KIGALI
COOLING EFFICIENCY PROGRAM

Scaling up clean cooling for all

Kigali Cooling Efficiency Program impact report (2017-2021)

NOW THE
Clean Cooling COLLABORATIVE

Contents

Laying the groundwork for greater impact

Five years ago, 17 foundations and individual donors committed $50 million to secure one of the most significant climate agreements to date. The immense value of the Kigali Amendment to the Montreal Protocol to phase down the production and consumption of harmful hydrofluorocarbons (HFCs) was clear to all in 2016. The Kigali Cooling Efficiency Program (K-CEP) provided a unique opportunity for funders working together to build on that moment and pair high-efficiency targets with this transition to more climate-friendly refrigerants.

As we look back on the last four years, we can undoubtedly be proud of what K-CEP has accomplished during its first phase. The Results Framework and the quantified greenhouse gas emissions reduction estimates demonstrate the program's direct impact. And we are gathering increasing evidence of positive ripple effects beyond the results framework, including elevating clean and efficient cooling as a top-tier mitigation opportunity in the agenda of global decision makers. The K-CEP Funder Steering Committee members and I also applaud the exceptional efforts of the K-CEP Secretariat and the grantee community in their efforts to raise the profile of cooling, while also demonstrating pathways to spark transformational market changes and lock in emissions reductions in the near term.

This is an historical moment for the program, as we conclude Phase I, and the program matures into a strategic direction that is even more focused on maximizing emissions reductions, elevating cooling as an equity and development priority, and applying a more holistic approach to transforming the cooling sector.

We must remember what is at stake. **The Kigali Amendment has the potential to avoid up to 0.4° C of global warming by the end of the century, with the enhanced energy efficiency of cooling doubling those climate benefits.** We simply cannot afford to not pursue this opportunity to its fullest extent.

We're excited for the work ahead and are committed to building on the successes of K-CEP Phase I. We've set a promising runway, and **now is the moment to double down** to ensure we see follow-through on mitigation commitments and accelerate replication of successful policies, finance models, industrial conversion, and demonstration projects. **Equitable net-zero emissions cooling is technologically feasible, but we must continue to raise the pace of this transition so the sector is fundamentally transformed.**

Fanta Kamakaté

Senior Program Officer, Climate and Energy, Pisces Foundation and Chair of the K-CEP Funder Steering Committee (FSC)

K-CEP's impact over our first four years

As temperatures rise at a devastating pace, global urbanization progresses, and incomes around the world grow, demand for cooling is increasing exponentially – whether for survival during a heatwave, food storage, medical necessities, or other needs. We're stuck in a cycle in which our voracious appetite for cooling feeds global warming, which then creates desperate demand for yet more cooling. With cooling demand on an upward trajectory, it's also slowing progress toward decarbonization of the energy sector. For perspective, last year, new electric load from air conditioners (ACs) eclipsed newly installed solar capacity. There's no question that the cooling sector must significantly cut its emissions.

Looking back over the past four years, I'm incredibly proud of our program and partners for demonstrating the impact we can have on mitigating emissions from the cooling sector and elevating the importance of access to cooling. **Since 2017, K-CEP has successfully allocated $50 million to 54 partner organizations**. We helped grow the field and created infrastructure and momentum for continued growth. We established a coalition to mobilize governments, industry, financial institutions, and businesses to act on cooling. We enhanced our cooling knowledge base, built networks to power collaboration, and led a range of influential initiatives and partnerships. We raised the global profile of the cooling problem and its solutions. We also achieved tangible results. Based on analysis from the International Energy Agency (IEA), **K-CEP's partners have locked in or committed to reduce 2.4 gigatons (Gt) of CO2 emissions by 2050, with additional policies and plans anticipated, for a total expected impact of 4.2 Gt CO_2.** This program demonstrates that with sufficient resources and a strong and steady commitment from funders, governments, and partner organizations, we can change perceptions and move the needle on important issues.

So much of K-CEP's work – from energy audits to painting cool roofs – requires travel and face-to-face engagement, yet our partners proved to be

incredibly resilient and innovative in working through the challenges posed by Covid-19. We're humbled by their commitment and dedication and applaud their achievements, particularly during this global disruption.

Despite the incredible achievements of the last four years, the work is far from over. In fact, our work in many ways has shed a brighter light on all there's still to do to address the cooling challenge, particularly as extreme heat events are on the rise.

As I write this, the Northern Hemisphere is yet again experiencing record-breaking heat. Heatwaves are wreaking havoc on communities, especially the most vulnerable and marginalized people, be they rural farm workers in India or residents in redlined communities in the United States. The urgency of curbing greenhouse gas emissions is real, and to do so for the cooling sector is particularly crucial as the need for cooling continues to grow.

Now is the time to increase our investment in and commitment to this issue.

Our planet is warming. Let's cool it together.

Jessica Brown
Director, Kigali Cooling Efficiency Program

K-CEP impact in numbers

4.2 $GtCO_2$

avoided emissions by 2050 from cooling efficiency policies and plans

5.2 $GtCO_2$

avoided emissions by 2050 from advocacy work on fluorinated gas (F-gas) policy[1]

21

National policies proposed, adopted, and/or implemented

9

National Cooling Plans (NCPs) published

$600M+

Investment mobilized

100+

Cool Coalition partners driving change in the cooling sector

99

Business partnerships

54

Partner organizations

1 With support from K-CEP, NRDC worked diligently to help secure the passage of the U.S. American Innovation and Manufacturing (AIM) Act, which mirrors the requirements of the Kigali Amendment and directs the U.S. EPA to reduce HFC emissions by 85% over 15 years. The AIM Act, if implemented and complied with, will save 5.2 billion metric tons CO2e thru 2050, equal to taking 1 in every 7 cars off the road.

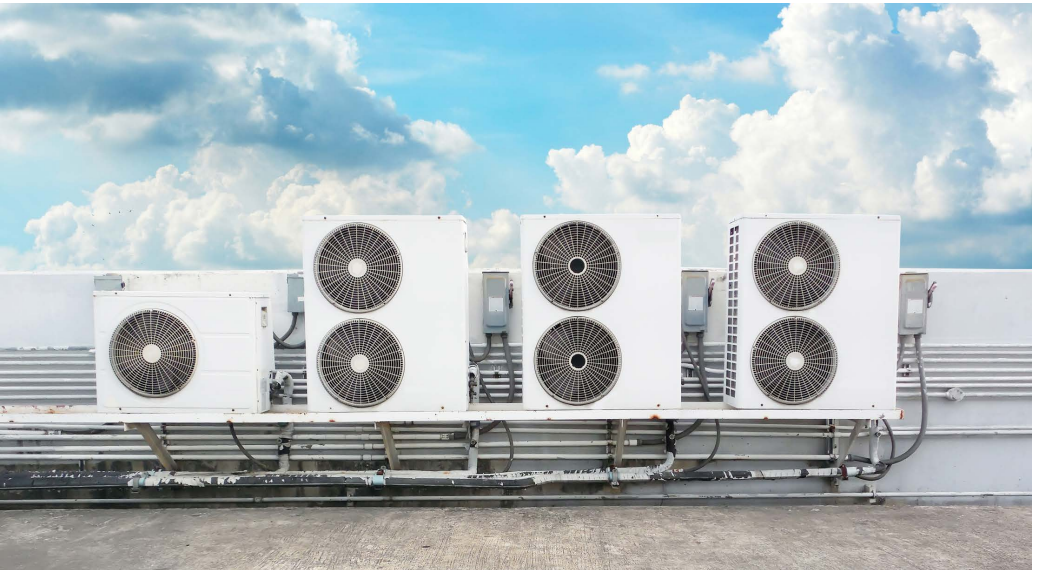
K-CEP history and approach

What K-CEP set out to do

In 2016, a group of energized funders (see Secretariat and Governance section) collaborated ahead of the Montreal Protocol meeting in Kigali, Rwanda and **pledged more than $50 million to create the largest-ever fund of its kind for action on efficient, climate-friendly cooling**. The following spring, K-CEP was born under the management of a new Secretariat, assembled by and housed within the ClimateWorks Foundation.

Under the Kigali Amendment to the Montreal Protocol, 197 countries committed to cut HFC production and consumption by more than 80% by midcentury. The Kigali Amendment has the potential to avoid up to 0.4°C of global warming by the end of the century, with the enhanced energy efficiency of cooling set to double the climate benefits.

The K-CEP Secretariat was charged with strategically programming the funds to advance appliance efficiency reforms alongside efforts to support the implementation of the new global HFC phasedown under the Kigali Amendment. Activities focused on developing countries.



K-CEP grants fell into four key areas or work:

Institutional Strengthening for Efficiency

Helping countries and companies integrate improvements in energy efficiency with their F-gas transition agendas. This work leveraged one of the most successful global climate treaties, the Kigali Amendment to the Montreal Protocol. We have supported the development of NCPs, which are policy roadmaps for curbing emissions from the cooling sector. We have also co-funded industrial conversions of cooling appliance manufacturing lines to help producers upgrade their appliances to be more energy efficient and climate-friendly.

Policies, Standards, and Programs

Supporting the development of national and corporate energy efficiency cooling policies, standards, and programs. We have utilized policies like Minimum Energy Performance Standards (MEPS), voluntary and mandatory labeling, and government incentive programs to help guide the direction of overall consumer demand and lead markets toward more efficient, climate-friendly, and cost-effective products.

Finance

Investing in initiatives that accelerate the scaling-up of efficient, climate-friendly cooling and providing grants and technical expertise to banks and investors to help mobilize public and private investments. We have also collaborated with governments to introduce consumer-targeted financial incentives, such as on-bill financing and national rebate programs.

Access to Cooling

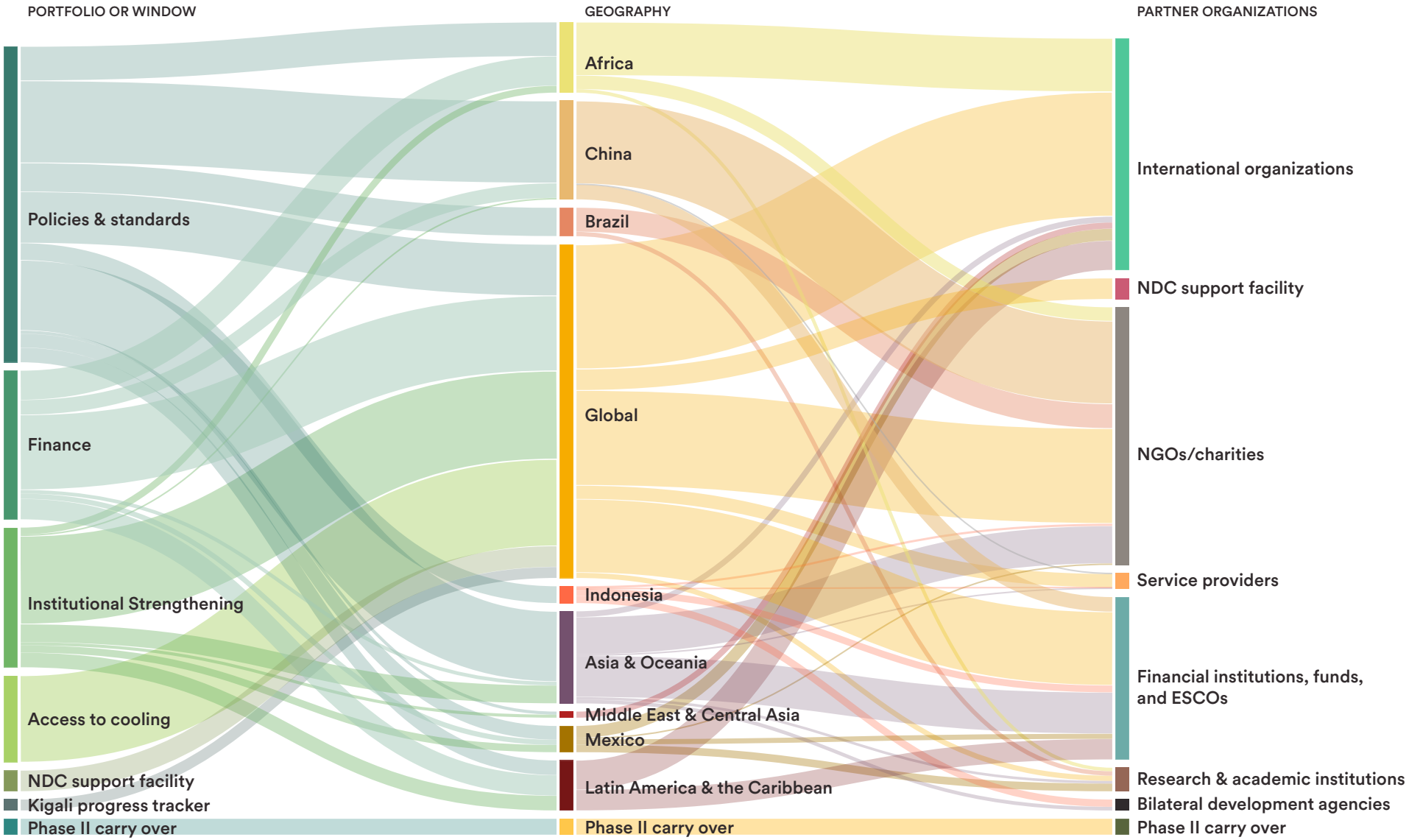
Elevating the profile of cooling as a development and equity priority for the most vulnerable communities around the world. We have advocated for increased access to cooling and supported pilot projects on the ground to demonstrate proofs of concept and identify pathways to scale up locally-owned cooling solutions.

We invested in 57 countries

K-CEP distributed over $50 million to global programs, projects, and initiatives that advance efficient, climate-friendly cooling.

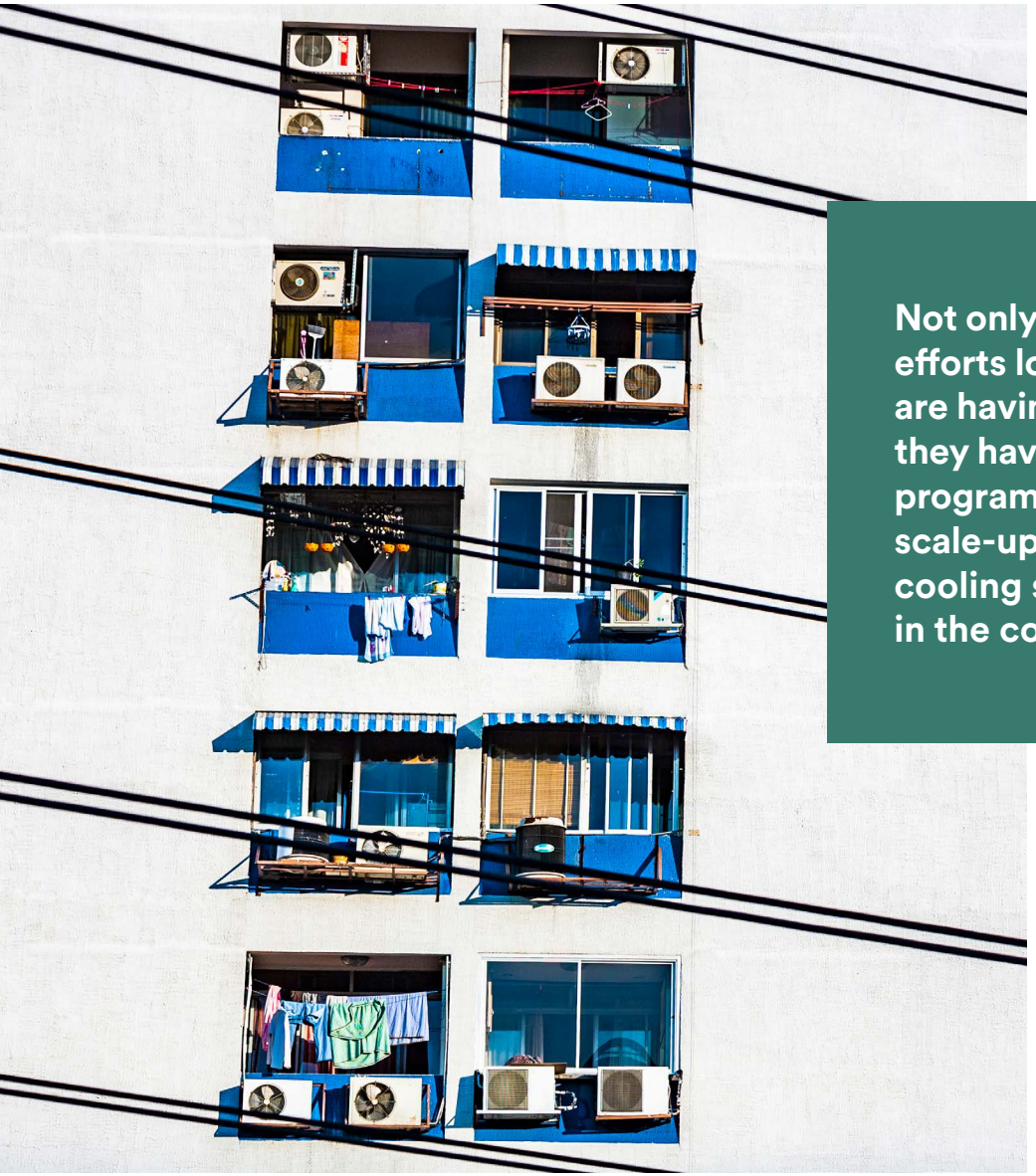
Argentina
Bahamas
Bangladesh
Barbados
Benin
Brazil
Burkina Faso
Cambodia
Cape Verde
Chile
China
Colombia
Cook Islands
Costa Rica
Cote d'Ivoire
Cuba
Dominican Republic
Ecuador
Egypt
Ethiopia
Ghana
Guatemala
Guinea Bissau
India
Indonesia
Jamaica
Jordan
Kenya
Lebanon
Malaysia
Mali
Marshall Islands
Mexico
Morocco
Niger
Nigeria
Pakistan
Palau
Panama
Papua New Guinea
Philippines
Rwanda
Saint Lucia
Senegal
Sierra Leone
Solomon Islands
South Africa
Sri Lanka
Tanzania
Thailand
Togo
Trinidad & Tobago
Tunisia
Uganda
Uruguay
Vanuatu
Vietnam

K-CEP investment flows over four years



For more details, please see K-CEP grants list in the Annex section.

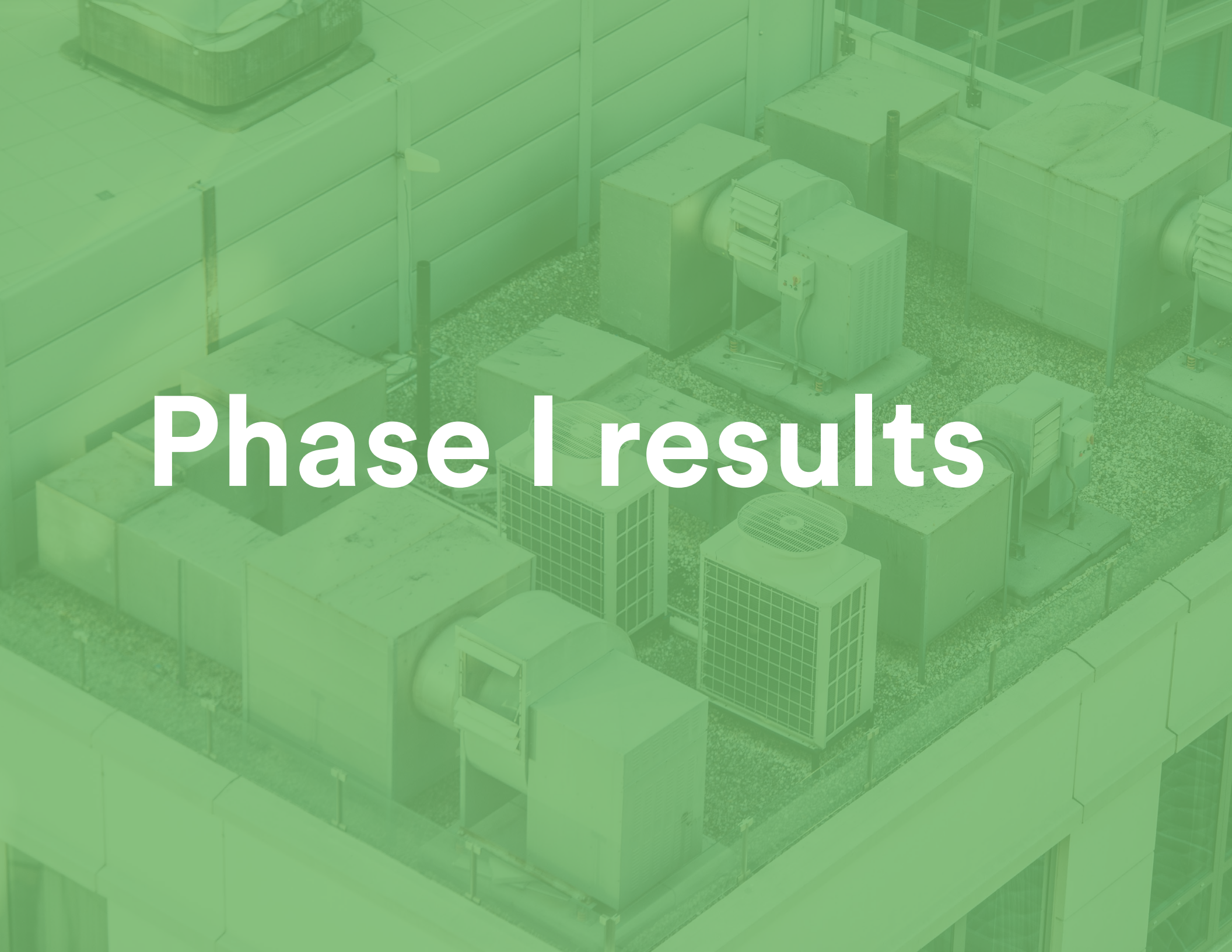
Our approach



Not only have our Phase I efforts locked in results that are having an impact today, they have also positioned our program to accelerate and scale-up the use of sustainable cooling solutions more easily in the coming years.

In Phase I, we invested in a diverse set of interventions, aiming to be both strategic and opportunistic in an ever-evolving cooling landscape. As a funder collaborative, a key objective is to also maximize the benefits that pooled philanthropic funds bring to both the planet and people, which has meant being focused and agile in the roll out of our strategy. Our comprehensive approach to advancing efficient, climate-friendly cooling and the outcomes we've been working toward can be seen in our Results Framework, which was developed with and endorsed by the K-CEP Funding Steering Committee (FSC). (See Phase I Results section.)

We invested heavily in policy work in order to lock in significant GHG savings. We also invested a lot in creating an enabling environment for future impact on GHG emissions, energy use, and cost savings. This entailed funding activities like supporting training programs, developing and trialing innovative business models to overcome market barriers, project preparation to mobilize investment, profile-raising, strategic communications, coalition-building, and research. While the fruits of this work are not always as easy to quantify as K-CEP's activities on policies, programs, or plans, **we're helping to lay the groundwork for medium- and longer-term transformation that is so desperately needed in the cooling sector.**



Phase I results

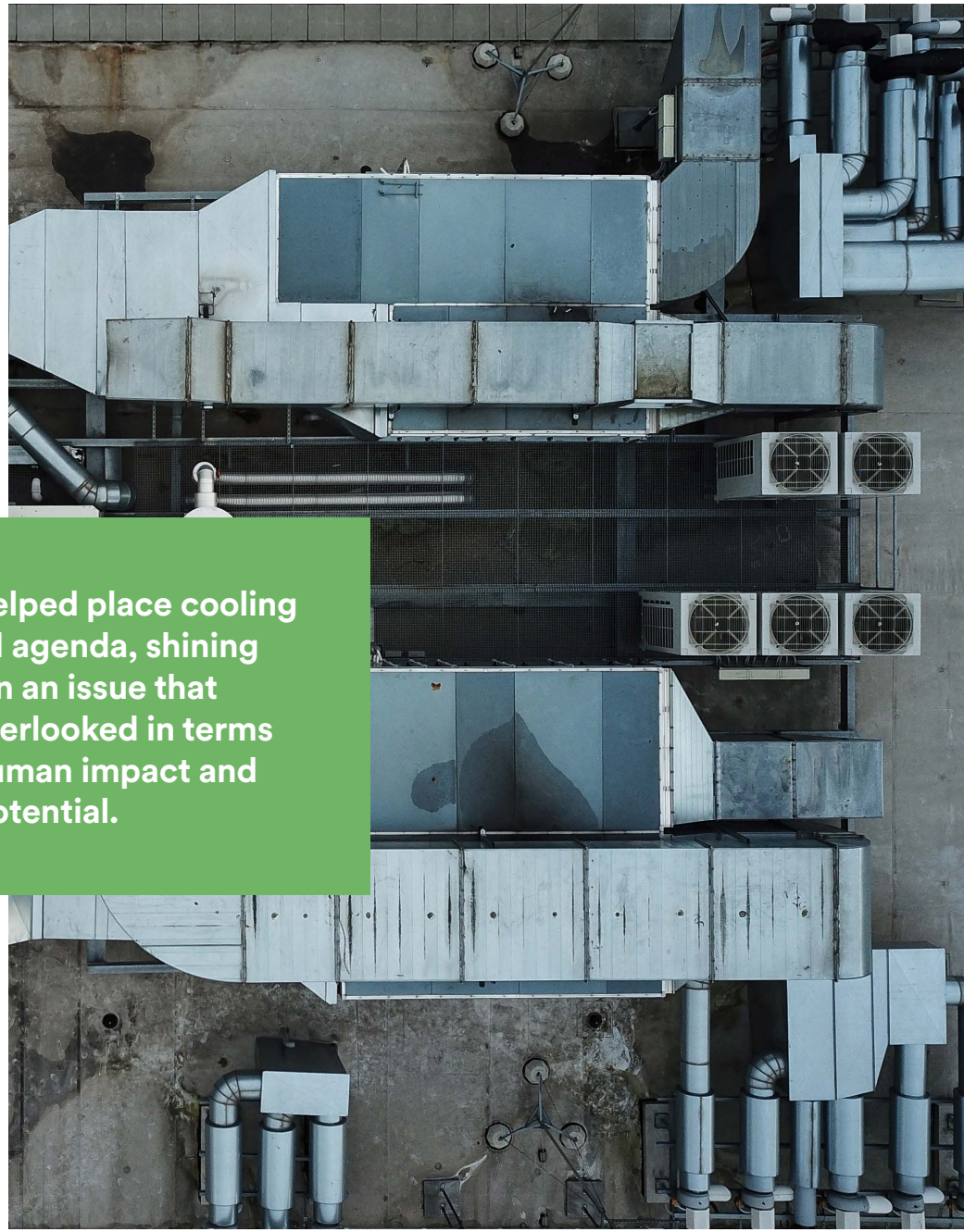
Executive summary

K-CEP has helped place cooling on the global agenda, shining a spotlight on an issue that was often overlooked in terms of both its human impact and mitigation potential. As a collective, we have been able to raise the alarm on the dangerous feedback loop that cooling creates, in which the very thing we need to keep us cool in an ever-warming world is significantly contributing to the heating up of the planet.

With K-CEP's support, our Phase I partners became early adopters, embracing efficient, climate-friendly cooling. While many had not previously taken serious steps toward curbing emissions from cooling, our support made it conceivable to pursue best practices. **The importance of these first movers cannot be overstated.** They are serving as models among their peers and are already starting to spark cascading change by helping to demonstrate several benefits and signal growing market demand.

Not only have we helped to elevate the narrative of cooling and its connection to development and equity, we've also produced quantifiable results from our work. We have tracked our progress over the last four years against a Results Framework (See Phase I Results section) that was set up early on during K-CEP's formation. We have also collaborated with the IEA to measure the GHG emissions impacts from our Phase I activities. To date, according to the IEA's analysis, it is estimated that the governments that partnered with K-CEP have locked in and committed to emissions reductions of at least 2.4 Gt CO_2 over the next 30 years. Additional anticipated policies and plans would bring the cumulative total of emissions reductions to 4.2 Gt CO_2. And we're just getting started.

K-CEP has helped place cooling on the global agenda, shining a spotlight on an issue that was often overlooked in terms of both its human impact and mitigation potential.



Measuring our success

Since its inception in 2017, **K-CEP has grown from a bright idea to a thriving program that has achieved significant and measurable impact.** When K-CEP was formed, our FSC and the ClimateWorks Foundation, as stewards of the program's funds, thoughtfully laid out the results that K-CEP should aim to achieve by the end of Phase I. The Results Framework Outcomes and Activities (See Annex section) adopted by the FSC has served as a steady north star for the program. The K-CEP Secretariat tracked progress against the Results Framework on a quarterly basis and published progress in the program's annual reports. At the end of Phase I, we can proudly say we have met the vast majority of our targets and in some cases even exceeded our goals.

Phase I was designed with a set of 10 outcomes to reach by the end of its first four years. The Results Framework shows documented progress toward these outcomes. Some of the key highlights include:

- **Supporting the proposal, adoption, or implementation of 21 cooling appliance standards and labeling programs around the world** (see Outcome 1 in the Results Framework outcomes table in the Annex section), which will make sweeping changes to what appliances are available on the market, thus influencing the supply-side at scale.
- **Influencing the integration of cooling into comprehensive national climate policies.** For example, of the 55 countries that included cooling in Nationally Determined Contributions (NDCs), 10 applied to the NDC Support Facility (see Outcome 9 in the Results Framework), demonstrating that governments are beginning to see heat as a growing threat and are trying to increase access to cooling while also curbing emissions from the sector.
- **Mobilizing over $600 million in finance for cooling** (see Outcome 7 in the Results Framework) to cost-effectively steer consumers and institutions toward more efficient, climate-friendly cooling products.

As the Covid-19 pandemic swept across the world during the fourth year of our program, we expected to see a slow-down in governments' abilities to prioritize cooling action as their attention shifted to manage the dire public health crisis. Despite the challenges and delays brought on by the pandemic, we still managed to reach most of our Phase I targets. Unfortunately, there were some targets we did not hit, but many of the activities set in motion will continue to deliver results, which will be reported over the rest of 2021 and beyond.

At the end of Phase I, we can proudly say we have met the vast majority of our targets and in some cases even exceeded our goals.

K-CEP Results Framework outcomes table

Very poor | Insufficient | Slower than expected | Insufficient data | Ongoing/In progress | Notable (& ongoing) | Achieved | Exceeded

OUTCOMES (by 2021)	
O1. Approximately 10 countries formally propose, adopt, or implement best practice cooling efficiency policies, standards, or programs.	Notable (& ongoing)
O2. More than 10 countries publish energy efficiency management plans to integrate energy efficiency into their refrigerant transition.	Notable (& ongoing)
O3. Montreal Protocol reports (including TEAP revisions and ExCom guidance on finance) and Multilateral Fund funding (including the $27 million pledge by governments at Kigali) reflect energy efficiency best practices.	Achieved
O4. High-efficiency technology increases its market penetration in target markets.	Insufficient data
O5. The number of people with increased access to efficient, low GWP cooling increases.	Insufficient data
O6. Corporate and/or government “cooling efficiency” buyers’ and/or sellers’ clubs expand the market share of high-efficiency cooling technologies.	Very poor
O7. K-CEP mobilizes more than $250 million.	Exceeded (& ongoing)
O8. Countries commit to, initiate, or experience an accelerated HFC phase-down because of energy efficiency initiatives supported by K-CEP.	Achieved (& ongoing)
O9. At least 10 countries add cooling efficiency policies, standards, or programs to their NDC.	Achieved (& ongoing)
O10. Efficient, low-GWP cooling is elevated to a priority development issue.	Exceeded

For more details, please see the Annex section.

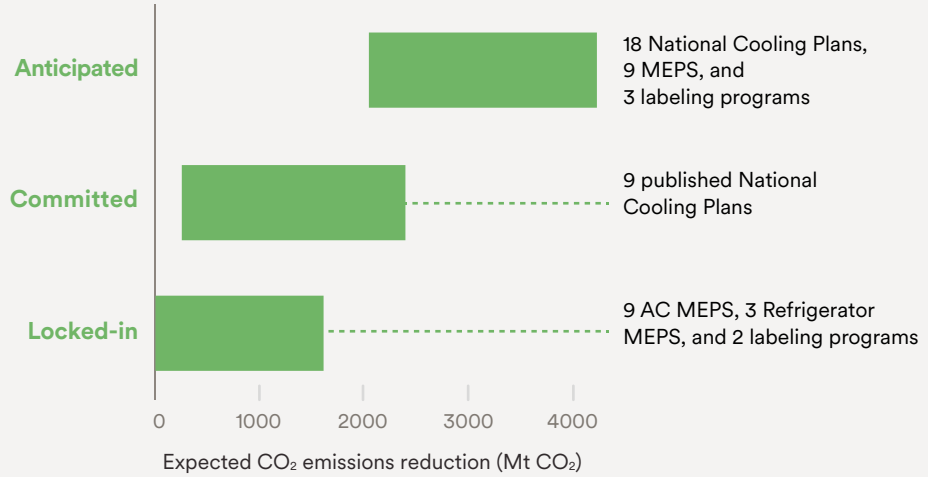
4.2 Gt CO_2 of avoided emissions by 2050

While our Results Framework tracks the different areas of our Phase I activities, we have also estimated the GHG emissions impact[2] of some of our work over these past four years. In total, without overlapping calculations, the policy work conducted in Phase I by K-CEP and its partners **expects to capture 4.2 gigatons of avoided CO2 emissions by 2050 once the work is fully implemented, with 2.4 Gt CO2 already secured, by 2050. In total, this represents $960 billion in cost savings over the same period.**

The emissions impact of our policy work can be broken down into three categories:

- **'Locked in' -** All policies (e.g., MEPS, product labels, etc.) that have been secured through law, adoption, and/or implementation. Through 14 policies in 8 countries, K-CEP has secured emissions reductions of 1.6 Gt CO_2 by 2050, representing $450 billion in cost savings.
- **'Committed' -** NCPs that have been endorsed and published by national governments. K-CEP's work with governments has already secured commitments from nine countries to cut emissions by 2.1 Gt CO_2 by 2050, representing nearly $510 billion in cost savings.
- **'Anticipated' -** All remaining policies or national cooling plans that have been, or will soon be, proposed to governments for consideration, formal approval, and adoption. To date, this includes 12 MEPS and labels policies and 18 NCPs, most of which are already in line for government approval. We anticipate that this work will result in emissions reductions of 3 Gt CO_2 by 2050, representing $645 billion in cost savings[3].

Figure 1. CO_2 emissions reductions from energy savings by project category



2 We worked with IEA to quantify the emissions impact from efficiency improvements and associated avoided indirect emissions from electricity generation. These emissions impacts do not include the additional benefits from accelerating adoption of more climate-friendly refrigerants

3 Note that because some of these plans include policies (proposed or adopted), the GHG impact of the NCPs overlaps with the GHG impact of our MEPS and labels work, therefore they cannot be aggregated.

K-CEP's emissions reductions largely come from our investment in MEPS, labeling policies, and NCPs.

Impacts from MEPS and labeling policies: These policies represent the most tangible and immediate impact metric, delivering both GHG emissions reductions and cost savings. K-CEP has supported the development and implementation of 15 AC-related MEPS, as well as six refrigeration MEPS, and five AC labels (see Figure 2).

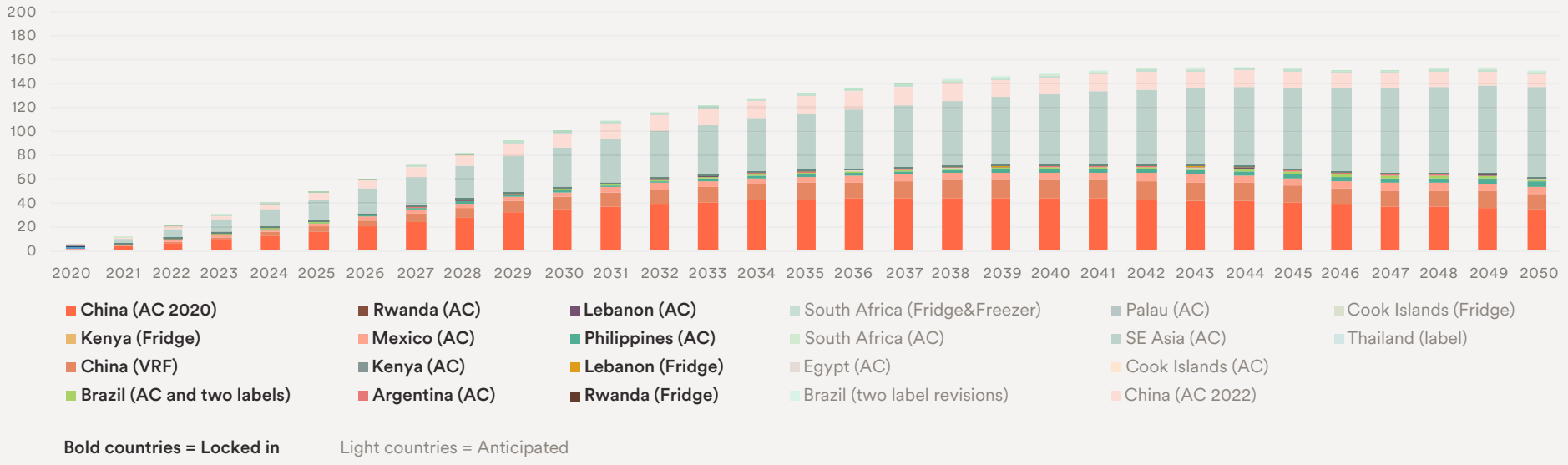
In total, the 26 MEPS and labels supported by K-CEP will result in emissions reductions of just over 3 Gt CO_2 by 2050.

Of the 26 MEPS and labels supported by K-CEP and partners, 14 have been 'locked in' and 12 are 'anticipated'. The emissions reduction from the 14 'locked in' MEPS is over 1.6 Gt CO_2 by 2050. The remaining 12 'anticipated' policies are on track to deliver an additional emissions reduction of just over 1.8 Gt CO_2 by 2050.

The expected electricity savings resulting from the implementation of all 26 MEPS and labels will be worth around $805 billion in reduced electricity costs to consumers cumulatively through 2050. This does not even capture the additional, significant savings that utilities can realize on the generation and delivery side as a result of reduced electricity demand from cooling.

It's important to highlight that because the 'anticipated' policies are waiting to be formalized, their associated cost savings and emissions reductions are not yet confirmed. Currently, the largest potential impact of these tentative MEPS and labels comes from the second stage of China's room AC MEPS, which is expected to come into force in 2022. Unsurprisingly, as the single largest contributor to K-CEP's GHG impact calculations, China's MEPS will have a significant impact once locked in. (See Grantee Spotlight section).

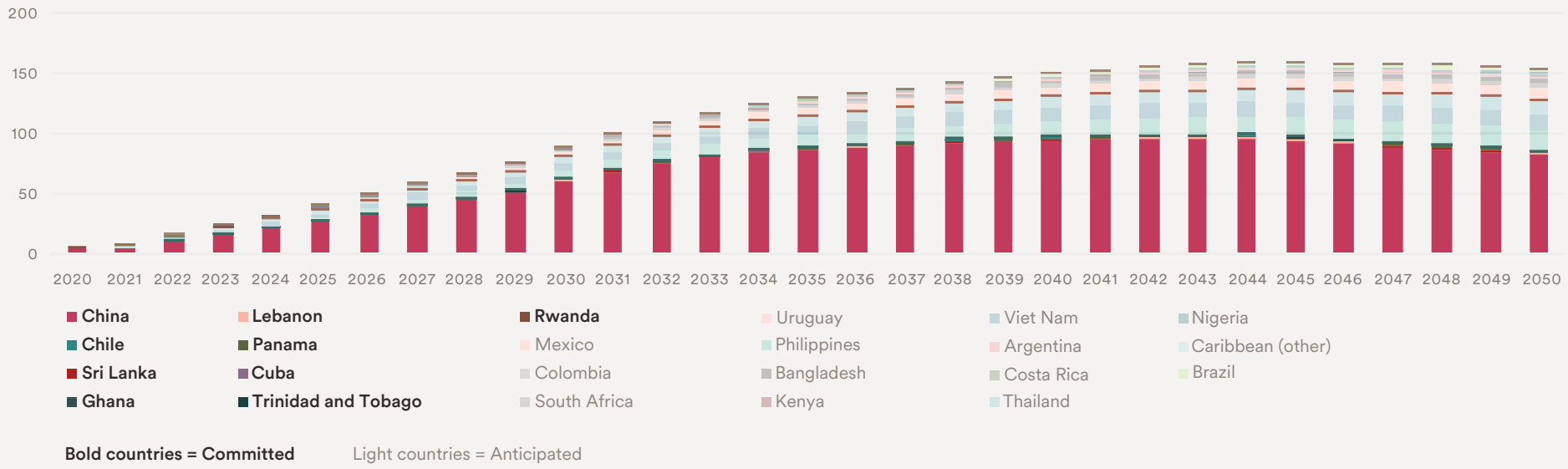
Figure 2: Avoided Mt CO_2 emissions from 26 MEPS and labels by country



Impacts from NCPs: Developed and endorsed by governments, NCPs represent a commitment to longer-term action in the cooling sector. Each plan is unique in terms of focus; some have high-level goals, while others are grounded in specific policies and programs that are already being implemented. K-CEP has supported the development of 27 such plans, nine of which — Chile, China, Cuba, Ghana, Lebanon, Panama, Rwanda, Sri Lanka, and Trinidad & Tobago — have now been published. K-CEP categorizes the impacts from these plans as 'committed' as they indicate a government's commitment to addressing efficient, climate-friendly cooling in the medium and longer term through the policies and programs included within the plans.

Once realized, the nine 'committed' plans will cumulatively avoid over 2.1 Gt CO2 and will save consumers over $510 billion by 2050, both as a result of reduced electricity consumption (see Figure 3).

Figure 3: Avoided Mt CO_2 emissions from National Cooling Plans



Note: The NCPs are not prescriptive in terms of efficiency performance levels for over half of the NCPs received, so assumptions have been made for these. The assumed changes in efficiency follow UNEP's United for Efficiency's (U4E) Model Regulations as the basis for the MEPS.

Lasting ripple effects

Many impacts go well beyond the planned outcomes in K-CEP's results framework and those stemming from individual grants.

K-CEP's work on efficient, climate-friendly cooling has yielded impacts widely acknowledged by stakeholders in the broader cooling and climate community. Many impacts go well beyond the planned outcomes in K-CEP's results framework and those stemming from individual grants. K-CEP commissioned Oxford Consulting Partners to build on Itad's 2020 mid-term evaluation of K-CEP by conducting interviews with K-CEP funders, grantees, advisors, and staff to assess the program's broader ripple impacts.

Interviewees universally pointed to examples where K-CEP's Phase I work globally raised the profile of cooling and helped embed it across the wider climate and development agendas. By centering cooling in ongoing policy, research, and advocacy initiatives, and facilitated by the provision of large-scale, multi-donor grant funding, K-CEP has influenced key institutions such as the Energy Sector Management Assistance Program (ESMAP) at the World Bank, Sustainable Energy for All, and several United Nations programs that have gone on to embed or expand the role of cooling in their approaches to climate and development. **K-CEP has acted as a 'cooling hub' and catalyzed partnerships of governments, businesses, academic institutions, and NGOs, such as the "Cool Coalition," to expand the global cooling agenda.** The policy and financing models piloted in K-CEP grants have rippled across geographies where K-CEP has not yet directly engaged, such as in India and among parties to the Montreal Protocol. **Various cooling markets now feature best practice standards, action plans, and technologies pioneered through K-CEP-funded initiatives, awards, and prizes.**

Interviewees identified several key aspects of K-CEP's model that facilitated these ripple effects. These include the role of the Secretariat as a space for high-level coordination and collaboration efforts among grantees and other partners, having the in-house skills and technical expertise to credibly promote the cooling agenda at the highest levels, focusing on generating evidence and media engagement to amplify K-CEP's vision, taking a broad and inclusive approach to grantmaking that helped build powerful coalitions for change, and engaging funders to raise the credibility of cooling-focused philanthropy.

Interviewees recognized the progress made and were overwhelmingly positive about K-CEP's ripple effects. They also recognized that much remains to be done and identified opportunities to strengthen impacts. Interviewees suggested deepening grant engagement in prospective high-impact areas. They also suggested going beyond Phase I's focus to build technical capacity to effectively engage industry, improve communications capabilities, and transition from awareness-raising to more action-oriented activities. The Secretariat is incorporating stakeholder feedback to enhance K-CEP II's grant portfolio and expand its influence on the broader cooling agenda.

Spotlights

PROJECT SPOTLIGHT | Policy, Standards, and Programs window

China's transition to efficient, climate-friendly cooling

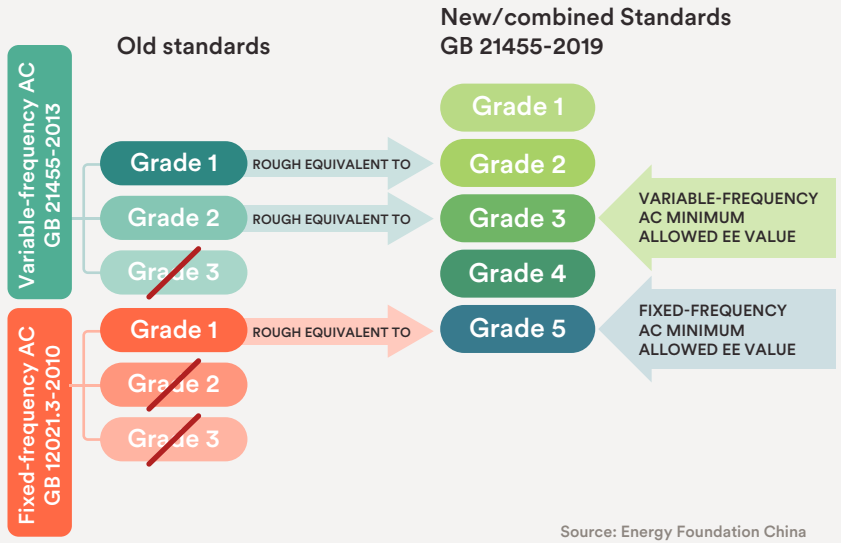
In 2018, K-CEP partnered with **Energy Foundation China (EFC)** to launch the ambitious China Cooling Efficiency Project to accelerate China's transition to more efficient, climate-friendly cooling. Since then, K-CEP has supported EFC, in collaboration with the **Institute for Governance and Sustainable Development (IGSD), the Lawrence Berkeley National Lab (LBNL), and CNIS**, to maximize the emissions reductions of residential and commercial air conditioning in China.

In June 2019, China published its seminal GCAP, becoming the third country to commit to comprehensive action on sustainable cooling, following Rwanda and India. The GCAP is China's first-ever national guide to promote cooling efficiency and moves to significantly improve the energy efficiency of cooling products. Through the plan, **China recognizes the critical role of cooling efficiency in climate change mitigation** and prioritizes it as an important integrated policy field.

Through the hard work of our partners, China has also introduced impactful MEPS for room ACs and variable-refrigerant flow (VRF) systems. **The room AC MEPS set world-leading efficiency grades** and more stringent minimum 'allowable values' for both fixed-frequency and variable-frequency units. **Successful implementation of these MEPS is expected to help China achieve its 2022 goal of improving the overall AC market by 30%**, as stated in the GCAP. China's new VRF MEPS is currently under review and is likely to be approved by the end of this year. **The standard is expected to result in an efficiency increase of over 40% compared to the previous version.**

The next few years will be critical in ramping up China's climate ambition. The GCAP plays a particularly important role as it will inform the ongoing development of China's 14th Five Year Plan, their enhanced NDC, and the implementation of the Kigali Amendment, which they recently ratified.

Figure 4: China's 2020 MEPS for room AC



Source: Energy Foundation China

According to CNIS, the new room AC MEPS will increase energy efficiency by around 14% overall, and would eliminate around 45% of room AC models from the market.

PROJECT SPOTLIGHT | Finance window

Increasing access to affordable, clean cooling in Ghana

Even though a high-efficiency appliance typically costs users much less over its lifetime (due to reduced energy use), the higher upfront cost is often a significant barrier for consumers, particularly when compared to cheaper mainstream models.

Over the last two years, we have worked with the United Nations Environment Program's (UNEP) United for Efficiency (U4E) initiative and the Basel Agency for Sustainable Energy (BASE) to support Ghana's transition to efficient, climate-friendly residential cooling using market-based financial mechanisms. Through on-wage financing, approved cooling appliances have become more accessible and affordable to more people. The criteria for eligible products were adapted from U4E's Model Regulation Guidelines, which were developed with over 60 global experts leveraging in-kind support and K-CEP funding.

Green On-wage (GO), part of the ECOFRIDGES initiative, is a joint project by **U4E, BASE, the government of Ghana, and the Economic Community of West African States' Centre for Renewable Energy and Energy Efficiency (ECREEE).** Public and private sector employees can now purchase eligible ACs and refrigerators with a bank loan, repayments for which are made directly via the salaried customer's paycheck. The employer acts as the loan's guarantor, reducing the need for stringent credit assessments and collateral.

So far, the initiative has successfully engaged three local competing financial institutions and four local competing equipment vendors. By 2023, ECOFRIDGES GO aims to unlock at least $11 million in financing to support the purchase of more than 15,000 efficient, climate-friendly cooling appliances that mitigate 86,184 tons of GHG emissions relative to a business-as-usual scenario.

In the first weeks of the scheme's pilot, over 500 ECOFRIDGES GO appliances had been sold. Once the concept and market receptiveness are tested, the pilot program will be expanded through local market dynamics.

U4E and BASE are also conducting similar activities for ECOFRIDGES Senegal (on-utility bill financing) and the Rwanda Cooling Finance Initiative (on-wage financing).

By 2023, ECOFRIDGES GO aims to unlock at least $11 million in financing to support the purchase of more than 15,000 efficient, climate-friendly cooling appliances that mitigate 86,184 tons of GHG emissions.

Through on-wage financing initiatives like ECOFRIDGES GO, efficient, climate-friendly ACs and refrigerators have become more accessible and affordable to more people.

PROJECT SPOTLIGHT | Institutional Strengthening for Efficiency window

Optimizing industrial conversion to improve efficiency while phasing out HFCs

Our work with **Mabe, in collaboration with the United Nations Development Program (UNDP) and with co-funding from the Multilateral Fund of the Montreal Protocol (MLF) and Environment and Climate Change Canada,** consisted of industrial conversion support (design, manufacture, and testing protocols) for energy-efficient compressors, alongside work on the F-gas transition.

Mabe, the leading home appliance brand in Latin America, has committed to the refrigerant transition and improving component efficiency through its corporate sustainability strategy. Since announcing the conversion, Mabe has transitioned from the climate-polluting HFC R134a, with a global warming potential (GWP) of 1,430, to the hydrocarbon R600a, which has a drastically lower GWP of three. **Mabe has also successfully upgraded the efficiency of its refrigerator compressors by 15-25%.** These more efficient and climate-friendly compressors are now being supplied to market.

Mabe took advantage of the disruption to business as a result of the Covid-19 pandemic to ramp up the conversion of its production lines to produce efficient, climate-friendly refrigerators.

Production of the more efficient and climate-friendly refrigerator lines started at around 400,000 units during 2020, scaling up to 1,070,000 units in 2021.

Over the last year, during the Covid-19 pandemic, Mabe has been able to take advantage of the disruption to business by ramping up the conversion of its four production lines. By finalizing the conversion work early (Q3 of 2020, as opposed to Q4), Mabe has boosted the number of improved units they will produce in 2021 by almost 20%. Production of the more efficient and climate-friendly refrigerator lines started at around 400,000 units during 2020, scaling up to 1,070,000 units in 2021.

According to Pablo Moreno, Mabe's head of corporate affairs, "Mabe is providing a success story that highlights to policymakers that low-GWP transitions, coupled with improvements in energy efficiency, can occur rapidly and at scale in order to ratify and exceed international agreements."

This monumental commitment and rapid action, in terms of both efficiency and climate-friendly refrigerants, sets a valuable example both in the region and globally and shows the potential for raising standards in Mexico to benefit consumers, national industry, and the environment.

PROJECT SPOTLIGHT | Access to Cooling window

Creating a cooler world with cool roofs

Launched in 2019, the Million Cool Roofs Challenge (MCR) aims to rapidly accelerate the deployment of cool roofs in countries where populations are particularly vulnerable to high temperatures and access to cooling is low. Through the application of a reflective coating to a roof, the sun's radiation is reflected away from the structure, preventing the building below from absorbing it as heat. This first-of-its-kind global initiative is a joint effort by K-CEP, the **Global Cool Cities Alliance**, **Sustainable Energy for All (SEforALL)**, and **Nesta's** Challenge Prize Centre**.**

Through a wide range of approaches, the 10 teams have successfully installed more than 1.1 million square meters of new cool roofs, and continue to catalyze long-term impact through policy advocacy and market development.

Ten teams were selected to each receive a $125,000 grant to install cool roofs, establish markets, demonstrate and evaluate local performance, and raise awareness with policymakers and local leaders. The 10 teams are competing for a final prize of $750,000, which will be awarded to the team that has demonstrated the best sustainable and transferable model for rapid deployment of cool roofs.[4]

Through the application of a reflective coating, cool roofs can reflect the sun's heat away from buildings, creating a cooler indoor environment for residents, students, or workers, as well as reducing the urban heat island effect. (Credit: PEER Africa)

So far, teams have seen some promising results relating to reduced temperatures. In Indonesia, the team has seen the **internal temperature of an industrial building drop by 10.4°C**. Similar results were seen in Bangladesh**,** where **surface and indoor temperatures during peak heat dropped by 12.3°C and 7.7°C**, respectively, at pilot sites. In Kenya, a pilot at an orphanage and school has reduced indoor temperatures enough to allow students to learn inside on hot afternoons, something they were previously unable to do during summer months.

Over the last two years, despite the global pandemic, the teams' efforts and progress have been commendable. Through a wide range of approaches, the 10 teams have successfully installed more than 1.1 million square meters of new cool roofs, and continue to catalyze long-term impact through policy advocacy and market development.

Full results of the MCR challenge, as well as the winning team, will be announced later this year.

4 Each team was initially granted $100,000, but due to delays caused by the Covid-19 pandemic, the challenge was extended, and funds were increased to help teams adapt and cover additional costs.

PROJECT SPOTLIGHT | Access to Cooling and Finance windows

Mainstreaming efficient, climate-friendly cooling within the World Bank Group

ESMAP's Efficient, Clean Cooling Program aims to promote and scale up sustainable, affordable, and accessible cooling solutions (e.g., cold chains) in support of development goals, as well as climate change adaptation and mitigation objectives. (Credit: World Bank)

In 2019, with funding from K-CEP, the **World Bank's Energy Sector Management Assistance Program (ESMAP)** established its Efficient, Clean Cooling Program. The program aims to promote and scale up sustainable, affordable, and accessible cooling solutions in support of development goals, as well as climate change adaptation and mitigation objectives.

In addition to helping countries develop the necessary market infrastructure, financing mechanisms, and policies to deploy sustainable cooling at scale, the program was designed to ensure that efficient, climate-friendly cooling is included in relevant World Bank Group (WBG) operations and investments.

To date, these grants are informing lending operation components amounting to just under $500 million.

Starting off as a sub-component of ESMAP's Efficient and Sustainable Buildings Program, **the Efficient, Clean Cooling Program has come into its own and has been institutionalized in ESMAP's 2021-24 Business Plan**, continuing the project well beyond the scope of K-CEP funding. The new business plan has mobilized additional financing from other donors, with 27 grants being allocated under the program since 2019. To date, these grants are informing lending operation components amounting to just under $500 million.

The Efficient, Clean Cooling Program has hosted and participated in a range of events to build awareness of sustainable cooling within and outside the WBG, produced several knowledge products, developed partnerships with key stakeholders, and is actively working to mobilize financing to advance access to sustainable cooling even further.

Access to cooling is increasingly recognized as part of the development agenda, which is a big change from a few years ago when cooling was not on many people's radar. Covid-19 has highlighted the need for efficient cold chains for vaccine deployment and further cemented sustainable cooling as an integral part of achieving the Sustainable Development Goals (SDGs). The program has helped raise visibility and awareness of the issue within the WBG and provided financial support for technical assistance activities, which are critical to shape policies for and investments in sustainable cooling in relevant sectors.

RESULTS FRAMEWORK IN ACTION

Securing global commitments on cooling

As of May 2021, at least 55 countries have committed to include action on efficient, climate-friendly cooling in their latest NDCs; a significant leap from just seven countries in 2015.

In the run up to the 26th United Nations Climate Change Conference of the Parties (COP26), as part of the Paris Agreement, countries have been working to enhance their NDCs, which declare their commitments to reducing their GHG emissions and building resilience to adapt to the impacts of rising temperatures. This process operates on a five-year cycle, in which governments progressively increase the ambition of their climate commitments and action.

One of the outcomes that we strove to achieve during Phase I of the program, which will extend into our next phase, was for at least 10 countries to include action on efficient, climate-friendly cooling in their enhanced NDCs. **To assist this work, K-CEP launched its NDC Support Facility for Efficient, Climate-Friendly Cooling in early 2020.** Of the 30 countries that applied for support, 10 have published enhanced NDCs with commitments on cooling. In fact, in part due to our influence going well beyond the governments we directly engaged with, 55 countries (as of May 2021) have committed to include action on cooling in their latest NDCs. This is a significant leap from just seven countries in 2015. We expect to see many more countries include cooling commitments in their enhanced NDCs before the COP26 publication deadline.

It is great to see that countries are already recognizing the benefits of efficient, climate-friendly cooling and committing to further action as they enhance their NDCs or long-term (2050) climate plans. **K-CEP is providing technical assistance to 10 countries in support of their leadership on cooling action: Burkina Faso, Cambodia, Chile, Ethiopia, Jordan, Morocco, Nigeria, Pakistan, Tunisia, Vietnam.** The countries are prioritizing efficient, climate-friendly cooling through a number of approaches, including scaling up passively cooled buildings in urban areas, policy work to set standards for high-efficiency equipment and appliances, and increasing access to climate-friendly cold chains for agriculture and food.

More information on our NDC Support Facility and its participating countries' commitments, as well as how countries can enhance their NDCs with efficient, climate-friendly cooling, can be found in our NDC brief.

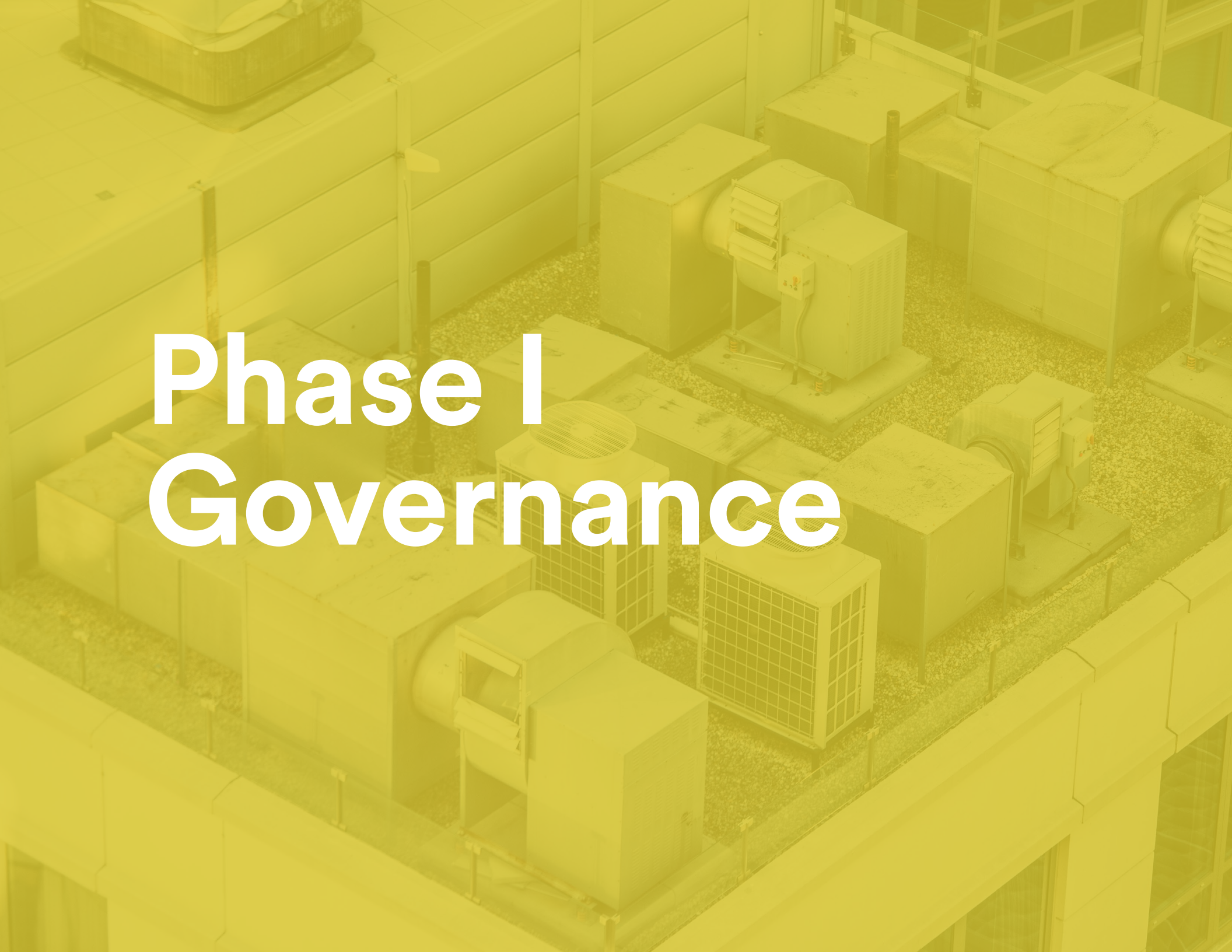
RESULTS FRAMEWORK IN ACTION

Transformation of China's air conditioner market

China is the global leader in the production of room AC, supplying a domestic market of approximately 80-90 million household ACs.

China is the global leader in the production of room ACs, supplying a domestic market of approximately 80-90 million household ACs, as well as being the global market leader for fully assembled ACs and AC components such as compressors. In March 2019, China's National Institute of Standardization (CNIS) proposed a two-step revision to its room AC and heat pump MEPS. The first step went into force in July 2020 and combined fixed- and variable-speed room AC units under the same seasonal energy efficiency performance metric and raised the MEPS for fixed speed ACs by approximately 15%. The second step, initially proposed for 2022, would have eliminated the lowest two performance levels (of five) and raised efficiency by 30%, consistent with the target of a 30% improvement in minimum energy efficiency level for room ACs in China's Green and High-efficiency Cooling Action Plan (GCAP), which was released in June 2019. However, the formally promulgated standard revision in December 2019 did not include the second step for administrative reasons.

Well ahead of the second step and cooling plan target, China's domestic AC market has undergone a rapid transformation over the past year. As of July 2021, it has rapidly shifted away from inefficient, fixed-speed ACs and toward efficient, variable-speed ACs. Domestic sales of fixed-speed ACs dropped from 15.6 million units in 2020 to just 1 million in the first half of 2021 – a fifteen-fold reduction. Meanwhile, variable-speed ACs sales increased by 73% from 24.2 million units to 42 million in the same period. As a result, fixed-speed ACs now account for only 2% of the domestic market as of mid-2021, with variable-speed ACs making up the rest. The combination of integrated MEPS and an NCP (See Spotlight section) has likely contributed to the rapid market transition to efficient, variable-speed AC observed since late 2020.



Phase I Governance

Phase I secretariat and advisors

The K-CEP Secretariat (formerly known as the Efficiency Cooling Office) is housed at ClimateWorks Foundation and is the internal engine of the program. It oversees operations, grantmaking, reporting, program management, strategy, and other services to maximize the climate, development, and equity impacts of funders and partners.

Our program is grounded in collaboration, commitment to excellence, and continuous improvement. In keeping with these principles, we commissioned a third-party evaluation of our program in 2019 to independently assess the program's efficacy and identify opportunities for improvement. The evaluators called K-CEP a "model collaboration," and the "best example of a collaborative platform I've seen." We are proud of the evaluation's confirmation that K-CEP has elevated the profile of efficient, climate-friendly cooling on the global stage and that its investment in collaboration has maximized the impact of its grants and broader advocacy efforts. Our successes have been driven by the entire K-CEP team, which possesses an invaluable mix of sector-based expertise and technical and management skills to deliver on this important and complex global strategy for efficient, climate-friendly cooling.

The team has built the momentum necessary to replicate and scale-up the program's global impact and has received wide recognition for its successes to date. Accolades include being selected for the 2018 UNFCCC Yearbook of Global Climate Action, being named as a finalist for the 2019 Roy Award for Environmental Partnership, receiving several mentions in Apolitical's 2020 Top 100 Climate Policy Breakthroughs, and being nominated for the prestigious 2021 Earthshot Prize.

As Phase I comes to an end, the Secretariat is comprised of:

Jessica Brown
Director

Mirka della Cava
Head of Policies, Standards, and Programs

Dr. Gabrielle Dreyfus
Chief Scientific Advisor

Christina Hayes
Communications Consultant

Xiaoyi Jin
Head of Access to Cooling and Senior Associate

Shilpa Patel
Head of Finance

Axum Teferra
Associate Director

Tao Wang
China Strategist

Rees Warne
Head of Monitoring, Evaluation, and Learning

Catherine Witherspoon
Senior Super-pollutants Advisor

Technical Advisory Committee

Our Technical Advisory Committee (TAC) is made up of 23 experts from a range of organizations and provides technical guidance on overall strategy and key investments, convening regularly on critical cooling topics. The TAC currently comprises of:

Iain Campbell
Rocky Mountain Institute (RMI)

Ana Maria Carreno
Collaborative Labeling and Appliance Standards Program (CLASP)

Suely Carvalho
Independent Consultant

Walid Chakroun
American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

Stephen Cowperthwaite
UK's Department for Environment, Food and Rural Affairs (DEFRA)

Brian Dean
Sustainable Energy for All (SEforALL)

Samira Elkhamlichi
World Bank Group (WBG)

Erik Gibbs
CLASP

Marco Gonzalez
Independent Consultant

Alex Hillbrand
Natural Resources Defense Council (NRDC)

Ajay Mathur
International Solar Alliance (ISA)

Ole Nielsen
United Nations Industrial Development Organization (UNIDO)

Samuel Pare
Burkina Faso Government

Clare Perry
Environmental Investigation Agency (EIA)

Toby Peters
University of Birmingham

Sommai Phon-Amnuaisuk
International Institute for Energy Conservation (IIEC)

Romina Picolotti
Centre for Human Rights and the Environment (CHRE)

Nihar Shah
Lawrence Berkeley National Laboratory (LBNL)

Laura Van Wie McGrory
World Resources Institute (WRI)

Han Wei
Energy Foundation China (EFC)

Jim Wolf
Independent Consultant

Durwood Zaelke
Institute for Governance and Sustainable Development (IGSD)

Xiaofang Zhou
United Nations Development Program (UNDP)

Phase I Funder Steering Committee

Our FSC oversees and advises on the execution of the program's strategic plan. K-CEP has proven to be a durable, flexible, cost-effective, and responsive instrument for managing and distributing funds for efficient, climate-friendly cooling. As the world's only active platform for funder collaboration and engagement that targets cooling, funders can increase leverage, coordinate grantmaking, share risk, achieve greater overall impact, and fund cooling without having to invest in programmatic expertise within their own foundations. Phase I FSC includes:

Sonia Aggarwal
Formerly Energy Innovation (Ex-member)

Sahba Chauhan
Formerly Oak Foundation (Ex-member)

Steve Cowperthwaite
DEFRA

Sandra Doyle
Tempest Advisors

Anand Gopal
Formerly Hewlett Foundation (Ex-member)

Fanta Kamakate
Pisces Foundation (2020-2021 Chair)

Charles McElwee
ClimateWorks Foundation

James L. (Jim) Wolf
Independent Consultant with Energy Innovation

Yelena Ortega
Children's Investment Fund Foundation (CIFF)

Walt Reid
Packard Foundation

Gabriela Schafroth
Swiss Government

Christian Spano
CIFF

Seema Paul
Sequoia Climate Fund

Mijo Vodopic
MacArthur Foundation

Funding partners

To date, 21 foundations, individuals, and governments have generously contributed to K-CEP.

Founding members

Laura and John Arnold

Barr Foundation

Josh and Anita Bekenstein

CIFF Children's Investment Fund Foundation

climateworks Foundation

John and Ann Doerr

Gates Ventures

Heising-Simons Foundation

William + Flora Hewlett Foundation

MacArthur Foundation

OAK Foundation

the David & Lucile Packard Foundation

Open Philanthropy Project

Pisces Foundation

Sandler Foundation

SeaChange

The Wyss Foundation

Additional funders

Bloomberg Philanthropies

Swiss Agency for Development and Cooperation

Elhapa Foundation

Sequoia Climate Fund

We thank our dedicated funders, partners, and grantees for their role in helping us create and amplify the engaging narratives surrounding our work over the last four years. Their hard work and creativity has had a massive impact on the reach and impact of our story so far.

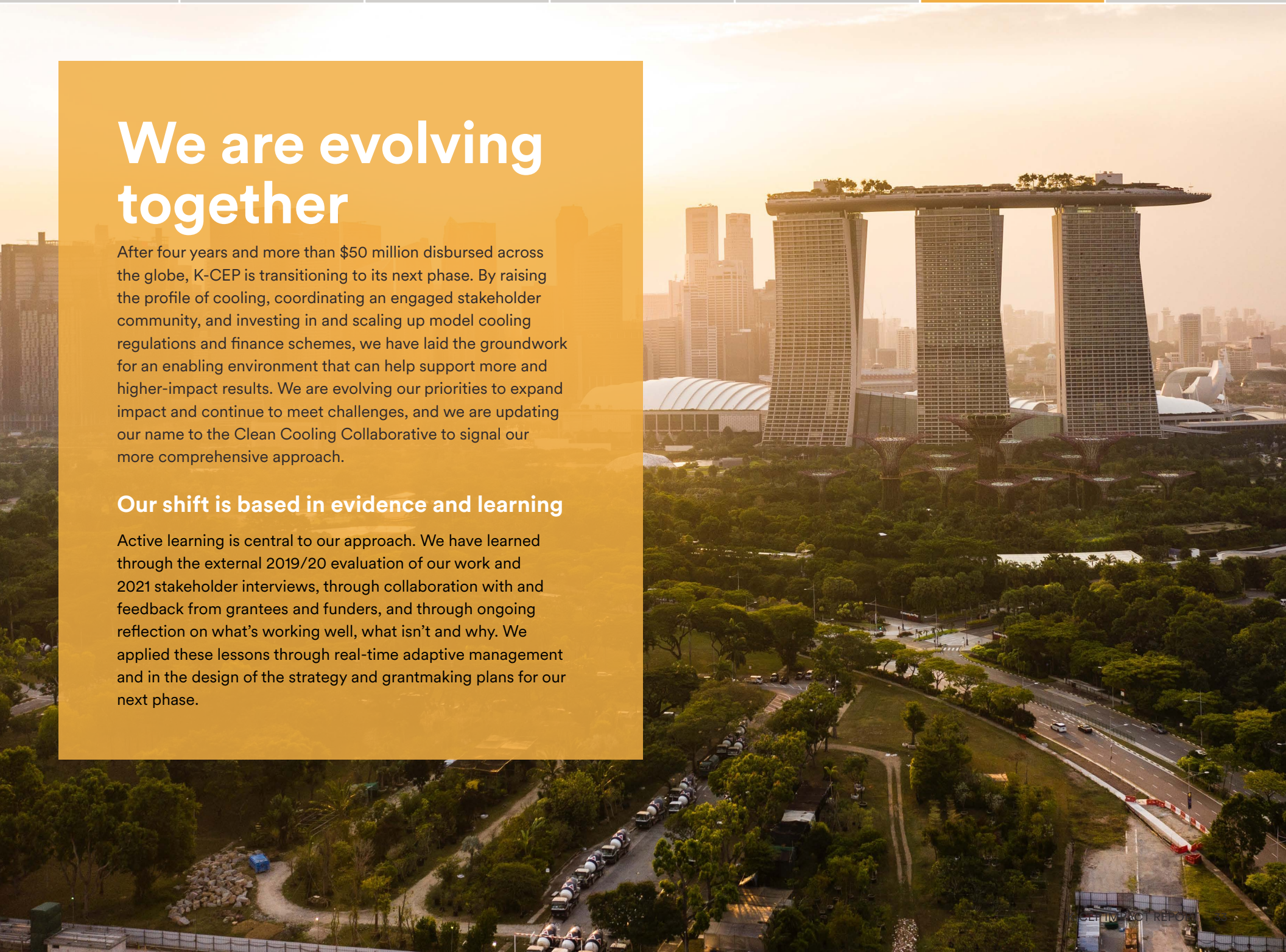
Looking ahead

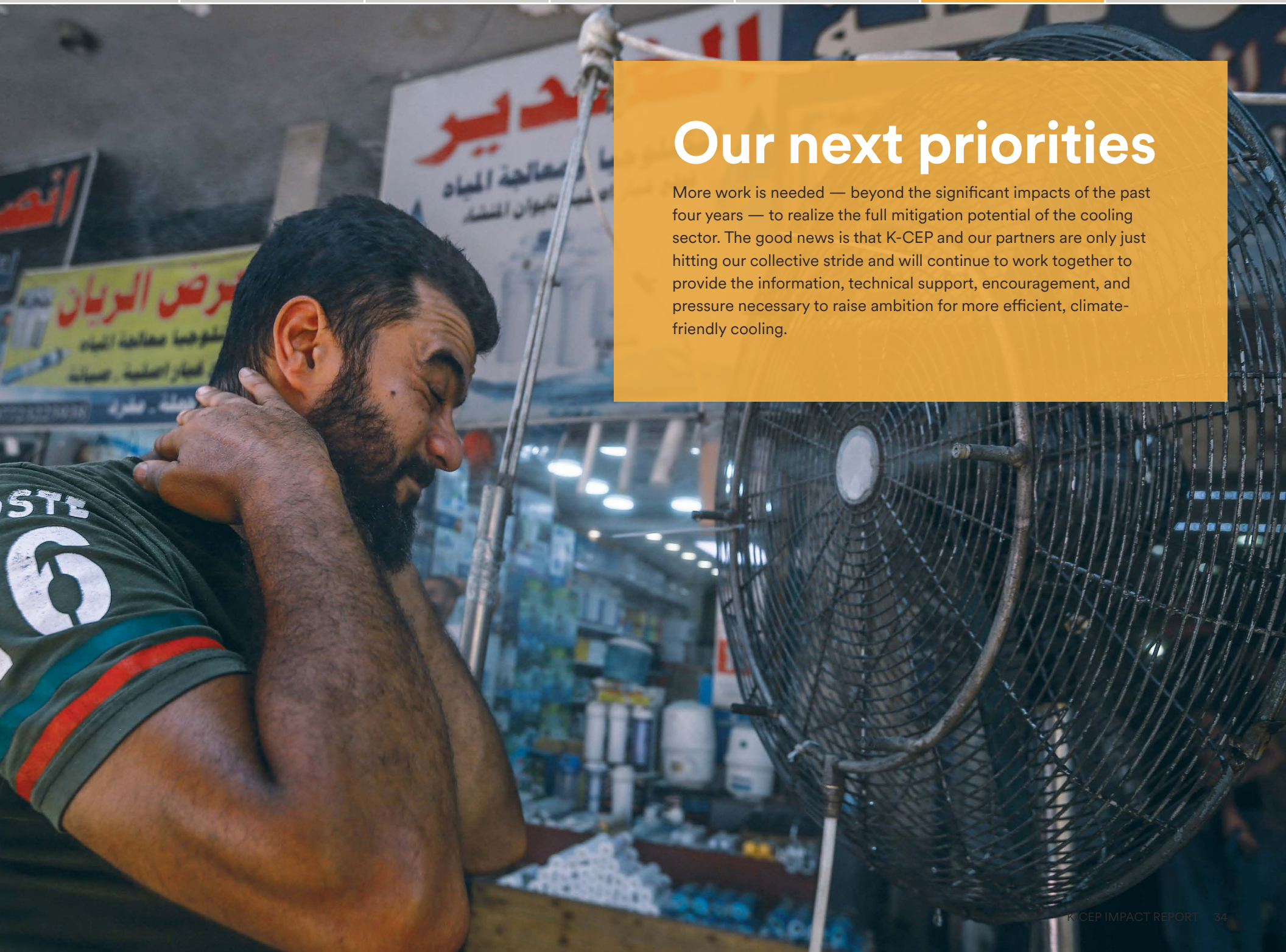
We are evolving together

After four years and more than $50 million disbursed across the globe, K-CEP is transitioning to its next phase. By raising the profile of cooling, coordinating an engaged stakeholder community, and investing in and scaling up model cooling regulations and finance schemes, we have laid the groundwork for an enabling environment that can help support more and higher-impact results. We are evolving our priorities to expand impact and continue to meet challenges, and we are updating our name to the Clean Cooling Collaborative to signal our more comprehensive approach.

Our shift is based in evidence and learning

Active learning is central to our approach. We have learned through the external 2019/20 evaluation of our work and 2021 stakeholder interviews, through collaboration with and feedback from grantees and funders, and through ongoing reflection on what's working well, what isn't and why. We applied these lessons through real-time adaptive management and in the design of the strategy and grantmaking plans for our next phase.





Our next priorities

More work is needed — beyond the significant impacts of the past four years — to realize the full mitigation potential of the cooling sector. The good news is that K-CEP and our partners are only just hitting our collective stride and will continue to work together to provide the information, technical support, encouragement, and pressure necessary to raise ambition for more efficient, climate-friendly cooling.

We look forward to working with many of our existing partners, as well as new ones, in the years ahead to make efficient, climate-friendly cooling for all a reality.

Our strategy is guided by the overall goal of achieving net-zero cooling. While we will continue to make grants worldwide (our initial funding was designed to support A5 Group 1 developing countries), **we will now emphasize investment in the four regions with the highest contribution to cooling sector emissions between now and 2050: China, India, Southeast Asia, and the United States.**

Energy efficiency will remain a central focus of our work, and we will also expand our scope to include other vital cooling solutions. While K-CEP intentionally did not prioritize work on the F-gas transition in Phase I, improving the energy efficiency of cooling equipment and phasing out high-GWP refrigerants are inextricably linked. We now have the opportunity to more actively **support the transition to climate-friendly** refrigerants and ensure that these efforts are synchronized with improvements in energy efficiency. We will **increase our support for passive cooling and cold chain solutions,** as well as play a greater role in **connecting cooling to building electrification and grid decarbonization efforts** by helping to accelerate the adoption of heat pumps and integrating AC into demand-response programs.

Our support for strong and far-reaching policies and labels has been vital, and we are adding support for **pairing these policies with enforcement and compliance programs to realize their full mitigation potential** (including reducing the movement of high-emitting appliances across borders).

We will **harness the untapped opportunity to leverage market dynamics**, working with corporate partners and buyers across both cooling supply and demand and engaging major producers and consumers of cooling to increase the private sector's ambition.

Our upcoming work will also give more attention to the **enormous need for solutions that realize efficient, climate-friendly cooling's development and equity benefits, particularly for the world's most vulnerable and marginalized communities.**

We look forward to working with many of our existing partners, as well as new ones, in the years ahead to make efficient, climate-friendly cooling for all a reality.

From K-CEP to the Clean Cooling Collaborative: A new name and vision

As we wrap up Phase I and expand our focus beyond cooling efficiency, we thought it was the right moment to refresh our brand, aligning it to the more comprehensive approach we will be taking as we move into this next critical stage of strategy and implementation.

To position ourselves for continued success and reflect our more holistic approach, K-CEP is now the Clean Cooling Collaborative.

KIGALI COOLING EFFICIENCY PROGRAM → Clean Cooling COLLABORATIVE

Continuing to work in partnership with the global cooling community that K-CEP helped to establish, as well as embracing new strategic collaborations, we, as the Clean Cooling Collaborative, are thrilled to be expanding our solution set and to be supporting high-impact levers of change that will help us address the growing cooling challenge with urgency.

We also welcome **Noah Horowitz**, who has joined the team to lead the charge of our new strategic direction as the Clean Cooling Collaborative Program Director. We're excited to hand the baton to Noah after the leadership of Jessica Brown and Dan Hamza-Goodacre in Phase I. The Clean Cooling Collaborative is fully embedded as one of the core programs of ClimateWorks Foundation, and will remain a part of the organization's robust and diverse program portfolio. We are lucky to be housed at ClimateWorks, which continues to be a backbone that strengthens and supports our program.

We see many opportunities to transform the cooling sector in the coming years, and are excited to continue bringing bold leadership to the field as the Clean Cooling Collaborative.

You can find out more about the Clean Cooling Collaborative at our new website – www.cleancoolingcollaborative.org.

Annex

K-CEP grants list

Country	K-CEP Partners	Project Description
Argentina	UNIDO	Support to refrigerator manufacturers to improve energy efficiency during the F-gas transition, market barrier assessment and implementation support for MEPS
ASEAN	Collaborative Labeling and Appliance Standards Program (CLASP)	Build regional compliance capacity across ASEAN, provide technical analysis on MEPS
ASEAN	UNEP	Bridge funding for ASEAN regional work
Bangladesh	GIZ	Study about energy efficiency in public buildings in Bangladesh
Bangladesh	UNDP	Improving energy efficiency during the HFC phase-down in the domestic refrigerator manufacturing sector
Bangladesh, Chile, Costa Rica, Cuba, Ghana, Lebanon, Malaysia, Nigeria, Panama, Sri Lanka, Trinidad & Tobago, Uruguay, Mexico	UNDP	Support to draft and publish national cooling efficiency plans in 13 countries
Brazil	Lawrence Berkeley National Laboratory (LBNL)	Technical analysis on Brazil AC MEPS and labels
Brazil	Institute for Climate and Society (iCS)	Support to draft and publish national energy efficiency strategy for the AC sector and capacity-building to strengthen energy efficiency standards and labeling and support implementation
Brazil	Uma Gota No Oceano	Raising energy efficiency awareness in Brazil's AC sector
Caribbean - Bahamas, Jamaica, Dominican Republic, Saint Lucia, Barbados	UNEP	Supporting Financial Mechanisms and Policies for Energy Efficient and Climate Friendly Cooling in the Caribbean tourism sector, MEPS, NCPs
China	Development Reimagined	Research on South-South cooperation between China and developing countries for environmentally friendly AC
China	Energy Foundation China	China cooling efficiency project: commercial AC MEPS, national cooling roadmap, early peaking cities cooling initiative, and market transformation
China	Natural Resources Defense Council (NRDC)	China cooling campaign - consumer awareness raising
China	Natural Resources Defense Council (NRDC)	Financing cooling efficiency improvement in commercial buildings and cold storage logistics companies
China	UNEP	NCP - China
China, Philippines, Argentina	Health Care Without Harm	Hospital cooling energy audits and advocacy for the adoption of energy monitoring systems
Colombia	UNDP	Embedding energy efficiency into the Colombian supermarket sector during the F-gas transition
Colombia	UNDP	Industrial conversion project
Costa Rica	UNDP	Development of a sectoral energy plan for district cooling
ECOWAS, including Cape Verde, Nigeria	Collaborative Labeling and Appliance Standards Program (CLASP)	Regional compliance program for ECOWAS region
Ecuador, Guatemala, Jordan, Lebanon, Morocco, Uganda	UNIDO	Support to refrigerator manufacturers to improve energy efficiency during the F-gas transition
Egypt	Lawrence Berkeley National Laboratory (LBNL)	AC standard, compliance and implementation support
Egypt, Ghana, Senegal, Rwanda	UNEP	Egypt: Scaling up investment in clean, efficient district cooling systems Ghana and Senegal: ECOWAS refrigerators initiative Rwanda: Cooling finance initiative

Ghana	UNDP	AC sector rebate and enforcing energy efficiency in the servicing sector
Global	National Renewable Energy Laboratory (NREL)	Compressor supply chain mapping and analysis
Global	Alto Analytics	Digital public sphere analysis insights research: efficient, climate friendly cooling
Global	Ashden	2021 Ashden Award - in informal Settlements award
Global	Ashden	2020 Ashden Award - Cool Coties award
Global	Basel Agency for Sustainable Energy (BASE)	"Cooling as a Service" business model
Global	Carbon Trust	Pathway to zero greenhouse gas emissions for cooling
Global	Climate Analytics	Climate-model projections of 21st century warming accounting for avoided HFC-emissions and energy-efficiency implications associated with the Kigali Amendment
Global	Climate Finance Advisors	Exploration of financing for efficient cooling alongside the Montreal Protocol, Phase 2
Global	Consortium led by Toby Peters	Guide to impact investment in clean cooling
Global	Environmental Investigation Agency (EIA)	Pathway to Net-Zero: Cooling Product List
Global	Environmental Investigation Agency (EIA)	Working with the Consumer Goods Forum to support global corporate and policy measures on energy efficiency, climate-friendly cooling in supermarkets
Global	Global Cool Cities Alliance	One Million Cool Roofs Challenge - technical advisory
Global	International Energy Agency (IEA)	Regional training workshops incorporating Cooling for All materials
Global	International Energy Agency (IEA)	Kigali Action Tracker
Global	Natural Resources Defense Council (NRDC)	Testing program to verify the accuracy of energy efficiency and refrigerant certifications for ACs
Global	Natural Resources Defense Council (NRDC)	Research, analysis and recommendations on energy efficiency for the Montreal Protocol
Global	Natural Resources Defense Council (NRDC)	Supporting global efforts to improve standards and labeling for efficient cooling
Global	Nesta	One Million Cool Roofs Challenge fund management
Global	Project X	Improving the energy efficiency and performance of cold storage and transportation for vaccines
Global	Rhodium Group	Analysis of federal green stimulus packages
Global	Rocky Mountain Institute	Cities-centric sustainable cooling handbook
Global	Sustainable Energy for All (SEforALL)	Cooling for All - secretariat role and implementation advisory
Global	Sustainable Energy for All (SEforALL)	Cooling for All - Global panel & report on Access to Cooling
Global	The Climate Group	Ep100/climate week
Global	The Climate Group	Climate Week NYC event
Global	The Economist	Sizing and forecasting the global cooling market
Global	Third Generation Environmentalism (E3G)	Cool Platform for International Political Economy (Cool PIPE)
Global	UNEP	Twinning of National Ozone Officers and national Energy Efficiency representatives, and capacity building to link EE with Montreal Protocol objectives
Global	UNEP	Global high-level leadership, advocacy, and communication
Global	UNIDO	Support the work of the Private Financing Advisory Network to catalyze investment in efficient cooling
Global	University of Oxford	Cold chain landscape assessment
Global	The World Bank	Establishment of an Efficient Clean Cooling Program (ECCP) at the World Bank
Global	World Wildlife Fund (WWF)	Food cold chain solutions - focus on fishing sector
Global	CDP	Research report to identify HVAC companies that are best suited to transition to a low carbon economy

Global	Basel Agency for Sustainable Energy (BASE)	Accelerate uptake of the 'Cooling as a Service' (CaaS) business model
Global	The Economist	"Transport and power: How efficient, climate-friendly cooling can support the transition to zero emissions"
Global	Third Generation Environmentalism (E3G)	Landscape assessment of public finance for cooling
Global	Sustainable Energy for All (SEforALL)	"Cooling for all" intervention
Global	Ashden	Fair Cooling Fund - Scaling cooling innovations
Global	Direct Relief	Piloting efficient, climate-friendly medical cold Cchain Eequipment in humanitarian contexts
Indonesia	Climate Policy Initiative (CPI)	Support to accelerate public and private finance toward cooling efficiency work in Indonesia
Indonesia	GIZ	Public procurement program for energy-efficient air conditioners in Indonesia (project canceled)
Indonesia	Global Initiative Communications	Cooling Efficiency Award and roundtable discussion at Sustainable Business Awards
Indonesia	Synergy Efficiency Solutions (SES)	Establish a sustainable energy efficiency market in Indonesia, focusing on clean, efficient cooling systems
Kenya	Collaborative Labeling and Appliance Standards Program (CLASP)	Support on implementation of MEPS for AC, and national cooling plan
Lebanon	UNDP	Support on MEPS, finance and incentives to retire old equipment, and service training and manual
Mexico	Lawrence Berkeley National Laboratory (LBNL)	Technical support on designing MEPS for mini split AC and commercial AC
Mexico	Iniciativa Climatica de Mexico (ICM)	Support on MEPS design and national cooling plan
Mexico	UNDP	Support to refrigerator manufacturers to improve energy efficiency during the F-gas transition
Mexico	UNIDO	Pilot project for the substitution of old refrigerators to new, efficient appliances (project canceled)
Mexico, Costa Rica, Chile, Colombia, Brazil	MGM Innova	Demonstration cooling projects across several sectors in the Latin America and Caribbean region
Micronesia	College of the Federated States of Micronesia	Energy security and climate action in the Federated States of Micronesia
Morocco, South Africa, Indonesia, Malaysia, among others	Sustainable Development Capital LLP (SDCL)	Deliver clean, efficient cooling improvements in industrial and commercial operations of global companies, via cooling as a service
Nigeria	UNDP	Integrating energy efficiency into the RAC servicing sector transforming the market of inefficient RAC equipment
Nigeria	UNDP	Integrating energy efficiency into the RAC servicing sector transforming the market of inefficient RAC equipment
Palau and Cook Islands	International Institute for Energy Conservation (IIEC)	Supporting MEPS and financial mechanisms for energy efficiency and climate-friendly cooling in the Pacific
Philippines	UNDP	NCP
PICS	International Institute for Energy Conservation (IIEC)	PICS champions island demo funds
Rwanda	UNEP	NCP
Rwanda	UNEP	Supporting an integrated policy approach for EE climate-friendly cooling: National cooling plan, MEPS and labeling, financial mechanism
South Africa	Lawrence Berkeley National Laboratory (LBNL)	NCP
South Africa	Lawrence Berkeley National Laboratory (LBNL)	MEPS for AC and supporting capacity for testing
Thailand, Vietnam	The World Bank	Strategy support: National cooling plans, market assessment, industrial capacity building and AC MEPS
Thailand, Vietnam, Philippines	Collaborative Labeling and Appliance Standards Program (CLASP)	Build regional compliance capacity across ASEAN, provide technical analysis on MEPS

Implementing partners

Alto Data Analytics
Ashden Sustainable solutions, better lives
ASHRAE
BASE Driving investment in sustainable energy
Carbon Trust
Climate Policy Initiative
clasp
CDP
CEA Consulting

Climate & Clean Air Coalition to Reduce Short-Lived Climate Pollutants
icm Iniciativa Climática de México
Climate Analytics
Climate Finance Advisors
College of Micronesia-FSM
University of Birmingham | Birmingham Energy Institute
Development Reimagined
Direct Relief

E3G
ECOFYS A Navigant Company
Energy Foundation 能源基金会
era Environmental Investigation Agency
Global Cool Cities Alliance
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
global initiatives
Health Care Without Harm
iCS instituto clima e sociedade
MGM Innova Group

IGSD
iea International Energy Agency
IIASA International Institute for Applied Systems Analysis
IIEC
Berkeley Lab Lawrence Berkeley National Laboratory
nesta
NRDC
NREL Transforming Energy
PROJECT X

S2C Pacific
Sustainable Energy for All
SDCL Sustainable Development Capital LLP
SES Synergy Efficiency Solutions Engineering the future today
The Climate Group
The Economist
uma gota no oceano
UNDP
UN environment programme

UNIDO
University of Oxford
The World Bank
WWF
兴业银行 Industrial Bank Co.,Ltd.
AIIB Asian Infrastructure Investment Bank
itad
Rhg
RMI

Communications and outreach

Perhaps one of the greatest non-quantifiable accomplishments of our communications and outreach activities has been putting cooling on the map as an urgent climate and development issue. This has been achieved through the use of a range of communications channels and activities to disseminate information and engage with our audiences.

Our website has been an invaluable tool, acting as a platform to educate audiences about the cooling challenge and who we are, as well as a library of resources from around the cooling community.

We have worked closely with partners to produce a regular stream of resources since 2017. While we believe that all of the reports, briefs, and guidance we have been involved in are important, there are a number that have proven to be particularly widely utilized:

- The Future of Cooling by the International Energy Agency (IEA)
- Cooling on the Move by the by IEA
- Cooling Emissions and Policy Synthesis Report by IEA and UNEP
- The Cooling Imperative by the Economist Intelligence Unit (EIU)
- U4E's Model Regulation Guidelines for Efficient, Climate-Friendly Air Conditioners and Refrigerators
- The Climate Action Pathway to Net Zero Cooling by the Carbon Trust
- The Chilling Prospects series by SEforALL
- Assessment of climate and development benefits of efficient and climate-friendly cooling by the Climate and Clean Air Coalition (CCAC) et al.
- The economic benefits of a clean recovery: the case of energy-efficient cooling by EIU

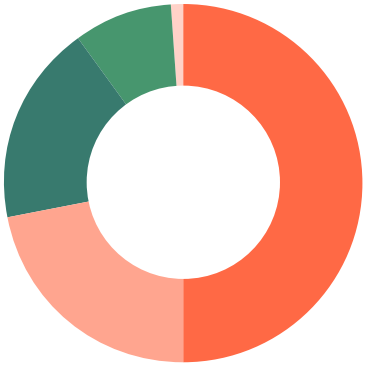
Events have also played a significant role in K-CEP's outreach and communications throughout our first phase, from major in-person events like the United Nations Secretary-General's Climate Action Summit in 2019, to the countless virtual meetings and panel discussions that took place during the Covid-19 pandemic, like the #ThisIsCool webinar series from SEforALL and the Cool Coalition.

K-CEP, its grantees, and the cooling challenge have attracted attention from major media around the world since 2017, including Time, The Economist, Reuters, Carbon Brief, and The Guardian. We have also produced op-eds for a number of publications, including Accelerate magazine, Energy Efficiency Magazine, and Reuters.

K-CEP's financials

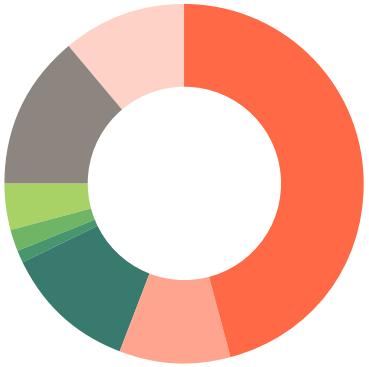
K-CEP Phase I funds

K-CEP funds awarded by window



- 50% Policies, Standards, and Programs
- 22% Finance
- 18% Strengthening for Efficiency
- 9% Access to Cooling
- 1% Kigali Tracker

K-CEP funds awarded by geography



- 46% Global
- 14% China
- 12% Asia and Oceania
- 11% Latin America
- 10% Africa
- 4% Brazil
- 2% Indonesia
- 1% Middle East and Central Asia

K-CEP Results Framework Table

OUTCOMES

Very poor | Insufficient | Slower than expected | Insufficient data | Ongoing/In progress | Notable (& ongoing) | Achieved | Exceeded

OUTCOMES (by 2021)	MEASURE OF SUCCESS	NARRATIVE	
O1. Approximately 10 countries formally propose, adopt, or implement best practice cooling efficiency policies, standards, or programs.	O1.1: # of countries that formally propose, adopt, or implement best practice cooling efficiency policies, standards, or programs.	• 8 countries proposed, adopted, or implemented best practice policies, standards, or programs. K-CEP also supported MEPS work in 13 other countries where policy work is ongoing. • **Implemented**: China (Room AC MEPS 2020), Ghana (financing program), Senegal (financing program) • **Adopted**: China (VRF MEPS), Brazil (Room AC labeling), Kenya (Room AC and domestic refrigerator MEPS), Mexico (commercial AC MEPS), Rwanda (Room AC and refrigerator MEPS, financing program) • **Proposed**: China (Room AC 2022 step up), South Africa (MEPS for freezer, refrigerator, and refrigerator/ freezer)	Notable (& ongoing)
	O1.2: # of best practice cooling efficiency policies, standards, or programs formally proposed, adopted, or implemented.	15 best-practice cooling policies, standards, or programs proposed, adopted, or implemented in 8 countries	Notable (& ongoing)
	O1.3 # of cooling efficiency policies, standards, or programs formally proposed, adopted, or implemented that are more stringent or implemented faster than would otherwise have been the case without K-CEP support.	• 10 MEPS and labels proposed, adopted, or implemented that are more stringent or implemented faster in 7 countries, in addition to the 15 best practice MEPS, labels, and programs. • **Implemented**: Ghana (AC MEPS), Argentina (AC MEPS) • **Adopted**: Brazil (Room AC MEPS, AC PROCEL Seal label), Lebanon (AC and refrigerator MEPS), Philippines (AC MEPS) • **Proposed**: Cook Islands (domestic AC. refrigerator), South Africa (AC MEPS)	Notable (& ongoing)
O2. More than 10 countries publish energy efficiency management plans to integrate energy efficiency into their refrigerant transition.	O2.1: # of countries that publish energy efficiency management plans that contain substantive actions to integrate energy efficiency into their refrigerant transition.	9 NCPs have been published that integrate energy efficiency into refrigerant transition: Chile, China, Cuba, Ghana, Lebanon, Panama, Rwanda, Sri Lanka, and Trinidad & Tobago. K-CEP also supported NCP development in 18 other countries where work is in progress (2 with anticipated publication in Q3 2021).	Notable (& ongoing)
O3. Montreal Protocol reports (including TEAP revisions and ExCom guidance on finance) and Multilateral Fund funding (including the $27 million pledge by governments at Kigali) reflect energy efficiency best practices.	O3.1: The finance report and other relevant energy efficiency reports from Montreal Protocol bodies reflect views of K-CEP-supported countries that advance energy efficiency.	From 2018 to 2021, several TEAP reports incorporated K-CEP supported studies and projects (including NCPs, U4E model regulations, label updates in Brazil, twinning, etc.) that emphasize the opportunity to mitigate global warming from a coordinated transition to lower GWP refrigerant and higher efficiency cooling and demonstrate cooling efficiency best practices.	Achieved
O4. High-efficiency technology increases its market penetration in target markets.	O4.1: % of cooling technology sold that is high efficiency in countries receiving K-CEP support.	Lack of consistent data across markets and countries impeded creating an overall calculation, although some data is available at the country level. According to data from chinaIOL.com, variable speed ACs in China now account for 98% of the domestic market as of mid-2021	Insufficient data
O5. The number of people with increased access to efficient, low GWP cooling increases.	O5.1: # of people with new access to cooling.	Based on population growth, decreases in risk, and available equipment sales data, Sustainable Energy for All (SEforAll) conservatively estimates that at least 250 million people in 54 high-impact countries gained new access to cooling between 2017 and 2021. Note that 1) data isn't available to determine how much of that was efficient, climate-friendly cooling appliances and 2) there's also little to no data at the global level of penetration of green roofs, urban tree planting, and other passive interventions or the number of people that benefit from these interventions. At project level, K-CEP on-the-ground pilots demonstrated the direct impact of implementing locally-owned cooling solutions. For example, with support from K-CEP grantee Health Care Without Harm, the Dr. J. Giordano Hospital in Albardón in Argentina made both passive and active cooling improvements - staff and the over 90,000 patients will benefit each year.	Insufficient data

OUTCOMES

Very poor | Insufficient | Slower than expected | Insufficient data | Ongoing/In progress | Notable (& ongoing) | Achieved | Exceeded

OUTCOMES (by 2021)	MEASURE OF SUCCESS	NARRATIVE	
O6. Corporate and/or government "cooling efficiency" buyers' and/or sellers' clubs expand the market share of high-efficiency cooling technologies.	O6.1: % of cooling technology sold that is high-efficiency in countries where corporate and/or government cooling efficiency buyers and/or sellers clubs are buying or selling cooling products.	During design, K-CEP funders hypothesized that buyers' and/or sellers' clubs could be an effective mechanism for expanding the market share of high efficiency cooling technology. While K-CEP explored several means of supporting formation of such clubs, there was not sufficient interest or uptake, so funds originally allocated for this were redirected to more promising work.	Very poor
O7. K-CEP mobilizes more than $250 million.	O7.1: Dollars mobilized.	With an initial $10 million investment in finance work, more than $600 million has been mobilized for efficient, climate-friendly cooling.	Exceeded (& ongoing)
O8. Countries commit to, initiate, or experience an accelerated HFC phase-down because of energy efficiency initiatives supported by K-CEP.	O8.1: # of countries where HFCs would be phased down more quickly because of K-CEP support for cooling efficiency.	12 countries committed to, initiated, or experienced an accelerated HFC phase down because of K-CEP support for cooling efficiency: In **Rwanda**, the National Cooling Strategy includes U4E's Model Regulations and a timeframe for adoption that will well exceed the requirements of the Kigali Amendment. Rwanda is on a pathway to do so with its MEPS and labels, which include a refrigerant GWP upper limit. In **Kenya**, according to their HCFC phase-out management plan (HPMP), HCFCs should be phased out by 2030. With the MEPS revision, the HCFC phase-out in the RAC sector will occur 10 years ahead of HPMP schedule In several countries* where K-CEP Finance Window grantees have been working to help mobilize investments in efficient, climate-friendly cooling, cooling efficiency projects using low-GWP refrigerants are being implemented and promoted through various financing approaches. *Argentina, Brazil, Colombia, Ecuador, Egypt, Ghana, Panama, Senegal, Singapore, and South Sudan	Achieved (& ongoing)
O9. At least 10 countries add cooling efficiency policies, standards, or programs to their NDC.	O9.1: # of countries that add cooling efficiency policies, standards, or programs to their NDC by the end of 2020.	10 countries that applied to the NDC Support Facility have added new cooling commitments to their 2020/21 enhanced NDCs: Cambodia, Costa Rica, Dominican Republic, Ethiopia, Grenada, Mexico, Morocco, Rwanda, Saint Lucia, and Vietnam.	Achieved (& ongoing)
O10. Efficient, low-GWP cooling is elevated to a priority development issue.	O10.1: SEforALL Chilling Prospects report is published, and Cooling for All Outlook reports are published in 2019 and 2020	Between 2018 and 2020, SEforALL released the annual Chilling Prospects report, which includes an outlook on Cooling for All: four editions of July 2018, November 2019, July 2020, and May 2021.	Exceeded
	O10.2: Percentage of Official Development Assistance (ODA) funding directed to cooling.	The percentage of ODA directed to cooling has increased. A 2021 K-CEP-funded study found a ~150% increase in funding by 2018/19 over the baseline (2014/15), when it was less than 0.2% of ODA. (Note that there is a lag in data availability and that current data resources are insufficient.) Importantly, there is evidence that attention to funding cooling is continuing to grow (e.g., the SDC's recent CHF3.6 million contribution to the K-CEP NDC Support Facility and the UK's £1 billion Ayrton Fund (2021-2026), which includes cooling as a priority).	Achieved (& ongoing)
	O10.3: UNE global campaign launched.	The Cool Coalition was launched at the First Global Conference on Synergies between the 2030 Agenda and Paris Agreement. The coalition now has over 100 partners from across national governments, businesses, financial institutions, international organizations, and civil society.	Achieved (& ongoing)

K-CEP Results Framework Table

ACTIVITIES

Very poor | Insufficient | Slower than expected | Insufficient data | Ongoing/In progress | Ongoing with notable results | Achieved | Exceeded

ACTIVITY DESCRIPTION	MEASURE OF SUCCESS	NARRATIVE	
A1 At least 15 K-CEP Immediate Action projects (with verified emissions methodology) are announced.	A1.1: # of K-CEP Immediate Action projects (with verified emissions methodology) that are announced.	Target = 15 Actual = 19 Immediate Action projects in 16 countries	Exceeded (& ongoing)
A2 A5 Group 1 parties submit views that advance energy efficiency.	A2.1: # of A5 Group 1 parties submitting views that advance energy efficiency in the Montreal Protocol (with support from K-CEP).	In 2018, 17 A5 Group 1 countries plus the 54 countries in the Africa Group made written submissions or verbal interventions in support of energy efficiency. In 2019, parties agreed at MOP 31 on Decision XXX1/7 to continue seeking information on "best practices, availability, accessibility and cost of energy-efficient technologies."	Achieved
A3 A 'strengthening for efficiency' package of support is launched	A3.1: Launch meeting or event for the 'strengthening for efficiency' package of support is held.	The "strengthening for efficiency" package of support was launched in November 2017 at MOP29.	Achieved
A4 Technical assistance is provided to approximately 10 countries for energy-efficient cooling policies, standards, and programs.	A4.1: # of countries receiving technical assistance for energy-efficient cooling policies, standards, and programs.	Target = 15 Actual = 39 • 26 countries working on national cooling plans: Argentina, Bahamas, Bangladesh, Barbados, Brazil, Chile, China, Colombia, Costa Rica, Cuba, Dominican Republic, Ghana, Jamaica, Kenya, Lebanon, Mexico, Nigeria, Panama, Rwanda, Saint Lucia, Sri Lanka, South Africa, Thailand, Trinidad & Tobago, Uruguay, and Vietnam. • 20 countries on MEPS: Argentina, Bahamas, Barbados, Brazil, China, the Cook Islands, Dominican Republic, Egypt, Ghana, Jamaica, Kenya, Lebanon, Mexico, Palau, Philippines, Rwanda, Saint Lucia, South Africa, Thailand, and Vietnam. • 12 Financial mechanisms: Argentina, Bahamas, Barbados, the Cook Islands, Dominican Republic, Indonesia, Jamaica, Lebanon, Mexico, Palau, Rwanda, and Saint Lucia. • Compliance testing program: Benin, Brazil, Burkina Faso, Cote d'Ivoire, Egypt, Ghana, Guinea Bissau, Mali, Niger, Nigeria, Senegal, South Africa, Thailand, Togo, Vietnam	Exceeded (& ongoing)
A5 Opportunities are identified for K-CEP and MP funds (including the $27 million announced in Kigali) to be co-invested, coordinated, or enhanced.	A5.1: Dollar amount of MP funding (including the $27 million pledge in Kigali) allocated for co-investment with, coordination with, or enhancement of K-CEP funds.	Opportunities have been identified for MLF funding to be allocated alongside K-CEP work. Over $35 million is confirmed. The MLF co-funding is coming in part but not exclusively from the $27 million announced in Kigali. Some of the co-funding comes from separate MLF funding for HPMP work. It should also be noted that not all of the $27 million is going to HFC industrial conversion projects. Some is going to enabling activities work as well.	Achieved
A6 A U.N. global panel on access to cooling is convened.	A6.1: U.N. global panel on access to cooling is convened.	The Cooling for All Global Panel, made up of leaders from business, philanthropic, policy and academia, was launched during the New York Climate Week in September, 2017. From 2017 to 2021, the Panel convened six times to identify the challenges and opportunities of providing access to affordable, sustainable cooling solutions for all.	Achieved
A7 A corporate cooling-efficiency buyers' and/or sellers' club is launched.	A7.1: # of companies signed up for corporate cooling-efficiency buyers' and/or sellers' clubs.	During design, K-CEP funders hypothesized that buyers' and/or sellers' clubs could be an effective mechanism for expanding the market share of high efficiency cooling technology. While K-CEP explored several means of supporting formation of such clubs, there was not sufficient interest or uptake. Covid also impacted this as companies considering coming together for a joint purchasing program (like banking sector in Brazil) had to shift to core business priorities and stopped all discussion on retrofitting AC in their buildings.	Very poor

ACTIVITIES

Very poor | Insufficient | Slower than expected | Insufficient data | Ongoing/In progress | Ongoing with notable results | Achieved | Exceeded

ACTIVITY DESCRIPTION	MEASURE OF SUCCESS	NARRATIVE	
A8 The K-CEP finance facility is launched and is active.	A8.1: The K-CEP finance facility is launched.	$10 million RFP on Finance Window launched in May2018. 29 applications requested $75 million in support and proposed over $500 million in capital mobilization.	Achieved
	A8.2: The K-CEP finance facility is active.	Work on the K-CEP Finance Window kicked off in 2019, with all six of the available grants allocated. The Finance Window grants cover a range of implementers across a broad geographic spread of developing countries and employ different financing approaches such as on-bill payment, credit lines, and procurement schemes.	Achieved
A9 The Kigali Cooling Efficiency Tracker is launched, and market and technology baselines are established.	A9.1: Kigali Cooling Efficiency Tracker is launched.	Kigali Cooling Efficiency tracker launched in 2018, which serves as the cooling module of the IEA's Global Exchange Platform, a one-stop resource on energy efficiency. The Tracker is a repository for cooling-related information that also follows market progress toward efficient, clean cooling.	Achieved
	A9.2: Market baseline is established.		Achieved
	A9.3: Technology baseline is established.		Achieved
B1 At least 100 ozone officers and at least 35 energy efficiency policymakers are provided with support in energy efficiency through twinning.	B1.1: # of ozone officers trained in energy efficiency. B1.2: # of energy-efficiency policymakers trained on energy-efficient cooling.	Ozone Officers Target = 100 Actual = 261 EE Policymakers Target = 35 Actual = 160	Exceeded (& ongoing)
B2 80 dedicated energy efficiency officers (staff or consultants) are hired (on a short-term basis reflecting the timeline and resources of K-CEP) in support of the government.	B2.1: # of dedicated energy efficiency officers (staff or consultants) that are hired (on at least a short-term basis) in support of the government.	Target = 80 Actual = 48 Grantees estimate that additional dedicated energy efficiency officers were hired, however, clear documentation of whether the hires fit the strict definition required by K-CEP was lacking.	Insufficient data
B3 More than 50 cooling-efficiency implementation projects (including the 15 or so immediate action projects) are launched.	B3.1: # of cooling-efficiency implementation projects (including the grants announced in A1) launched by K-CEP or grantees with K-CEP funding and/or leveraged funds.	Target = 50 Actual = 66	Exceeded (& ongoing)
	B3.2: # of cooling-efficiency implementation projects completed by the end of K-CEP Phase 1 by K-CEP or grantees with K-CEP funding and/or leveraged funds.	Of the 38 implementation projects expected to be completed within the K-CEP Phase I timeline, 28 have been completed, including industrial conversion projects in Mexico and Bangladesh, demonstration projects in five Pacific Islands countries, cool roofs pilots, medical cold storage pilots in humanitarian contexts, etc. Due to COVID-19, the other 10 projects have been delayed, and the work is ongoing under no-cost extensions. For example, the CaaS implementation partners have experienced delays in advancing discussions and negotiations with potential CaaS adopters because many businesses have closed at least partially and priorities have shifted to address the crisis. In addition, 28 more implementation projects, most of which launched under the K-CEP Finance Window, are designed to continue progress beyond K-CEP Phase I timeline.	Ongoing/ In progress

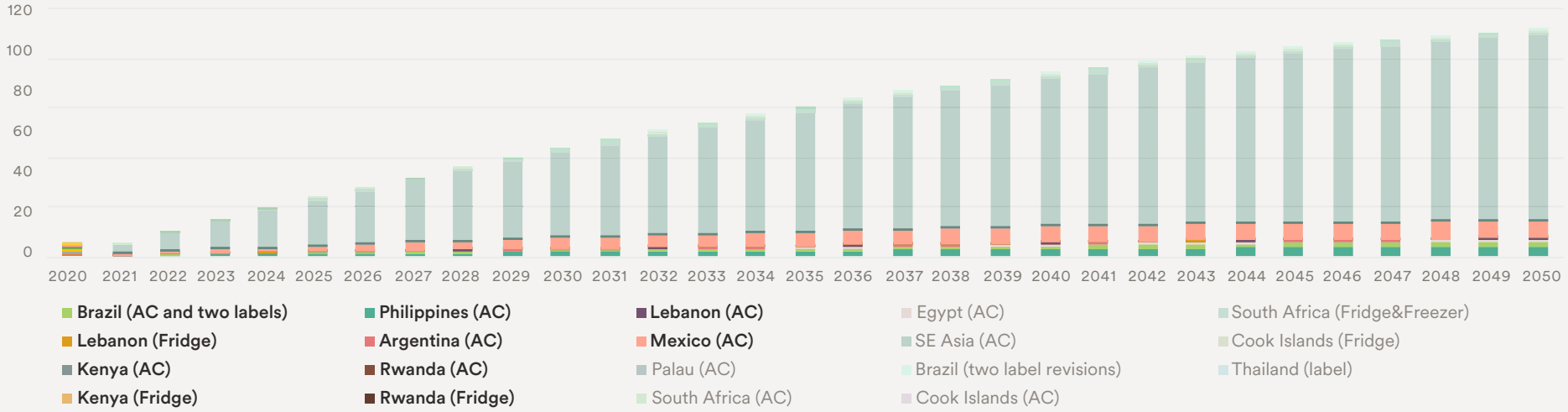
ACTIVITIES

Very poor | Insufficient | Slower than expected | Insufficient data | Ongoing/In progress | Ongoing with notable results | Achieved | Exceeded

ACTIVITY DESCRIPTION	MEASURE OF SUCCESS	NARRATIVE	
B4 The Global Access to Cooling Report is launched, leveraging new funds, policies, and/or programs.	B4.1: Global Access to Cooling Report is launched.	SEforALL, in partnership with K-CEP, released four reports as part of the groundbreaking Chilling Prospects series. The first report was launched in July 2018 at the U.N. High-level Political Forum.	Achieved
	B4.2: $ amount of funds leveraged for the types of work recommended by the report.	Initiatives aligned with Cooling for All and addressing access to cooling have estimated leverage of approximately $123 million for the activities related to the types of work recommended by the Chilling Prospects reports.	Achieved
	B4.3: # of new policies or programs proposed by the types of organizations identified by the report.	At least 30 new cooling initiatives/programs that advance access to cooling progress were established in high-impact countries. For example: the development of a model National Cooling Action Plan and plans to test the methodology in Cambodia and Indonesia; two IFC TechEmerge Programs in Nigeria and Latin America respectively; new work conducted by BASE on Cooling as a Service; Danfoss on district cooling in India, etc.	Achieved
B5 All A5 Group 1 countries have access to support to identify best practice cooling efficiency options.	B5.1: # of A5 Group 1 countries that have been provided with access to training, informational materials, or online resources through K-CEP.	Training has been provided to government officials in all 137 A5 countries through UNEP's twinning work in 2018/2019. Informational materials are available publicly online through various websites, including www.k-cep.org/insights/resources/	Achieved
B6 Cooling efficiency proposals for additional funding are written with support of the K-CEP.	B6.1: # of proposals for non-K-CEP funding that are written with support of ECO or K-CEP grantees.	More than 110 cooling efficiency proposals for non-K-CEP funding have been developed with K-CEP's support.	Achieved
B7 K-CEP lessons are disseminated.	B7.1: # of K-CEP knowledge products and briefs posted on the K-CEP website.	To date, 63 K-CEP knowledge products and briefs were posted on the K-CEP website and distributed through the quarterly newsletter.	Achieved
	B7.2: Percent of grantee projects for which K-CEP lessons have been shared with ECO team.	All grantees shared lessons learned with the K-CEP Secretariat, and those participating in the annual strategy meetings directly shared lessons learned with others in the K-CEP community.	Achieved
	B7.3: # of individuals receiving the K-CEP newsletter.	K-CEP newsblasts and newsletters delivered to 759 recipients each quarter.	Achieved

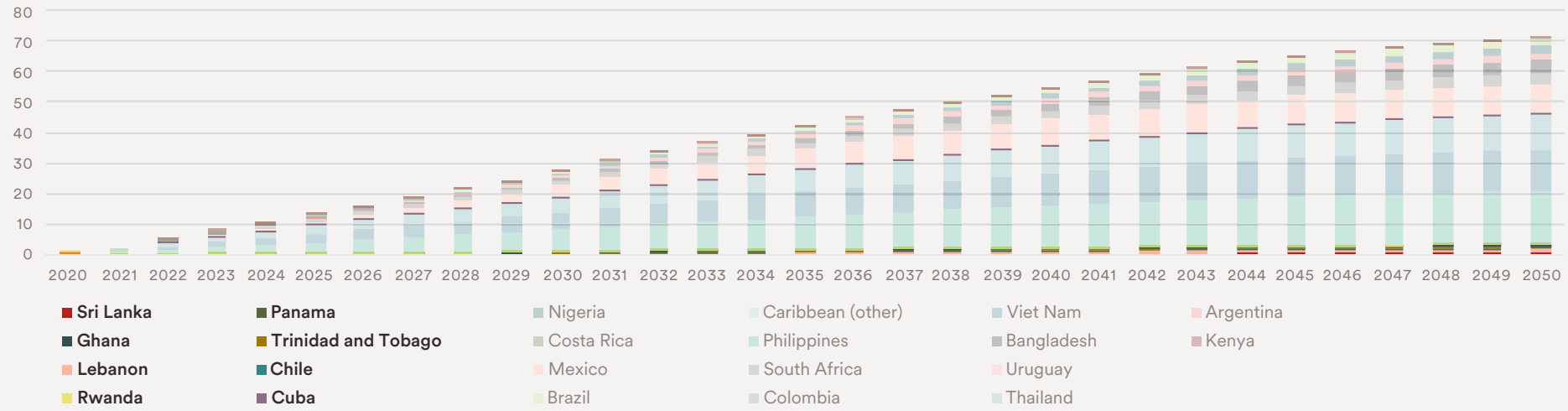
Phase I Results figures continued

Figure 5. Avoided Mt CO_2 emissions from MEPS and labels by country (without China)



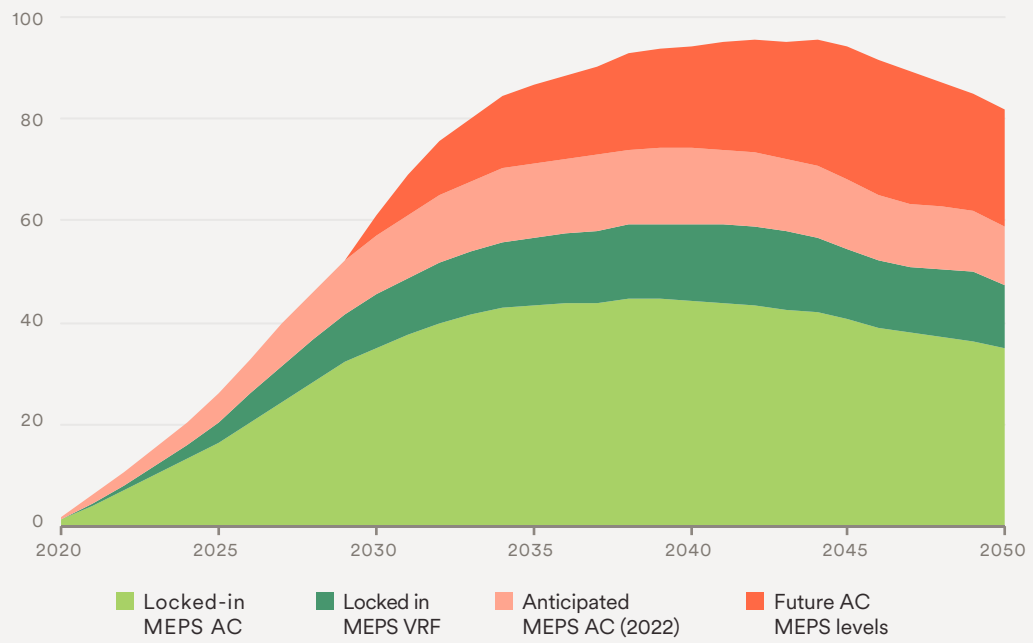
Bold countries = Locked in Light countries = Anticipated

Figure 6: Avoided Mt CO_2 emissions from NCPs (without China)



Bold countries = Committed Light countries = Anticipated

Figure 7: Impact of China MEPS in GCAP (Mt CO2)



China's GCAP prioritized MEPS for residential ACs with a 30% improvement in efficiency and a VRF standard with a 40% improvement, by 2022, with an additional 15% increase by 2030. The 2022 amendment to the residential AC MEPS and the ongoing amendment to the VRF MEPS (anticipated 2021) are projected to achieve a significant portion of those targets by 2030, with additional anticipated energy and GHG savings from further strengthening of AC MEPS.

Clean Cooling
COLLABORATIVE

The Clean Cooling Collaborative (formerly K-CEP) is a philanthropic initiative housed at ClimateWorks Foundation that works to deliver climate-friendly cooling for all.