropy’s enabling levers

Throughout this brief, we describe “levers” as tools used by philanthropy and other climate actors when developing strategies to implement emission reduction measures. While the goal is a transition toward lower emissions, these levers are indirect, as they attempt to establish the enabling conditions for implementation of climate policies at multiple levels of government and society at large. Programmatic strategies utilize these levers to differing degrees and many deploy them simultaneously.

 Advocacy	Strong government policies are indispensable in order to enact large-scale, transformative climate change mitigation. By directly engaging with policymakers to advocate for smart and effective climate policies, the climate community can play a key role in the policy process and ultimately drive outsized impact.
 Communications	Through strategic communications, the climate community can drive engagement with a wide public audience, build awareness about the seriousness and urgency of the climate crisis, and convey what is needed to stop it. By boosting public engagement on climate-relevant topics, climate actors can indirectly encourage politicians and policymakers to enact ambitious climate policies.
 Diplomacy & governance	The years-long process of negotiating the Paris Agreement demonstrates the difficulty and importance of international climate diplomacy. By illuminating the best opportunities, advocating for smart policies, and assisting with institutional capacity-building, supporting bilateral and multilateral engagements, climate actors can help countries boost the ambition of their climate targets or assist in the design of regulations to reduce the emissions stemming from transnational or international activities.
 Field-building	To enable effective climate action, a multitude of actors (individuals, academics, investors, businesses, government) in various capacities can take on the big challenges of implementing climate solutions. For this to work well, we need a robust civil society including a thriving non-profit sector, grassroots champions, academia, informed business leadership, and opportunities for engagement between these various actors. Philanthropic support for field building and engagement across these categories can help overcome barriers, identify opportunities, and build the political will needed to enable climate action.
 Finance & markets	Climate actors can help the investment community and markets better understand the financial advantages of backing climate solutions, as well as the risk of stranded assets that lose their value due to the global transition toward a net-zero emissions future. They can also encourage investors to put their money behind positive examples and divest from climate change exacerbators.
 Innovation	Innovation and risk-taking are needed to develop and deploy the technologies required to stabilize the climate. The climate community can help commission cutting-edge research, conduct demonstration projects, and assist early deployment, helping innovators turn ideas into marketable products.
 Litigation	Without adequate enforcement mechanisms, even the smartest climate policies cannot function as intended. Climate actors can help to ensure accountability by initiating or supporting legal actions that uphold climate-relevant regulations like power plant emissions standards, building codes, Indigenous people’s land rights, and much more.



Looking back from 2050: How transport became sustainable

Looking back from 2050, we can now say with confidence that the 2020s were a significant turning point for the global transport sector. Over the past three decades, we have seen the improbable transform into the ordinary across all modes of transportation. By mid-century, emissions from the transportation sector, historically one of the biggest drivers of climate change, have all but vanished, as electric vehicles (EVs), sustainable fuels, and zero-emission ships have become the norm.

Historic moments in the early 2020s cascaded into a global movement later in the decade. Governments across all continents committed to require 100% clean, electric-drive, and emissions-free vehicles; major corporations moved to electrify their fleets; improvements to battery designs occurred in many key regions; battery and electric vehicle factories broke ground everywhere; first tens, then thousands of zero-emissions flights and ship routes emerged around the world.

The transition of the 2020s was momentous and fueled by several key factors:

- Coordination and commitment of partners across the U.S., Europe, China and India, and then a concerted push to support the rest of Asia, Latin America, and Africa, led to increasing government and business ambition and joint action, especially on enabling policies that drove trillions of dollars toward solutions that reduce transport emissions.
- Groundswell pressure from cities, local communities, and the public drive governments to act.
- There were increasing investments in advanced batteries, smart charging infrastructure, and increasing commitments of the auto industry to deliver more EVs and EV models as well as advanced batteries. Retooling production lines, advertising, and dealer networks led to a monumental market pivot, building confidence among consumers that EVs will meet their needs and desires.
- While incumbent interests in the oil and combustion vehicle industries continued opposition and misinformation campaigns for several decades, they slowly lost influence as more stakeholders from groups representing business, investors, environmental justice, health, and equity embraced the shift to affordable zero-emission transport.
- After the Covid-19 pandemic, people and companies embraced the benefits of commuting and flying less. Companies incentivized their employees to work remotely, and when commuting, to use more efficient transit, new bike lanes, and shared mobility, saving travel time and money for other priorities.
- Ambitious policies worldwide to accelerate the production of sustainable aviation fuels saw the proliferation of production facilities.

These hard-won developments ushered in massive benefits for health, climate, and the economy:

- Billions of barrels of oil were kept in the ground, and more than 150 gigatons of CO₂ never reached the atmosphere.
- Millions of lives were saved due to improved air quality, and many more millions experienced a life without respiratory illnesses such as asthma.
- Countless emerging economies broke away from oil dependency and reinvested billions to nourish a flourishing domestic renewable energy and zero-emission transport manufacturing sector.
- Roughly \$2 trillion-\$7 trillion were saved from avoided climate catastrophes, and were invested instead in the affordable, accessible, and equitable mobility that we have today.
- Fewer airports were needed, avoiding stranded climate assets and reducing noise and local air pollution in nearby communities.

This year, Beijing and Los Angeles celebrated their first year with air quality that met the highest standards set by the World Health Organization. Yesterday, the last gasoline-powered passenger vehicle was scrapped in Munich and public gas stations were shuttered in the U.S. Short-haul regional electrified flights are the norm in many places and sustainable aviation fuels are quickly replacing jet kerosene. The last fossil fuel ships, airplanes, and long-haul trucks are in their final stretch to reach zero emissions. Tomorrow and thereafter, future generations will grow and flourish in a world where clean air, basic mobility, and a safe climate are all that they will ever know.



A sustainable transport system for 2050

The world's transportation system needs dramatic transformations by 2050 in order to align with a safe long-term climate. The system we envision provides sustainable transport with equitable access for all, through electrified road vehicles as well as airplanes and ships powered by innovative clean energy. To achieve this vision will require coordinated action, increased ambition among governments and businesses, and strong grassroots support. Immense challenges remain, but success would bring massive benefits for the climate, the economy, public health, and equity and justice.

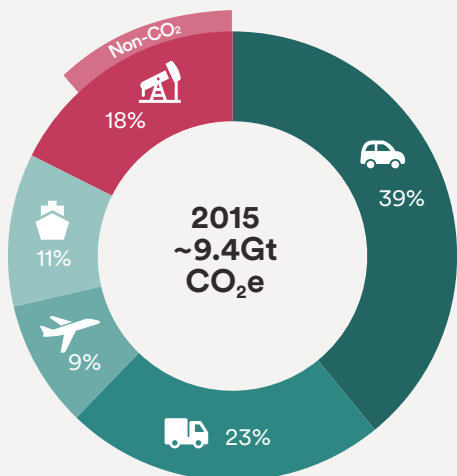
Transport emissions are projected for rapid growth

The main problem standing in the way of the sustainable future we envision is the use of oil, which makes up over 90% of energy used in transport today, with the sector accounting for roughly two-thirds of total global oil consumption. This burning of fossil fuels to power vehicles, planes, and ships comes with major societal costs, as it causes health problems for millions around the world and generates roughly one-fifth of global carbon dioxide emissions per year (around 8 Gt CO₂ per year). Upstream emissions from what we call the “fuel supply sector” — those associated with the extraction, processing, and distribution of fuels — add another 1.7 gigatons of carbon dioxide-equivalent (Gt CO₂e) emissions per year (of which, about two-thirds is non-CO₂, like methane). Across transportation, these emissions come from three key subsectors, including road transport (freight and passenger), aviation, and shipping. The first category currently makes up the bulk of transport-related emissions, but as the technology for passenger transport progresses, shipping, aviation, and freight’s share of emissions will grow substantially unless action is taken sooner. Meanwhile, all of transportation’s direct emissions are intertwined with upstream emissions — as oil demand for transportation increases, we see an increase in these emissions from the extraction, refining, and distribution of fuels.

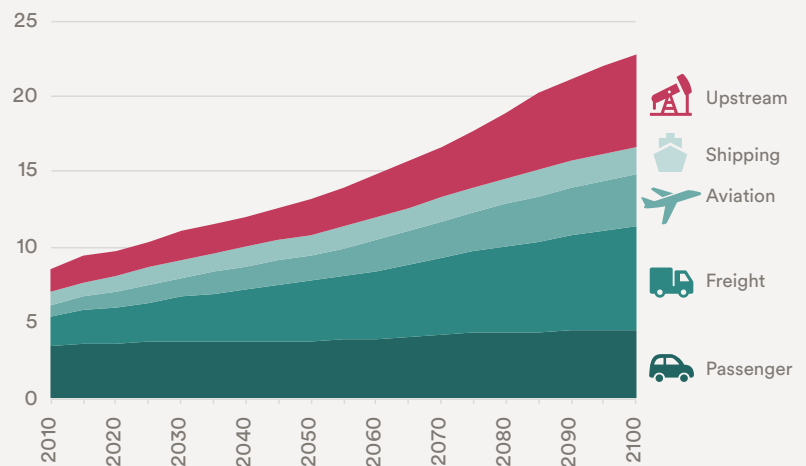
Without a concerted effort to curb emissions, trends point to significant future growth in the sector. In a reference scenario with limited climate change mitigation policies around the world, emissions in this sector grow by around 14% by 2030, 37% by 2050, and more than double by the end of the century. While all subsector emissions grow, the growth in freight emissions is highest, at nearly 25% by 2030 and more than 50% by 2050, becoming the largest-emitting subsector. Meanwhile, passenger-related emissions remain steady in a reference scenario, growing only by a few percent by mid-century, as efficiency of private vehicles and use of public transit largely offset growing demand. However, any increase in emissions, no matter how small, is a step in the wrong direction.

FIGURE 1

Transport-related emissions in 2015



Transport-related emissions 2015-2100 (Gt CO₂e/year)



Source: Reference scenario from GCAM v5.2 as seen in CWF report: Achieving Global Climate Goals by 2050. This reference scenario has a 2010 policy baseline and the end-of-century temperature outcome is around 3.5°C of global average temperature rise. This is higher than recent estimates of around 3° C.

The emissions reduction solutions

Photo by Little Plant on Unsplash

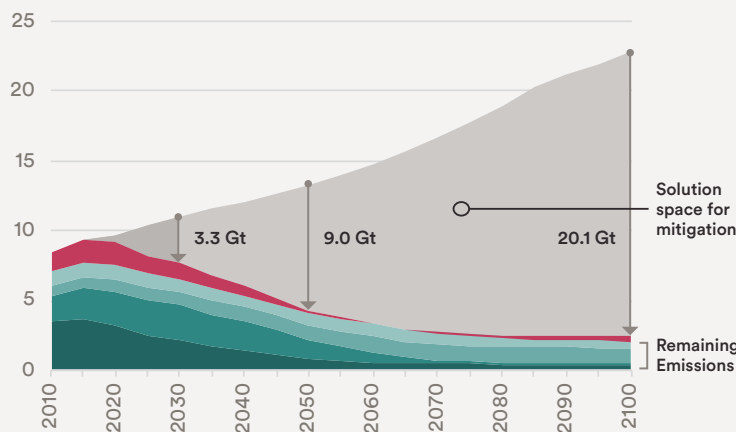
The ClimateWorks Transportation Program works to create the global conditions under which low-carbon and zero-emissions transportation outcompetes fossil fuel-powered transport, pushing toward our broad 2050 vision for the entire sector. The program’s strategies target emission reductions across all public and private transportation categories (road, aviation, and shipping) by leveraging efficiency improvements, new mobility business models, individual behavior and interlinked systems in urban mobility, zero-emission vehicles, and advanced fuels.

Transformation of the transportation system will require ambitious public policies at the global, national, and subnational levels, empowered city leadership, engaged business stakeholders, reduced barriers to commercial success, and an engaged public. The Transportation Program focuses on strategies coordinated within and across the largest and fastest growing markets to bolster innovation, unlock economies of scale, reduce technology costs, and enable a growing global market for clean, affordable, and zero-emission transportation, consistent with global climate goals.

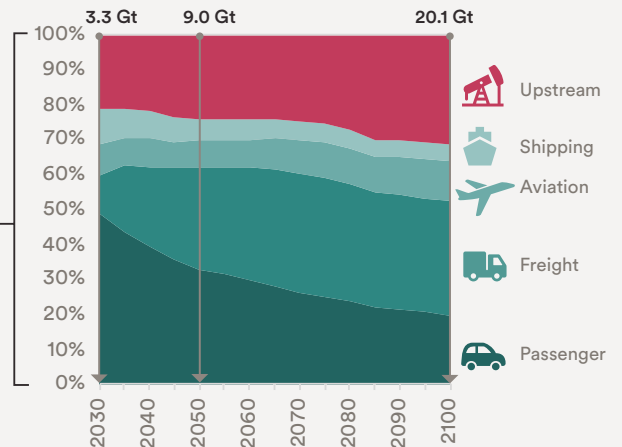
Done right, reducing emissions from the transportation sector will simultaneously deliver better air quality and health outcomes, including reduced respiratory diseases and premature deaths associated with local pollution, and save billions of dollars in reduced transportation costs. By 2050, this will result in around 13% of the total needed annual emissions reductions to remain on track to achieve Paris Agreement targets (around 9 Gt CO₂e out of 71 Gt CO₂e required by 2050). As measures scale up, the share of reductions grows to one-fifth of needed reductions by the end of the century (around 20Gt CO₂e out of 100 Gt CO₂e required by 2100).

FIGURE 2

Transport-related emissions and mitigation for 1.5° C of warming (Gt CO₂e/year)



Annual mitigation shares 2030-2100 (% of transport mitigation)



Source: Reference and 1.5° C scenario from GCAM v5.2 as seen in CWF report: Achieving Global Climate Goals by 2050. The difference between the Reference and 1.5° C scenario by 2050 is around 71 Gt CO₂e and with reductions of around 9 Gt, transport is around 13% of the solution space. This share grows in the second half of the century. Passenger-related emissions are nearly 50% of reduction in the nearer term as solutions for other sub-sectors scale over time.

Road transport solutions

In order to reduce the negative impacts of road transportation and achieve global climate goals, all road transport will need to transition to zero-emissions battery electric power and fuel cell vehicles within the next few decades. Coupled with clean power generation, this will slash climate pollution from road transportation by over two-thirds by 2050, providing us with one of the most powerful, globally scalable ways to help achieve a safer climate. A shift to electric-drive vehicles will bring enormous benefits, including reduced local pollution and improved health, especially for marginalized communities; more affordable and efficient vehicles; greater utilization of renewable energy; local jobs; and stronger economic resilience.

Due to supporting policies and expanded production, batteries and electric motors are projected to reach cost parity with combustion engines by 2025. Dramatic progress in battery technology and reduction in price have made this transition possible faster than most experts imagined only a few years ago. Reaching these outcomes, however, requires a global campaign aimed at policymakers, businesses, and consumers to drive market expansion and adoption, which will lower costs through economies of scale and greater competition, leading to innovations in design and manufacturing.

ClimateWorks supports a global set of partners to secure smart government policies, boost business action, and empower people to accelerate the EV transition and phase out polluting vehicles. Through the global **Drive Electric Campaign**, we focus on the U.S., Europe, China, and India, which represent almost 70% of global demand and have an outsized impact on reaching the tipping point when electric vehicles will outcompete combustion vehicles globally.

Complementary to electrification, we also support efficient and equitable urban mobility to reduce the need for personal vehicles. This includes the most efficient urban travel such as clean transit, biking, walking, and shared mobility; greater connectivity between transit and shared mobility, such as bike and e-scooter sharing; and equitable restructuring of public space toward a transport system that is accessible to all people.

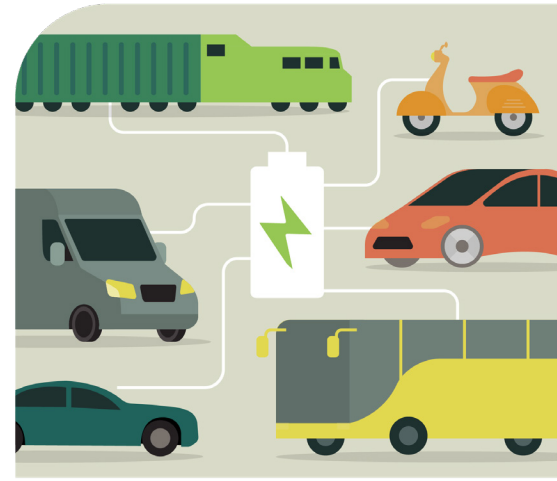
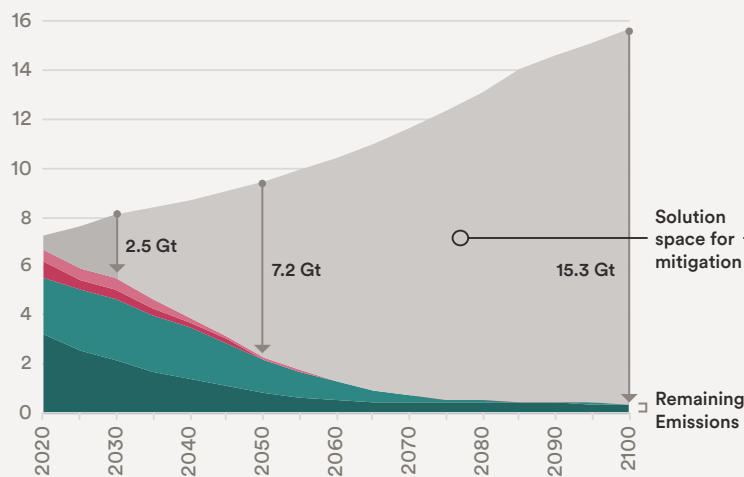
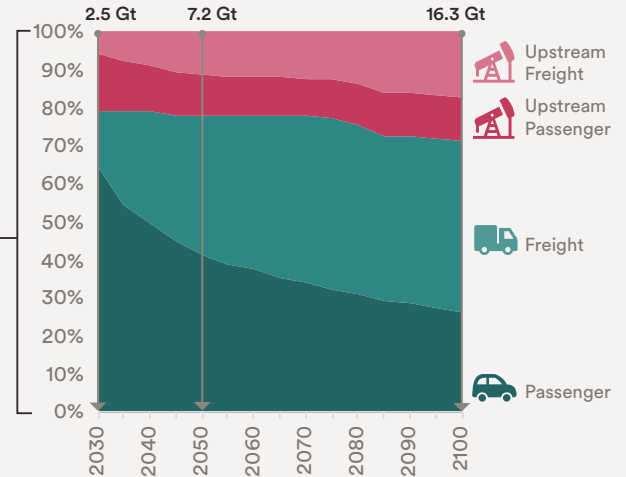


FIGURE 3

Road transport emissions and mitigation for 1.5° C of warming (Gt CO₂e/year)










Annual mitigation shares 2030-2100 (% of transport mitigation)



Source: Reference scenario from GCAM v5.2 as seen in CWF report: Achieving Global Climate Goals by 2050.

Road transport: enabling levers in action

 Advocacy	California's Advanced Clean Trucks rule was strengthened and passed in 2020 with support from a coalition of groups representing environment, research, health, equity, labor, communications, and business leaders. This rule is now a model for governments around the world.
 Communications	Coordinated strategic communication is raising global awareness of the many benefits of EVs in order to inspire enabling government policies, as well as business and consumer adoption. The Drive Electric Campaign website provides a shared resource to highlight the progress made by partners.
 Diplomacy & governance	Foundation-supported partnerships across the field have quadrupled, enabling new commitments, including 18 governments committed to 100% sales of zero-emission passenger vehicles within the next decades; 35 cities committed to only buying electric buses by 2025 and set up zero-emission zones; over 100 companies committed to buy 100% electric vehicles by 2030; and many others.
 Field-building	The Drive Electric Campaign and partners now include over 70 organizations providing research, advocacy, technical assistance, and coordination. These organizations are part of the Global EV Advisory Group that collaborates on identifying opportunities for engagement.
 Finance & markets	Diverse coalitions are securing billions of dollars in public and private investment, including in utility infrastructure investment for EV charging, incentives for EV purchases, and investment in new manufacturing for vehicles and batteries. Other coalitions are working directly with investors to raise awareness on the opportunity to shift investment to cleaner transportation options.
 Innovation	As a result of sustained messaging on the benefits of EVs and independence from oil imports, India approved a National Program on Advanced Chemistry Cell Battery Storage, which will provide billions of dollars for battery innovation.
 Litigation	Investigative research by key partners led to the exposure of cheating by Volkswagen (in the so-called "Dieselgate" scandal) and other automakers on emissions tests. These revelations drove litigation and led to the adoption of goals to phase out combustion vehicles, stronger CO ₂ standards, testing, and enforcement worldwide.



Aviation solutions

Before the Covid-19 pandemic, demand for air travel was booming. Globally, airlines carried 4.3 billion passengers in 2018, and by 2036, this was expected nearly to double to 8.2 billion, with over 50% of that growth coming from the Asia-Pacific region. At around 1 Gt CO₂e, aviation emissions account for around 2% of global emissions annually. That share is poised to grow as demand for aviation — in most cases, the most emissions-intensive means of traveling — doubles or even triples by 2050 and continues to grow thereafter. And while Covid-19 paused this growth allowing for an inflection point for individuals and businesses, this dip in demand might prove temporary.

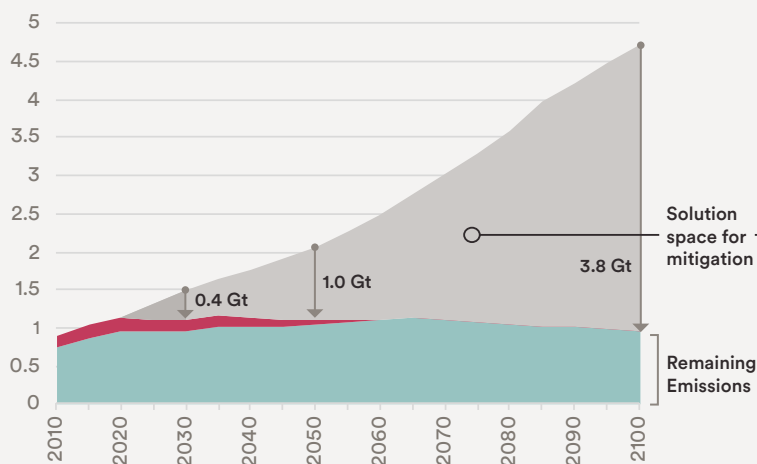
ClimateWorks leads a global philanthropic strategy to address aviation’s climate impacts by supporting smart policy reform to ensure pricing that reflects the sector’s climate impacts, advancing innovative low-carbon aviation technologies like sustainable aviation fuels and innovative new aircraft, and organizing and mobilizing public and corporate pressure to accelerate commitments to transformative climate action in the sector.

In order for the aviation industry to align with the Paris Agreement, ClimateWorks partners with the **International Coalition for Sustainable Aviation (ICSA)**, which envisions that first, governments will need to commit to a 50% emissions reduction by 2050, compared to 2005 levels, through aggressive fleetwide fuel efficiency improvements, accelerated uptake of certified sustainable aviation fuels, and policies that reduce the amount of air travel demand. This still leaves a substantial mitigation gap that can be addressed through ambitious policies to avoid locking in additional emissions growth, such as appropriate pricing of aviation emissions (taxation), moratoriums on airport expansion, supportive sustainable aviation fuel policies (including exploring the use of carbon dioxide removal technology like direct air capture as an input to fuels), and inclusion of all aviation emissions (international and domestic) in Nationally Determined Contributions to the Paris Agreement.

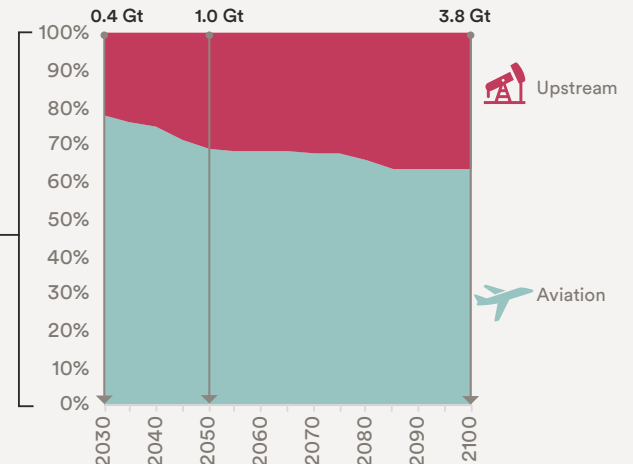


FIGURE 4

Aviation-related emissions and mitigation for 1.5° C of warming (Gt CO₂e/year)



Annual mitigation shares 2030-2100 (% of transport mitigation)



Source: GCAM v5.2 as seen in CWF report: Achieving Global Climate Goals by 2050. The ICSA vision goes beyond the reductions modeled but requires scaling of technologies not yet incorporated into the modeling framework. Metrics for non-CO₂ emissions related to contrails are not included, but have been shown to have an additional trapping effect for thermal radiation.

Aviation: enabling levers in action

	Advocacy	The European Commission published a report in late 2020 confirming the non-CO ₂ climate effects of aviation and proposing potential measures such as sustainable aviation fuel mandates, rerouting, and aviation engine standards.
	Communications	U.K. NGOs mounted a successful counternarrative to the domestic aviation industry's requests for financial support during the Covid-19 crisis, earning wide news coverage of their demands to make the funding conditional on meeting climate objectives, as well as for a transition to sustainable jobs.
	Diplomacy & governance	ICSA demanded enhanced transparency in policymaking by the International Civil Aviation Organization (ICAO), which led the ICAO Council to publish meeting agendas, offset program approvals, Advisory Board recommendations, and public comments, a wholly new step for the historically secretive organization.
	Field-building	In 2020, ClimateWorks and Oak Foundation hosted NGOs from across the EU to co-create strategies for cleaner aviation, resulting in the development of several new aviation climate projects launching in 2020 and 2021.
	Finance & markets	In Europe, an airline bailout tracker was used to monitor the substantial amounts of aid going to the aviation sector. The resulting public scrutiny was important in ensuring governments remained committed to important climate legislation, but also resulted in some conditionality being attached to the bailout funding. For example, Lufthansa must commit to aligning its public advocacy (lobbying) with EU climate objectives.
	Innovation	NGO participation in the U.K. government's Jet Zero Council led to terms of reference, including work on the necessary policy and regulatory framework to drive innovation.
	Litigation	The U.K. Court of Appeal ruled that the government's policy in support of Heathrow Airport expansion was unlawful because it failed to account for climate change. This put the brakes on expansion while other net-zero emissions legislation was being passed, created a precedent for considering the climate impacts of flights in the development processes, and the court ruling said the government must take a precautionary approach to the impacts of non-CO ₂ emissions.



Shipping solutions

If the shipping industry were a country, its greenhouse gas (GHG) emissions would be nearly equivalent to those of Germany — about 2.4% of the global annual total, and rising. Ships also release particulates, including sulfur and nitrogen oxides, which cause serious health impacts, and black carbon, which has a direct warming impact in sensitive environments like the Arctic.

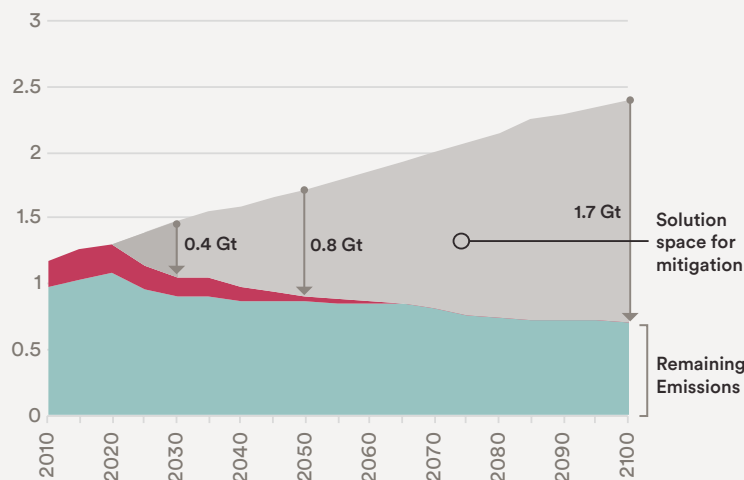
After years of dragging its heels on climate action, the member states of the International Maritime Organization (IMO) came to an initial emissions strategy in April 2018, which calls for an “at least 50%” cut in GHG emissions by 2050 (and 70% of CO₂). Achieving zero-emission vessels requires a massive change to the fuels and propulsion systems in a sector with slow capital turnover, as ships built today will operate decades into the future. And yet, new research on efficiency, as well as the use of batteries, sails, hydrogen, and ammonia, are beginning to change the conversation about what is possible.

ClimateWorks has convened grantees and partners working on marine shipping for a decade, and with support from partnering foundations, we created the **Climate Emergency Shipping Coalition (CESC)**. This group of 21 expert organizations aims to decarbonize ships by 2050, achieving immediate reductions consistent with the Paris Agreement. The joint strategy aims to advance supportive IMO policy to back its GHG reduction plan; to work on technology development and finance in fuel supply, ship design, and propulsion type; and to use local and regional leverage points like ports to foster the cooperation of shipbuilders, shipping companies, clients, regulators, and the public at large.

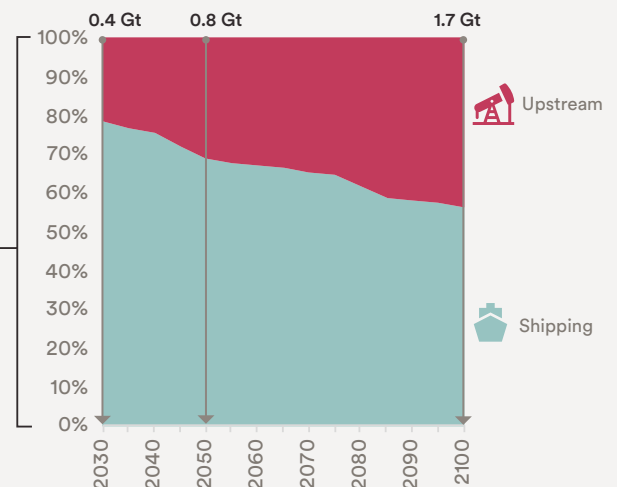


FIGURE 5

Shipping emissions and mitigation for 1.5° C of warming (Gt CO₂e/year)









Annual mitigation shares 2030-2100 (% of transport mitigation)



Source: GCAM v5.2 as seen in CWF report: Achieving Global Climate Goals by 2050. The IMO strategy envisions larger reductions than what is seen here. Recent IEA (ETP 2020) modeling indicated an additional 0.28 Gt reduction by 2050 due to the inclusion of fuels like ammonia and hydrogen, which are not yet in the GCAM modeling framework. This suggests a greater opportunity for reductions with further advancements on fuels.

Shipping: enabling levers in action

	Advocacy	In November 2020, the IMO approved amendments to the Marine Pollution Convention (MARPOL), paving the way for the introduction of an Energy Efficiency Design Index for existing vessels.
	Communications	A robust communications infrastructure is developing under CESC to educate ship owners, operators, companies, regulators, funders, and investors on the technological options and innovative finance mechanisms for maritime decarbonization.
	Diplomacy & governance	The IMO's 2018 GHG strategy set a positive tone for decarbonization, but implementation challenges remain. The Shipping High Ambition Coalition (SHAC), works with key IMO member states to push others to adopt more stringent measures. SHAC is also working with the COP 26 secretariat to develop sector goals.
	Field-building	Partnerships within CESC, progressive industry partners, and IMO champion states are emerging. As of the end of 2020, 28 financial institutions had signed up to the Poseidon principles aimed at driving zero-carbon investments in the maritime sector; grantees launched Cargo Owners for Zero Emissions Vessels; and CESC members are contributing to the industry's Getting to Zero Coalition.
	Finance & markets	There is growing alignment among shipping financiers on the Poseidon principles. In 2020, an additional 17 shipping charterers signed on to the principles, and member finance institutions applied the principles in their engagement with shipping clients to close over \$1 billion in Poseidon-related transactions.
	Innovation	Efficiency, batteries, sails, hydrogen, ammonia, and other fuels are the subject of significant investigation by industry and government, with new initiatives from the EU, leading countries, and ports. CESC members are helping the field navigate tricky technical, economic, and environmental issues among the options.





Transportation funding trends

A field poised to act before it is too late

Between 2015-2019, transportation received around 5.5% of all tracked foundation funding for climate change mitigation. This totals around \$415 million during that timespan, or roughly \$80 million per year (see Figure 6). Funding for transportation has grown in recent years, from approximately \$70 million in 2015 to roughly \$100 million in 2019.

Around two-thirds of this funding is dedicated to the road transport sector, roughly split between the categories of zero-emissions vehicles and urban mobility. Aviation, shipping, and other cross-sectoral strategies make up the remaining one-third. There are around 40 funders active globally on road-related strategies, 11 active on shipping, and only three active on aviation. This means that while funding to the transport sector needs to be scaled in general, this need is especially apparent for shipping and aviation.

Geographically, China, Europe, and the U.S. accounted for roughly two-thirds of tracked transportation funding from 2015-2019 (see Figure 7).

The remaining one-third includes funding in India, Latin America and other regions or global efforts. This split reflects the fact that existing philanthropic strategies are focused on the world's largest markets.

ABOUT OUR DATA: In order to help the philanthropic community respond to the climate crisis, ClimateWorks Global Intelligence provides insights to support climate funders in building and executing transformative climate strategies. As part of this service, ClimateWorks maintains the Climate Funding and Grantee Landscape, which reveals climate strategies, grants, and funding flows from major foundations. It is the only real-time, globally comprehensive view of foundation action for climate change mitigation. Here, we highlight key Funding and Grantee Landscape data from 2015-2019 across all transportation sectors, highlighting key trends for funders to consider as they develop strategies for transport decarbonization.

FIGURE 6

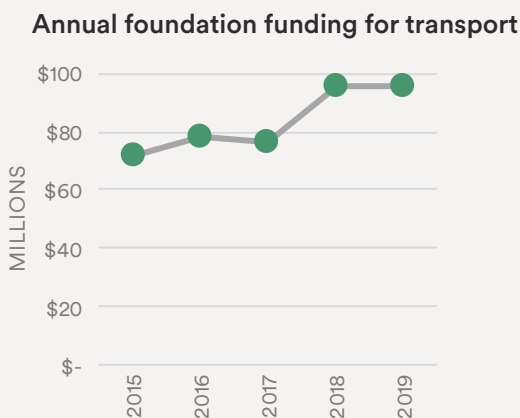
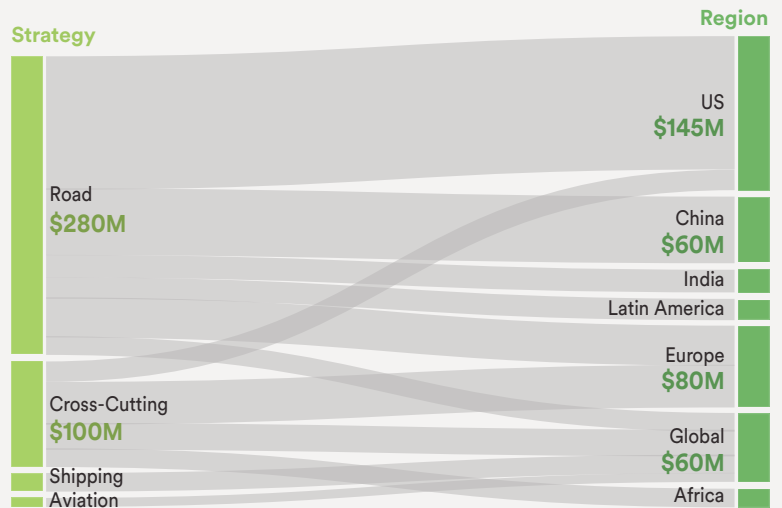


FIGURE 7

Foundation funding by strategy and geography, 2015-2019



Funding by region is based on geography of intervention, not the geography of the funder or recipient. If a U.S.-based grantee receives funding from a U.S.-based funder for work in Europe, this would be counted toward "Europe." "Road" strategies include work focused on vehicle efficiency, zero-emission vehicles, and urban mobility. For more on global funding trends, see our 2020 report [Funding trends: Climate change mitigation philanthropy](#).

Over the last five years, the ClimateWorks Transportation Program and its partners have assembled a global group of over 500 partners working together to accelerate markets for electric vehicles, alternative fuels, and low-emission planes and ships. Proven coalitions are in place and ready to scale collectively. In any given year, there are between 200-250 grantees actively working on transportation. As with any sector, there are shifts in terms of the active players and their strategies, resulting in roughly 70-90 new grantees entering the space each year (See Figure 8).

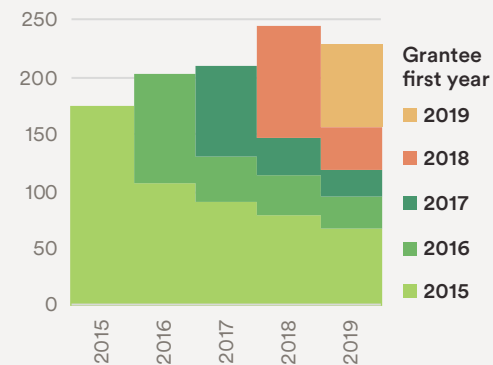
The global nature of aviation, shipping, vehicle manufacturing, and component supply chains means that this industry responds to global policy and market signals, especially within major markets. By simultaneously working within and across the key global markets accounting for most of the demand, we can catalyze the tipping point when sustainable transport options outcompete combustion-based transport in the market in a relatively short period of time. Our partners' work over the last five years has demonstrated rapidly growing momentum for this cause, but now is the time to accelerate these global trends to speed transitions.

There is no time to delay, as the actions we take over the coming 10 years will have long-term ramifications for the climate decades into the future. Despite recent progress driven by our coalitions, success is not inevitable, and further funding and action is needed to achieve a transition to clean transportation at the speed and scale needed for a safe climate. This will require further effort, more resources, and more partners. We invite others to join this exciting effort to build a more sustainable transportation system that meets the needs of people and the planet.

[Contact us](#) to find out more about our programmatic work across the transport sector, our partner-driven coalitions, and the climate philanthropy strategy development process.

FIGURE 8

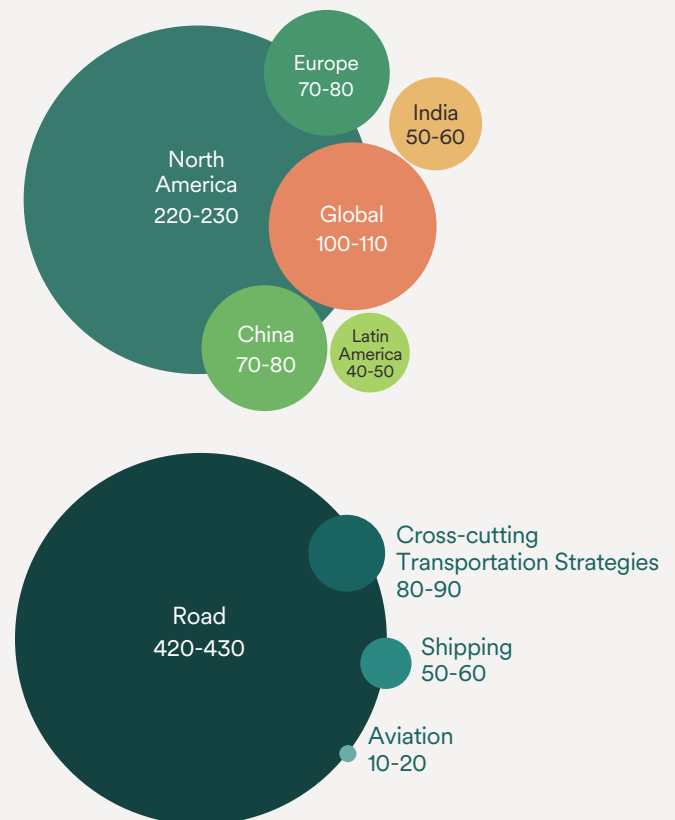
Active transportation grantees per year



Between 200-250 grantees are active each year. There is a cycle of grantees entering the field so that in 2019 around a third of grantees were new, around a third were active since 2015, and another third entered in the years between. In total there are around 500 grantees.

FIGURE 9

Transportation grantees by region and strategy



This figure shows grantee counts by the project focus of their work. A grantee receiving funding for projects focused on multiple regions and/or strategies will be counted under each region and/or strategy. The "Global" regional grouping includes funding with a global or transnational focus and/or work that spans multiple regions.



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