

# Review of the Improving Health and Productivity Through Sustainable Cooling for All Programme

This review assesses the results, effectiveness, lessons learned, and opportunities of the Sustainable Cooling for All Programme from 2022 to 2024. Through an analysis of validated programme documentation, key performance data, and stakeholder engagement, the review rapidly assesses achievements, challenges, and significant shifts in programme strategy. It aims to identify areas for improvement, opportunities for scaling success, and recommendations for strengthening future programme design and implementation in 2025 and beyond. This has been internally conducted by the SEforALL MEL Department, leveraging evidence and data that has been validated both internally and externally throughout the timeline of review.

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## Table of Contents

1. Executive Summary .....	2
2. Review of Programme Effectiveness.....	5
3. Highlight of Key Successes .....	25
4. Highlight of Key Learnings.....	28
5. Significant Adaptations and Course Corrections .....	30
6. Opportunities for Future Funding & Strategic Recommendations for Future Implementation .....	32
Annex 1 .....	35
Annex 2 .....	37

## 1. Executive Summary

The Sustainable Cooling for All Programme, hereby referenced “the Programme” funded by the Austrian Development Agency (ADA), Swiss Agency for Development and Cooperation, and Clean Cooling Collaborative, aims to drive policy innovation, evidence generation, partnerships, and business solutions to expand access to sustainable cooling, particularly for vulnerable populations in urban and rural settings. By reducing energy demand while ensuring equitable access to cooling, the Programme contributes to climate resilience, energy efficiency, and social inclusion.

The Programme has made substantial strides in meeting its planned objectives and overachieved on 11 out of the 12 applicable KPI targets in the business plan tracked by the Programme. It has also demonstrated remarkable achievements in expanding global cooling access, influencing policy, and mobilizing investment. A key focus has been integrating cross-cutting themes, including gender inclusion, youth engagement, and climate resilience. It has provided critical insights into gender disparities in cooling access, supported youth-led innovations, and aligned sustainable cooling solutions with broader climate action frameworks. Additionally, the Programme's financial mobilization efforts have resulted in significant investments, enabling the scaling and deployment of sustainable cooling initiatives globally.

This review assesses the results, effectiveness, lessons learned, and opportunities of the Sustainable Cooling for All Programme from 2022 to 2024. Through an analysis of programme documentation, key performance data, and stakeholder engagement, the review evaluates achievements, challenges, and significant shifts in Programme strategy. It aims to identify areas for improvement, opportunities for scaling success, and recommendations for strengthening future programme design and implementation in 2025 and beyond.

The review identified several key findings and takeaways from the Programme:

- **Supporting Financing and Scale up of Access to Cooling Solutions:** The Programme’s financial mobilization target exceeded expectations, influencing the mobilization of USD 326.53 million during the 2021-2024 period, surpassing the initial target of USD 140 million. However, despite progress in advocacy and awareness-raising, access to financing to implement cooling solutions remains a critical barrier. Governments and businesses, particularly in developing markets, struggle to secure necessary investments for sustainable cooling projects as there is a need to de-risk the market and bridge the gap between small and micro-enterprise technology providers and larger institutional investors in need of larger ticket sizes to invest in. Strengthening collaborations with financial institutions and multilateral lenders is essential.
- **Supporting Countries to Develop and Enhance NCAPs, NDCs or equivalent:** The Programme significantly influenced national policy development, particularly in Kenya and Ghana, where sustained technical support led to the integration of cooling solutions into national strategies. The Programme provided direct or indirect support to a total of 30 high-impact countries<sup>1</sup> in incorporating cooling solutions into their National Cooling Action Plans (NCAPs) and Nationally Determined Contributions (NDCs), exceeding the target of 27 countries. NCAPs were also implemented in 53 high-impact countries, more than double the original target of 25, significantly advancing access to sustainable cooling worldwide.

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<sup>1</sup> Argentina, Bangladesh, Benin, Belize, Burkina Faso, Cambodia, China, Colombia, Dominican Republic, Egypt, Ghana, India, Jordan, Kenya, Lebanon, Malawi, Mexico, Morocco, Myanmar, Nigeria, Pakistan, Somalia, Sri Lanka, South Sudan, Thailand, Timor-Leste, Togo, Turkey, Uganda, Vietnam

- **Supporting Ambition and Commitments:** The Programme also provided pivotal support to the development and launch of the Global Cooling Pledge. It provided strategic guidance, drafted key text, and facilitated strategic consultations. These efforts led to Kenya championing the pledge, with Maldives and other nations signalling support. Additionally, SEforALL's secondment to the COP28 Presidency led country engagement, ensuring strong participation and the pledge's official launch during COP28 on December 5, 2023. The pledge secured commitments from over 60 countries, including Nigeria, Kenya, Ghana, Brazil, and the United States. It is important to note the Global Cooling Pledge is projected to cut 78 billion tonnes of CO<sub>2</sub>e emissions by 2050 and reduce electricity bills for end users by USD 17 trillion cumulatively between 2022 - 2050, aligning with global climate goals.
- **Raising Awareness of Sustainable Cooling Solutions:** The Programme's engagement and outreach activities performed strongly between 2021-2024, with 11,725 participants attending cooling related events and 64 capacity-building sessions conducted, far exceeding initial targets. The Programme's communication impact grew significantly, with 836 cooling-related communications materials delivered and 89,130 people reached, surpassing the original target of 68,000. Knowledge generation also improved, with 16 new tools and data products produced to enhance understanding of cooling needs, surpassing the initial target of 7. The Programme also delivered the #ThisCool Communications Campaign to raise awareness of sustainable cooling solutions. However, while the Programme produced valuable research and policy recommendations, uptake by policymakers and industry stakeholders remains inconsistent and could be further improved. A more tailored dissemination approach and enhanced capacity-building efforts are needed to maximize uptake and eventual impact.
- **Gender Inclusion:** The Programme successfully highlighted the gender dimensions of cooling access, particularly the disproportionate risks faced by women. However, more systematic gender mainstreaming is required to ensure that cooling policies and investments are equitable and inclusive.

The Programme made strategic adjustments, including refining its engagement strategies, expanding partnerships, and targeting knowledge products for specific sectors like food, agriculture, and health. These adjustments followed recommendations from an externally commissioned evaluation which influenced the Programme's strategy for 2022 and beyond. However, further efforts are needed to streamline and strengthen in-country support mechanisms, particularly by ensuring that adequate technical and financial resources are allocated to match the scale of country-level ambitions and needs.

To enhance the impact and sustainability of the Programme, strengthening strategic partnerships, particularly with ADA, will be essential. A continued and deepened collaboration with ADA, as briefly outlined below and further detailed in section 6, will play a key role in advancing key Programme objectives. Specifically, this partnership will support efforts to:

- Strengthen gender and youth-focused cooling interventions with dedicated knowledge building on the gender-based impacts of a lack of sustainable cooling and the socio-economic benefits women and girls can derive from accessing sustainable cooling, aligning with ADA's commitment to inclusive development by ensuring women and young entrepreneurs benefit from programme activities.
- Scale financial support mechanisms by improving access to investment and concessional financing for sustainable cooling initiatives, especially in low-income regions. Lead the implementation of innovative financing mechanisms in cold chains and passive cooling that advance market maturity and affordability for vulnerable groups.

- Enhance sectoral planning at the country and sub-national level by leveraging data innovation with a focus on critical enablers for expanding access to cooling, including data and investment planning support for expanding agricultural and vaccine cold-chains, the development of urban or sub-national heat action plans, and the implementation of passive cooling solutions for buildings and urban environments.
- Boost knowledge dissemination and awareness by producing high-impact reports, case studies, and digital learning resources to promote best practices and sector-wide learning.
- Leverage multi-stakeholder partnerships to drive country specific innovations, increase investment, and scale cooling solutions through coordinated collaborations and interventions.

The review also produced some key recommendations:

- **Finance and Investment:** Support country platforms to identify priority cooling investments and design catalytic financing mechanisms. Facilitate or lead efforts to finance deployment of sustainable cold chain infrastructure and passive and nature-based solutions.
- **Data-driven Technical Support to Support Solution Deployment and Guide Investment:** Prioritize geospatial planning to support countries, sub-national governments, the private sector, and development partners to invest in and deploy sustainable cold chain, passive, and nature-based solutions. Improve accessibility and usability of knowledge products through targeted dissemination strategies and digital platforms and institutionalize sector-specific research, light-touch evaluations, and feedback loops.
- **Awareness, Capacity, and Inclusion:** Integrate gender considerations across all programme activities and advocacy efforts. Scale the Cooling for All training curriculum by partnering with academic institutions and local governments.
- **Policy, Governance and Planning:** Enhance collaboration with development finance institutions and policymakers to mainstream cooling access in development agendas. Target global platforms such as the G20 and COP Presidencies to elevate cooling as a policy priority.

As the global demand for sustainable cooling continues to grow, the Programme's role in shaping policy, mobilizing finance, and driving sector-wide learning remains vital. To maximize impact and sustainability, it is essential to enhance financial support mechanisms, provide investment-ready data at the country level, strengthen policy engagement, and improve knowledge dissemination. By leveraging its strategic partnerships with ADA and other key stakeholders, the Programme can further its mission of ensuring universal access to affordable, sustainable, and efficient cooling solutions are accessible to all.

## 2. Review of Programme Effectiveness

### 2.1. Achievement Against Key Performance Indicators and Deliverables

The Programme's performance is tracked against several Key Performance Indicators (KPIs) - which are measurable values used to assess the progress and success of a programme or organization towards achieving its objectives. These include KPIs associated with the SEforALL 2021-2023 Business Plan, as well as programmatic KPIs. Below is a summary of progress against these indicators beginning in 2021 with the initiation of a new SEforALL business plan through to the end of 2024.

The Programme made substantial strides in meeting its planned objectives during the 2021-2024 period and overachieved on 11 out of the 12 applicable targets. There is an opportunity, however, to further enhance evidence generation and knowledge dissemination. Expanding structured knowledge-sharing and learning tools will further amplify sector-wide impact and strengthen the adoption of sustainable cooling solutions. Building on the remarkable progress the Programme has achieved, continued investment and innovation will be key to bridging the cooling access gap, ensuring that more communities worldwide benefit from equitable and sustainable cooling solutions.

**Programme Level Business Plan KPIs:** These are the Programme's core KPIs. They are the indicators committed to in the design of the Programme's 2021-2023 Business Plan and reported to all the Programme's funders including the ADA, Swiss Agency for Development and Clean Cooling Collaborative.

#### Supporting financing and scale-up of access to cooling solutions

- **SEforALL Business Plan KPI:** USD million investment raised by partners to deliver sustainable cooling solutions and incentives
- **KPI Definition:** Value (USD) of funding mobilized by cooling initiatives to increase access to sustainable cooling solutions to meet the needs of human comfort and safety, food and nutrition security and/or medicine and health services.

Financial mobilization was a cornerstone of the Programme's success. Notably, the Programme significantly exceeded target for funding mobilized by supported partners, with those partners raising USD 326.53 million to support access to sustainable cooling initiatives globally between 2021 and 2024 - against an original target of USD 140 million - demonstrating strong partner engagement and investment traction. The funding has facilitated investments in cold-chain infrastructure, energy-efficient cooling appliances, and renewable energy-powered cooling solutions. Key highlights over the grant period include the following:

- In 2021 the Green Climate Fund (GCF) approved its first Cooling Facility, which included \$157 million in direct funding and an additional \$723 million in leverage from internal World Bank operations.
- The finance leveraged by partner organizations in to deliver sustainable cooling solutions further increased in 2022, including funding through the World Bank Energy Sector Management Assistance Programme (ESMAP) Technical Assistance programme for cooling, as well as a \$25 million grant from the IKEA Foundation to the Clean Cooling Collaborative.
- In 2023, three new funding windows were opened for cooling innovation by the International Finance Corporation (IFC), and additional support was announced by the UK for the IFC on at COP 28.

In 2023-2024, SEforALL began to include support for the mobilization of finance as part of its country support offer, working with governments and fund managers, solution providers, and development financiers to increase investment through design of dedicated vehicles, partnered fundraising, and convening. This strategy began with initial work in Kenya, Ghana, and Nigeria.

In **Kenya**, SEforALL collaboratively worked on galvanizing innovative finance in the implementation of cooling projects and activities. This is in collaboration with Ministries of Environment, Climate Change and Forestry, Energy, Health and Agriculture, Kenya Renewable Energy Association (KERE), Heating Refrigeration and Air conditioning Engineers of Kenya (HEVAC-Kenya). One prioritized project was for Energy Efficiency and Cooling in 200 Secondary Schools which raised 250,000 Euros through Mission Efficiency and a further 2 million Euros was targeted for fundraising.

SEforALL in collaboration with the Kenya Ministry of Energy and Ministry of Environment, Climate Change and Forestry launched an investment marketplace workshop in November 2023 with various stakeholders from the development sector, financial sector, civil society and private players in energy efficiency and cooling. The World Bank ESMAP program engaged the Cooling Programme for its advice on the Kenya National Agricultural Value Chain Development Project and the Programme will continue to work with the World Bank to mobilize additional financing for rural cooling needs in client countries, including those supported by the GCF Cooling Facility.

In **Ghana**, SEforALL helped build a needed pipeline of cooling investments linking projects to available finance. SEforALL helped support an increase in financial flows to cooling projects and activities by working with various stakeholders including the Private Financing Advisory Network and the Sustainable Use of Natural Resources and Energy Finance (SUNREF) in facilitating and packaging bankable projects. SEforALL also worked with the Development Bank of Ghana at the concept stage to establish a template for financing sustainable cooling projects. SEforALL supported the creation of various platforms for the promotion of highly efficient cooling devices and various impactful projects such as Akofresh - a project which supports the cooling of fresh farm produce reducing post-harvest losses in the Akumadan area.

In 2024, a group of philanthropies convened by ClimateWorks Foundation - a long-standing supporter of the Cooling for All Programme - announced an initiative for philanthropy to invest an initial commitment of \$50 million in climate adaptation and resilience efforts in regions most vulnerable to climate change impacts, including extreme heat. The announcement was issued in response to United Nations Secretary-General António Guterres' [call to action on extreme heat](#). It shows how philanthropic funders are scaling up their role in addressing the escalating threats that extreme heat poses to health, workers and livelihoods, infrastructure, and food security in communities worldwide.

Multilateral funders have stepped up to support cooling innovation and deployment. The International Finance Corporation (IFC) committed USD 12.7 million to a new Sustainable Cooling Initiative with the UK's Department of Energy Security and Net Zero in 2024. This initiative builds on the success of the TechEmerge Programme and aims to develop transformative cooling systems and enhance investment readiness. With this investment, IFC supports the implementation of the Global Cooling Pledge. Additionally, the Asian Development Bank and the High-Level Technology Fund have launched a technology innovation challenge to discover and test cooling storage solutions designed specifically for rural women in Bangladesh and Cambodia.

As the momentum for sustainable cooling is growing and access to cooling is being included into more programmes and investment portfolios, access to sustainable cooling finance is growing substantially and SEforALL believes that the finance tracked is likely an underestimation. This is because most international development or energy finance for cooling is typically included in larger investment

portfolios or programs that concentrate on energy efficiency, agriculture, or health care writ large. For example, the Programme advised the World Bank and FAO on the Kenya National Agricultural Value Chain Development Project, a USD \$250 million credit facility provided by the World Bank focusing on producer capacity, value chain investments, and technology pilots. While the project will support access to sustainable agricultural cold-chains, the value of finance for these elements is unknown due to cooling being a component part of many project elements. Further guidance from SEforALL on how finance for access to cooling can be tracked and reflections on its value can be found in the [SEforALL Energizing Finance Analysis: A Framework for Tracking Cooling Investment](#).

### Progress Against Results Framework

Activity	Indicator(s)	Definition(s)	End of grant target	31 December 2024 value
Investment	<b>Business Plan KPI:</b> USD million investment raised by partners to deliver sustainable cooling solutions and incentives (NB: also a core KPI in SEforALL Business Plan)	Value (USD) of funding mobilized by cooling initiatives to increase access to sustainable cooling solutions to meet the needs of human comfort and safety, food, and nutrition security and/or medicine and health services.	140	326.53

### Supporting countries to develop and enhance national cooling plans

- **SEforALL Business Plan KPI:** # of Access to Cooling high impact countries w/ access to cooling in their NCAP and NDC as a result of SEforALL’s support directly and indirectly
- **KPI Definition:** Number of high impact countries that use Cooling for All data, information or proposed text on policy, financial, technology or service-based measures (or are otherwise directly or indirectly supported by SEforALL) that support access to cooling, or show how cooling supports the Sustainable Development goals in their National Cooling Action Plan, Nationally Determined Contributions, or equivalent national strategy or plan.

The Programme played an instrumental role in supporting the development of National Cooling Action Plans (NCAPs), ensuring that cooling solutions are sustainable, inclusive, and scalable, enabling countries to implement robust long-term plans. The Programme helped achieve substantial progress in the inclusion of access to cooling in the Nationally Determined Contributions (NDCs) of high-impact countries, with support for NDC revisions provided by partners that SEforALL worked closely with and/or influenced, including the United Nations Development Programme’s (UNDP) Climate Promise Initiative and the United Nations Environment Programme (UNEP) country support work.

#### *National Cooling Plans and NDCs*

The Programme supported 30 high-impact countries where access to cooling is reflected in their National Cooling Action Plan (NCAP), Nationally Determined Contribution (NDC), or an equivalent strategy as a result of SEforALL’s support directly or indirectly, surpassing the target of 27. This includes direct support for NCAPs in 8 high impact countries, where direct support is defined as provision of SEforALL data, recommendations, or advisory support either directly to the Government or to the lead international partner responsible for technical assistance. In addition, the Programme has now provided indirect support to 22 countries, with indirect support defined as any combination of actions, advice,

data, and evidence provided by SEforALL that made the case for; or enabled partners to support policy progress on access to cooling<sup>2</sup>. In addition to these 30 countries, SEforALL has tracked 16 other high-impact countries where access to cooling is reflected in an NCAP, NDC, or equivalent strategy, but in which SEforALL has not provided direct or indirect support. However, this brings the total number of Access to Cooling high impact countries with access to cooling in their NCAP, NDC, or equivalent strategy, tracked by SEforALL, to 46.

The Programme initiated its engagement with national sustainable cooling policy development in 2020, working in collaboration with development partners such as Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), United Nations Environment Programme (UNEP), United Nations Development Programme (UNDP), and United Nations Industrial Development Organization (UNIDO) to advance progress in several countries in Asia and Africa. A key policy development instrument promoted in many countries is the National Cooling Action Plan (NCAP). SEforALL's role since 2020 has included providing access to cooling data and related policy recommendations into the national cooling policy development process.

Since 2020, the Programme has provided support to NCAP planning processes in eight high impact countries: Nigeria, Ghana, Sri Lanka, Bangladesh, Pakistan, Cambodia, Kenya, and Indonesia. It also provided similar support for South Africa, a non-high impact country. As part of the grant activities, SEforALL advocated for, and participated in the development of a model NCAP. This work was concluded through the Cool Coalition and, based on SEforALL's inputs incorporated access to cooling and a needs-driven approach.

Between 2020 and 2023, NDC enhancements related to access to cooling were observed in Burkina Faso, Cambodia, Egypt, Liberia, Malawi, Myanmar, South Sudan, Thailand, Togo, and Uganda, among others. Further, the Global Cooling Watch (UNEP, 2023) reports that 96 countries - around half of all countries - have established a national-level strategy or policy to increase access to cooling. However, only 20 countries (out of 58 countries where data were available) have government policies or programmes for off-grid refrigeration, which will be key to enhancing cooling access for those who need it most.

### *Country Level Highlights*

In **Cambodia**, SEforALL provided technical support for the development of the NCAP between 2021 and 2023, which was led by the Government of Cambodia, UNEP, and United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). SEforALL provided data and draft inputs into various sections with a focus on access to cooling. [The Plan](#) was published in March 2023 and contained a robust focus on supporting access to cooling and equity. The plan outlines interventions for the country to transition to sustainable cooling in all sectors - with the potential to reduce projected electricity demand from cooling by 23% in 2040 - while protecting vulnerable people from the effects of extreme heat and lack of reliable cold-chains.

In **Kenya**, SEforALL provided technical support in review of the National Cooling Action Plan and supported the launch thereof, through data, inputs and the convening of workshops for stakeholder engagement. [The launch of the NCAP 2023-2027](#) and development of a community of practice created an enabling environment for enhancing ongoing development of reliable cold-chains in agriculture and

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<sup>2</sup> This finding is supported by affiliated partners having provided technical assistance and/or through the Cooling for All programme evaluation. Further details can be found in the public report available at:

[https://www.seforall.org/system/files/2023-03/Cooling%20for%20All%20evaluation%20final%20report\\_PUBLIC.pdf](https://www.seforall.org/system/files/2023-03/Cooling%20for%20All%20evaluation%20final%20report_PUBLIC.pdf)

healthcare, prioritization of affordable and efficient cooling appliances and reducing energy consumption through energy efficient cooling. By creating awareness of cooling at national and sub-national levels, SEforALL was invited to collaborate with the Government of Kenya and GIZ in enhancing cooling in the draft National Climate Change Action Plan 2023-2028 and provided technical inputs on improving sustainable cooling policies to the lead agencies in 2023.

In **Indonesia**, SEforALL collaborated with UNEP and UNESCAP to develop Indonesia's NCAP. SEforALL joined the working group for Indonesia's NCAP development and provided analytical and policy recommendation support on food and agriculture food chain and passive cooling interventions. Throughout 2021 SEforALL supported partners by drafting an access to cooling outline for the Indonesian NCAP. In 2024, the Indonesia National Cooling Action Plan (I-NCAP) finally received the approval by Ministry of Energy and Mineral Resources and was launched by the Government of Indonesia.

In **Ghana**, the programme [convened a community of practice](#) to support implementation of the National Cooling Action Plan and train public sector stakeholders on cooling in buildings, cooling in cities, and the Cooling for All Solutions Tool. Over the course of a three-day workshop convened by SEforALL in March 2023, government stakeholders participated in discussions to identify policy, and financing needs to implement the plan, and representatives from Rwanda and Kenya participated in a South-South component of the workshop to identify and share best practices.

SEforALL organized sessions to raise awareness on Ghana's new regulations on AC's and Refrigerators. Ghana is moving from Minimum Energy Performance Standards (MEPS) to High Energy Performance Standards (HEPS) and as such needs to create awareness on the new labelling system which will look at 7 stars for highly efficient devices. This was also to help create awareness through the Ozone Unit of the Environmental Protection Agency (EPA) on R290 AC's which use natural refrigerants.

In 2023, National Cooling Action Plans were released in the high-impact countries of **Turkey, Jordan, and Belize**. Each plan drew on lessons from the model National Cooling Action Plan Methodology, developed with SEforALL's support with UNEP and UNDP providing primary support to Belize and the Cool Up Program to Turkey and Jordan.

#### *Support for Cooling within Integrated Energy Plans*

To support electrification efforts, SEforALL is advancing a nexus approach towards access to energy and access to sustainable cooling. This includes integrating cold-chains within SEforALL-led Integrated Energy Plans (IEP) where there is interest or demand from recipient governments. The objective of the IEP is to harmonize energy and cooling needs to upgrade cold-chain infrastructure, together with investment costs of intervention. During the grant period, SEforALL provided this support in Nigeria, Malawi, Madagascar, and Mozambique.

In 2021, SEforALL supported the integration of cold-chains into the IEP processes for Nigeria and Malawi. Following the official launch in 2022 SEforALL released its report on vaccine cold-chains as a support mechanism for the IEP in **Malawi**. The report included the results of cold-chain capacity utilization and assessment, facility energy needs assessment and recommendations for effective cold-chain management for both COVID-19 vaccines as well as routine immunization coverage for Malawi. This vaccine distribution and energy analysis provided insight into a few key areas of cold-chain management that, if addressed, could strengthen the overall vaccine supply chain in the country.

In 2023, SEforALL supported **Madagascar** by including an analysis featuring pathways for improving the agricultural cold-chain through integrated energy and cooling solutions. The multifaceted vaccine cold-

chain analysis served a threefold purpose. Firstly, it aimed to enhance the efficiency and reliability of the existing supply chain. Secondly, it supported Madagascar to prepare the country for the ongoing expansion of the immunization programme, including the achievement of new targets related to COVID-19 vaccines and potential future vaccines, such as those for malaria. The agricultural cold-chain analysis for Madagascar focused on a selection of four critical agricultural value chains that will benefit from enhanced cold-chain technology. It maps cold-chain requirements along the value chains together with access to energy services, access to cold-chain technology and the status of refrigeration along the value chain. The analysis includes an assessment of specific technology used, the volume of products that benefit from access to cold-chain services and a gap analysis to identify specific deficits and opportunities that could profit Malagasy producers in the future. This includes an assessment of refrigerated transport, refrigerated cold storage, and cold-chain equipment at distribution centers. It furthermore includes an evaluation of existing technology stack across each selected value chain and an assessment of cooling needs and availability, efficiency, and affordability of sustainable cooling technologies. The Madagascar Integrated Energy Access Planning (IEP) Tool was formally launched in 2024, with backing from the Minister of Energy and Hydrocarbons, and highlighting opportunities to integrate efforts towards electrification, clean cooking and cold chains for agricultural and medical purposes.

In parallel, the Programme initiated support for the Cooling modules for **Mozambique's** IEP in 2024. Similarly to Madagascar, the analysis will integrate least-cost electrification planning with an analysis of cold-chains for medical and agricultural uses. In the agricultural sector, the Programme is supporting a more advanced, geospatial analysis of suitable sites for deployment of cold-chain equipment (cush as walk-in cold rooms) powered by mini-grids or the national grid. This will support the creation of a portfolio of possible investments in agricultural cold-chain equipment with high-level commercial feasibility assessments.

#### *Additional Programmatic KPIs for the Advice and Policy Progress Activity*

The Programme provided technical assistance to 14 countries, 1 city association, and 34 initiatives, supporting a total of 49 entities. This exceeded the original target of 46 entities, although the support was more concentrated on initiatives and cities than on countries, compared to the disaggregated targets. Within the 14 countries supported, SEforALL's engagements were either tailored advice to inform a National Cooling Action Plan, the development of Integrated Energy Access Plans that included sustainable cold-chains, or strategic advice to guide the outputs of G20 Presidencies (India and Brazil). In 2024, notable progress included preparations for a more detailed analysis of the agricultural cold chain within the Integrated Energy Plans (IEP) of Madagascar and Mozambique, as well as new support for Heat Action Planning in Homa Bay County, Kenya.

A total of 56 initiatives were established in high-impact countries, more than doubling the initial target. These initiatives have been led by various partners of the Cooling for All programme. Most recently, in 2024, the International Finance Corporation (IFC) announced a new Sustainable Cooling Initiative, building on the success of the TechEmerge program. Furthermore, the Cool Coalition launched two new working groups on Model Urban Heat Action Plans and NDC Guidance, both of which SEforALL is actively engaged in.

## Progress Against Results Framework:

Activity	Indicator(s)	Definition(s)	End of grant target	31 December 2024
Advice	<b>Business Plan KPI:</b> No. of Access to Cooling high impact countries w/ access to cooling in their NCAP and/or NDC as a result of SEforALL's support, directly and indirectly (NB: also, a core KPI in SEforALL Business Plan)	Number of high impact countries that use Cooling for All data, information, or proposed text on policy, financial, technology or service-based measures that support access to cooling or show how cooling supports the Sustainable Development goals in their National Cooling Action Plan, Nationally Determined Contributions, or equivalent national strategy or plan.	27	30: including 8 countries supported directly and 22 indirectly.  An additional 16 high-impact countries with cooling in an NDC, NCAP or equivalent were tracked, bringing the total to 46 countries in the sector.
	Programmatic KPI: No. of access to cooling high-risk countries, cities and initiatives that receive policy support and technical assistance from SEforALL	High-impact countries are defined as access to cooling high impact countries, whereas cities and initiatives are not defined as high impact. Cities and countries are differentiated from each other and from initiatives and therefore not double counted; as the city support is a new activity, targets are zero since city support did not have a target in the original contract.	46 (25 countries, 0 cities, 21 initiatives)	49: including 14 countries 1 city association, 34 initiatives
	Programmatic KPI: No. of cooling initiatives established in high impact countries that advance access to cooling progress	The number of initiatives that advance access to cooling progress, regardless of SEforALL assistance. These can be partner organizations and initiatives.	25	56

**Additional Programmatic KPIs:** These are additional KPI's tracked by the Sustainable Cooling Programme as contributing to the Programme's theory of change and business plan KPIs. They include efforts to track access to sustainable cooling, partnership, data, evidence and tools, and communications and events

### Tracking Access to Sustainable Cooling and the Chilling Prospects Research Series

Since the start of the grant from ADA to support the Sustainable Cooling for All Programme, the Programme developed and launched Chilling Prospects series tracking reports from 2021-2023, as well as additional knowledge by-products on gender, in order to track access to sustainable cooling.

Chilling Prospects 2021 was released in May 2021 and focused on tracking global access to cooling and delivering enhanced data and analytics that better defined country-level and regional cooling access gaps. This report also featured a discussion of the role of sustainable vaccine cold-chains for an equitable COVID-19 response and profiled solutions in action. The report launch marked the first time SEforALL conducted a broadcast style event, which was available on the SEforALL Website, LinkedIn Twitter and YouTube.

SEforALL used the global convening power and visibility of the SEforALL Forum in 2022 to launch the [Chilling Prospects 2022](#) report, which focused on tracking global access to cooling, and delivering

enhanced data and analytics that better define country-level and regional cooling access gaps among the 54 high-impact countries and the high-temperature regions of 22 countries not considered high-impact. Chilling Prospects 2022 estimated that approximately 1.2 billion rural and urban poor are at high risk because they lack access to cooling. Additionally, the report forecasted scenarios for populations at risk through 2030 and found that if SDGs 7.1 and 1.1 were to be achieved, nearly 500 million people would be moved from high-risk to medium risk.

[Chilling Prospects 2023](#) was released in July 2023 during the Clean Energy Ministerial in Goa, India, and included an analysis of 77 countries, which showed that 1.12 billion people among the rural and urban poor areas were at high risk due to a lack of access to cooling. This report sought to increase awareness about gender-based factors that place women and men at risk of lacking access to cooling and, for the first time, presented sex-disaggregated data, highlighting the disparities in access to cooling and making a call to action for gender-responsive cooling solutions and finance.

Within the 77 countries included in the [Chilling Prospects 2023](#) analysis, 1.12 billion people among the rural and urban poor are considered to be at high risk due to a lack of access to cooling at the end of the grant period. The number of people at high risk decreased from 1.14 billion people in 2022. Within this, the rural poor population decreased by 21.9 million people across the 77 countries assessed and the number of urban poor increased by 1.5 million people. Women make up approximately 52 percent of the population at high risk in rural areas and 54 percent of the population at high risk in urban areas. Critical 9 countries are home to over 772 million people at high risk. By proportion of the population, the risk is most pronounced in Mozambique, where 83 percent of the population is at high risk, followed by Nigeria (53 percent) and Sudan (44 percent). In addition, 2.90 billion lower-middle-income people are at medium risk and 958.7 million middle-income people are at low risk in the 77 countries analyzed.

#### *Chilling Prospects Special Editions and Knowledge Briefs*

The Programme also released two special editions of Chilling Prospects during the grant. The first, [Chilling Prospects 2022 Special: Delivering Cooling for All](#), SDG7 and Climate Action dove deeper into the progress on access to cooling and climate action (SDG13) to forecast how increased penetration of renewable energy (SDG7.2) and energy efficiency (SDG7.3) would impact access to cooling. The findings shed light on the importance of comprehensive analysis that link access to an adequate electricity supply, energy efficiency and renewable energy to achieve SDG7, SDG13 and reduce the number of people at risk. In March 2023, the [Chilling Prospects Special: Gender and Access to Cooling](#) unpacked the gender-based factors that place women and men at risk of lacking access to cooling and disaggregated 2022 data by gender. By incorporating gender as a lens to analyze data, the Chilling Prospects Special 2023 identified that women make up approximately 52 percent of the population at high risk in rural areas and 54 percent of the population at high risk in urban areas. However, the analysis also showed that the number of people at high risk decreased from 1.14 billion people in 2022 to 1.12 billion in 2023, a decrease of approximately 20.4 million people.

The report on gender built on a knowledge brief SEforALL published in March 2021 titled [Cooling for All and Gender: Towards Inclusive, Sustainable Cooling Solutions](#). Additional knowledge briefs published by the program during the grant as byproducts of the Chilling Prospects include [Tracking Cooling Investment](#) and [Standards for Off-Grid Cooling Appliances](#) that filled key knowledge gaps in the area of sustainable cooling.

#### *Chilling Prospects Country Briefs*

In 2024, SEforALL published Chilling Prospects Country Briefs for [Ghana](#) and [Kenya](#). The country briefs present Ghana and Kenya's cooling needs, discuss challenges and opportunities in critical cooling

sectors, review the high-level but key thematic solutions, and recommend priority areas for policy and market interventions that would advance sustainable cooling for all in both countries.

Activity	Indicator(s)	Definition(s)	End of grant target	2024 value
<b>Access</b>	Programmatic KPI: Population at high risk due to a lack of access to sustainable cooling (millions of people)	Number of people identified in the Chilling Prospect series analysis that are in the two high risk groups, the rural poor and urban poor.	N/A	1,12 billion (in 77 countries assessed in Chilling Prospects 2023)

### Advocacy and Partnership

Since the outset of the partnership with ADA, SEforALL placed significant emphasis on the below outlined partner projects and collaborations:

#### *COP28 Global Cooling Pledge*

In 2023, the Programme supported the UAE COP Presidency and the Cool Coalition in the design of the Global Cooling Pledge. The Programme provided strategic guidance, drafted key text, and facilitated strategic consultations with Governments and partners to support its design. As a member of the Cool Coalition Executive Committee, SEforALL guided the development of the Global Cooling Pledge, providing advice and draft text, and supporting the Cool Coalition Secretariat in the iteration of the Pledge based on stakeholder and country feedback. To support feedback collection, SEforALL hosted three consultation sessions: an official side event during the CEM/Mission Innovation Preparatory Meetings in Brazil (March), a session during the Ghana Cooling Days workshop (April) and during a Deep Dive Workshop of the Asia Clean Energy Forum (June). These events included participants from Kenya, Ghana, Rwanda, Maldives, Cambodia, the United States, the United Kingdom, and India, among others.

As a result of initial advocacy efforts, Kenya agreed to support the pledge as a champion country, while Maldives indicated it would back the pledge during ACEF. Additionally, the Cooling programme supported the UAE COP Presidency and the Cool Coalition to mobilize commitments to the Global Cooling Pledge in November - December 2023, ensuring the delivery of commitments from Nigeria, Kenya, and Ghana among others, including through an SEforALL team member seconded to the COP28 Presidency, who was ultimately responsible for leading country engagement and finalizing country commitments to the Pledge.

Ultimately, more than 60 countries, including the United States, Brazil, and Nigeria signed the Global Cooling Pledge, demonstrating a significant global commitment to sustainable cooling solutions. The SEforALL CEO and SRSG participated in the COP 28 Presidency event launching the Global Cooling Pledge on December 5, 2023, alongside Ministers from Ghana, Denmark, and Maldives.

Achieving the Global Cooling Pledge targets would cut emissions by approximately 78 billion tons CO<sub>2</sub>e between 2022-2050, while reducing electricity bills for end users by USD 1 trillion in 2050, and by USD 17 trillion cumulatively between 2022-2050.

### *Mobilizing Kenyan Counties to Join the Sub-national Global Cooling Pledge*

SEforALL mobilized nine Kenyan counties to commit to the Subnational Global Cooling Pledge at COP 29. These commitments were enabled through SEforALL's support to the Kenya Council of Governors in developing Heat Action Plans. The nine counties—Vihiga, Kisumu, Homa Bay, Nakuru, Laikipia, Kilifi, Tana River, Taita Taveta, and Makueni—pledged to integrate cooling into existing strategies, increase urban green and blue spaces for cooling, and prioritize low-global warming potential, high-efficiency cooling technologies in government buildings.

### *Synergies with SEforALL's support to G20 India Presidency on Energy Efficiency*

SEforALL built synergies with the Bureau of Energy Efficiency of India to advance key energy efficiency deliverables during the G20 India Presidency. In particular:

- Key recommendations on ensuring access to thermal comfort of all were factored into the G20 Strategic Plan for Advancing Energy Efficiency Across Demand Sector by 2023, co-authored by BEE, SEforALL, AEEE and IEA. The recommendations were subsequently reflected in the G20 Voluntary Action Plan on Doubling the Global Rate of Energy Efficiency Improvement by 2030, which was recognized in the G20 Energy Transition Minister Outcome Document and in the G20 New Delhi Leader's [Declaration](#).
- Efficient cooling, passive design, and nature-based solutions were included among the key criteria for the identification of 100 Iconic Sustainable Buildings, an initiative led by BEE and SEforALL with domestic and international partners.

### **Progress Against Results Framework**

<b>Activity</b>	<b>Indicator(s)</b>	<b>Definition(s)</b>	<b>End of grant target</b>	<b>31 December 2024</b>
<b>Partnerships</b>	Programmatic KPI: No. of Cooling for All partner organizations and initiatives	The number of partner organizations and initiatives that partner with the Cooling for All programme, including the number of private sector partners of the Cooling for All initiative.	50	64

### **Data, Evidence and Tools**

The ADA Grant to SEforALL enabled the development of additional tools to support access to sustainable cooling. During the grant period, the Programme produced 16 primary knowledge, data products and tools, more than twice the initial target. Cooling for All data, evidence, tools and training resources were used by 33 partners and government including 13 government counterparts, surpassing the projected 20 partnerships. The Programme also produced 72 knowledge bi-products, such as articles, webinars, briefings and others. This falls slightly short of the initial target (80), as the Programme favoured larger flagship reports in recent years. In addition to the Chilling Prospects Research Series products referenced above, these efforts include:

#### *Agricultural Cold-chain Planning Tool*

The Programme began development of an innovative geospatial tool, the Agricultural Cold-chain Access Planning (AgCAP) tool. This tool will leverage geospatial data to assess farming and fishing activities in each settlement, track the production of perishable products, and identify communities that would benefit most from cold storage facilities, based on customizable criteria. It will also provide a high-

level analysis of the commercial feasibility of cold storage solutions powered by mini-grids or grid expansion. Once piloted in Mozambique, the AgCAP tool will be made open access and can be used either as part of Integrated Energy Plan (IEP) support or as a stand-alone analysis.

### *Global Cooling Watch*

In support of the Global Cooling Pledge, a joint initiative with the United Arab Emirates as host of COP28, the UNEP-led Cool Coalition coordinated the development of a Global Cooling Watch report, titled [“Keeping it Chill: How to meet cooling demands while cutting emissions”](#). Launched at COP28, the report presents pathways to get to near-zero emissions in the key cooling sectors and issues a call to action to countries. During the reporting period, SEforALL supported this process as part of the Technical Advisory Committee, and as a topical author providing data, contributions, and review across all chapters. SEforALL also joined the modeling advisory committee to ensure that forecasts of future cooling demand account for the needs of the most vulnerable. Among other inputs, the Global Cooling Watch analysis made direct use of both Chilling Prospect 2023 data on populations at risk, and elements of the [“policy tracking approach”](#) released with Chilling Prospects 2022.

### *ESMAP Support and Joint Publication*

Since 2021, SEforALL has actively contributed to the work of the World Bank Energy Sector Management Assistance Programme (ESMAP) group. This included design support for the USD \$157 million application to the Green Climate Fund for the subsequently approved Cooling Facility. During the ADA grant period, SEforALL and the World Bank ESMAP unit also partnered to develop the joint report, [“Sustainable Cooling in Off-Grid Rural Areas - The Nexus between Access to Energy and Clean Cooling”](#), published in 2024. The report stimulates discussion and action among stakeholders on the urgent need for significantly more attention to the nexus of access to sustainable cooling with access to electricity in rural off-grid areas. Based on a literature review and electrification experiences on the ground, the report seeks to clarify key synergies between access to cooling and to electricity, identify important issues and barriers along with policy tools to address them, and formulate preliminary recommendations and signal areas for further work.

### *Heat Risk Planning Methodology*

During the grant period, the Programme also initiated development methodology to measure urban heat risk and visualize the impact of sustainable cooling solutions for cities in the Global South. Initiated in 2023, SEforALL continued active development of a geospatial, data-driven urban heat risk mitigation mapping tool to help policymakers and planners identify effective sustainable cooling solutions and where to deploy them, enabling development financiers to target the most effective deployment of solutions, and enhancing equitable and sustainable access to cooling.

## **Progress Against Results Framework**

<b>Activity</b>	<b>Indicator</b>	<b>Definition(s)</b>	<b>End of grant target</b>	<b>31 December 2024</b>
<b>Data, Evidence and Tools</b>	SDC KPI E.a) No. of Cooling for All data, evidence and tools provided to better understand access to cooling needs	The number of primary knowledge products produced for the sector by Cooling for All which could include knowledge briefs, Chilling Prospects, online database, online GIS modeling product, Needs Assessments, Solutions Toolkit. This target is the addition of one	7	16

	and sustainable cooling solutions	Chilling Prospects report per year plus the Needs Assessments formats annually. This is reported on a cumulative basis.		
	SDC KPI E.b) No. of knowledge bi products (product formats, website articles, blog posts, briefings, webinars) produced by SEforALL to improve accessibility and disseminate Cooling for All data, evidence and tools	The number of biproducts leveraging primary knowledge products which tailor Cooling for All's data, evidence, and tools to target audiences through different dissemination channels such as website articles, briefings, webinars, etc. annually.	80	72
	SDC KPI E.c) No. of partners or governments using the Cooling for All data, evidence, tools and training resources	Cooling for All tools and resources include the Needs Assessment, Solutions Toolkit, Training material and any other future products developed by SEforALL.	20	33

**Communications**

The Programme’s communications and knowledge dissemination efforts were also noteworthy. Between 2021 and 2024, 863 knowledge and communications materials were developed and shared, exceeding the target of 450. 92,406 people were reached through the Programme’s communication collateral, surpassing the target of 68,000. This expanded reach has helped raise awareness of sustainable cooling solutions and amplified the Programme’s influence, engaging a broader audience and driving greater visibility for the critical role of cooling in climate resilience, energy transitions and sustainable development.

*This is Cool Communication Campaign*

Throughout the grant period, SEforALL continued to deliver the **#ThisisCool Communications Campaign**, initially launched in July 2020, to raise awareness of sustainable cooling solutions. At the end of 2021 the #ThisisCool campaign had an estimated timeline reach of 38.3 million deliveries and a #thisiscool hashtag reach of 10.78 million. On social media, the campaign saw 6,539 tweets from 3,943 contributors, including 204 posts from SEforALL in 2021. The microsite developed for the campaign was viewed 23,089 times and generated a cumulative 772 communications toolkit downloads.

In 2022 the campaign continued to support increased awareness of sustainable cooling solutions through multiple social media assets, messages and stories contained on a microsite, allowing partners to download and utilize SEforALL produced communications collaterals. The campaign was also leveraged for a media strategy to launch Chilling Prospects 2022, which secured 101 pieces of media coverage including Reuters, Times of India, Independent, Mail Online and BBC Africa. SEforALL was interviewed by broadcast media on the Chilling Prospects 2022 report by BBC Africa and Sky News Daily Climate Show.

### *This is Cool Youth Challenge*

Two editions of the This Is Cool Youth Challenge were conducted in 2022 and 2023. The Challenge mobilized innovative youth-led solutions that accelerate access to sustainable cooling. The 2023 Challenge was conducted in collaboration with AIA Hong Kong, BASE, CEPT University, Cool Up Programme, and IBM. During the second edition in 2023, the Challenge doubled in reach compared to 2022: submissions increased from 100 to over 200, received from 50+ countries, across four categories. A panel of international partners selected one winning project in each of the below categories:

- Cooling for Thermal Comfort: Interlocking Semi-Calcite Passive Brick (UK/Thailand)
- Cooling for Food, Nutrition and Agriculture: Baridi (Kenya)
- Cooling for Healthcare: Vacchi-Safe (Nigeria)
- Cooling and Artificial Intelligence: AgriTECH (Egypt)

Winners received a cash prize and a sponsorship for one representative to attend Youth Day at COP 28, to tap into SEforALL's network and showcase the role of young innovators in sustainable cooling for all. At COP 28, the [four winners](#) pitched their projects to a panel of experts, and the Grand Winner 2023 was announced live.

### *Cool Coalition Communications and Advocacy Working Group*

Following COP27, SEforALL agreed with the Clean Cool Collaborate (CCC) and UNEP to establish a communication working group that would replace the communications roundtable in 2023. SEforALL subsequently worked with UNEP and CCC to agree on a term of reference for, and launch of, the cool coalition communications and advocacy working group. The working group was convened four times in 2023 and produced a series of outputs, including:

- Unified key messaging available to all partners;
- A set of agreed and common data points for use amongst the partners; and,
- A set of success stories for communication purposes.

In preparation for COP 28, the working group utilized a shared calendar and communications assets for events around which the partners shaped the overall advocacy efforts related to the Global Cooling Pledge. Additionally, SEforALL worked closely with CCC and UNEP as co-chairs of the working group to create dedicated cooling communications tools for partners. The working group also provided a platform for cooling partners to share and amplify the solutions they were promoting, and to support their own communications campaigns, such as those associated with CLASP's net-zero heroes report or the BASE webinar series.

### *Let's Talk Energy Podcast*

In Ghana, SEforALL began producing the "Let's Talk Energy" podcast, a series that aims to create awareness about energy efficiency and cooling solutions in Ghana. The podcast provides listeners with insights into the importance of energy efficiency, the current energy consumption patterns, and the impact on the environment. Featuring experts, industry players, and policymakers who will provide their perspectives on energy efficiency as well as sustainable cooling solutions in Ghana, Let's Talk About Energy focuses on various topics related to energy efficiency and cooling in Ghana.

## Progress Against Results Framework

Activity	Indicator(s)	Definition(s)	End of grant target	31 December 2024
<b>Communications</b>	SDC KPI F.a) No. of communications collateral delivered for Cooling for All and made available with the #ThisIsCool communications campaign and overall reach of communications campaigns	The total output of Cooling for All communications collateral developed by SEforALL (stories) and by media (news articles), while SEforALL tracks and provides data around reach, monitoring for a positive trend.	450	863 Videos: 32 Social Media Posts: 751 SEforALL News Stories or Articles: 80
	SDC KPI F.b) No. of people reached by Cooling for All communication collateral	This is proxy data to the output. The total reach of Cooling for All content (number of unique users or interactions with SEforALL content) of Cooling for All communication through online and social media platforms. This includes Chilling Prospects, the #ThisIsCool communications campaign	68,000	92,406; including 44,287 video views and 48,119 views of SEforALL news stories or articles

## Events

The engagement and outreach aspects of the Programme also performed strongly, with 11,615 participants attending cooling-related events—far exceeding the expected 500, and 60 capacity-building sessions and speaking engagements held surpassing the target of 40. The following events were highlights of the Cooling for All programme during the ADA grant implementation period.

### *SEforALL Forum in Kigali*

In 2022, the Cooling for All programme delivered a comprehensive cooling programme at the SEforALL Forum in Kigali. This included 2 public events, 1 capacity building event, and a marketplace booth. As part of the Forum, the 2022 Chilling Prospects report was launched, in partnership with the Cool Coalition, and speakers from Danfoss, Council of Energy, Environment and Water (CEEW), RMI, World Health Organization (WHO), and the World Bank ESMAP team. Together with the World Bank, SEforALL managed a public event focused on rural cooling at the intersection of energy access, including speakers from CLASP, SELCO and the Africa Center of Excellence for Sustainable Cooling, amongst others.

### *Ghana Cooling Days: Operationalizing the NCAP, South-South Learning, and Training*

SEforALL organized Ghana's first Cooling for All Days (18-20 March 2023) with support from the Energy Commission and the Environmental Protection Agency. The Cooling for All Days addressed various interventions ongoing in the Ghanaian sustainable cooling space such as Ghana's NCAP as well as providing leadership through leading on Cooling Pledges. The Cooling Days also gave an opportunity for professionals to be trained in cooling in various sectors with input from C40 Cities. Over three days,

the workshop welcomed more than 90 participants, including youth, students, development partners, national associations, financial providers, and importers.



*Cooling for All Training Workshop, Accra, March 2023*

### *Kenya NCAP Launch and Training Event in June 2023*

SEforALL supported the launch of the Kenya National Cooling Action Plan which also recognized GIZ Proklima and CLASP. A training program was developed and delivered to various 50 stakeholders including private sector and sub-national government in the first and second quarter on cooling and gender, cooling in buildings and cities, agricultural and healthcare value chains, as well as investment and entrepreneurship.



*Launch Kenya NCAP, June 2023*

### *Kenya Council of Governors Training*

In November 2023, SEforALL delivered Cooling for All training during a one-day event hosted by the Kenya Council of Governors. The event brought together County Executive Committee Members, Directors in Charge of Energy, representatives from the Rural Electrification and Renewable Energy Corporation, and the National Ozone Unit. The participating counties included Bungoma, Busia, Homabay, Isiolo, Kitui, Makueni, Mandera, Migori, Nairobi, Nakuru, and Turkana. The training session covered Kenya-specific data on cooling access, along with discussions on the drivers, challenges, and sustainable cooling solutions. During interactive sessions, representatives from each county shared their respective successes, challenges, and opportunities. Tools and knowledge resources were shared with the participants to facilitate action on cooling-for-all initiatives. Counties were also encouraged to raise awareness about cooling issues and sustainable solutions on the ground, integrate cooling

considerations into their under-development County Energy Plans, and proactively develop county-tailored Heat Action Plans.

#### *SDG 7 Pavilion at COPs 26, 27 & 28*

At COP 26, the Cooling for All team facilitated the participation of the SEforALL CEO and SRSG in two cooling events: one focusing on food cold-chains at the Danish Pavilion and another on sustainable cooling solutions at the SDG 7 Pavilion hosted by SEforALL. In addition to the dedicated event on cooling at the SDG 7 pavilion, the team supported a partner event run by Ashden on cooling at the SDG 7 Pavilion and supported additional cooling events at COP over social media

The team organized, supported, and participated in several events at the SDG7 Pavilion at COP27. Including the release of the Chilling Prospects 2022 Special: Delivering Cooling for All, SDG7 and Climate Action, the launch of the Nature for Cool Cities Challenge, in which the first pledge from Homa Bay County in Kenya was announced. Additional events included the announcement of the winners of the Youth Innovation Cooling Challenge and Delivering Cooling Solutions at the Last Mile, in collaboration with World Bank ESMAP. The team also participated in the Biodiversity COP for the first time in December 2022 to promote the Nature for Cool Cities Challenge.

During COP 28, SEforALL hosted five events on sustainable cooling at the SDG 7 pavilion in the Blue Zone. The events served to highlight country action in support of the Global Cooling Pledge, the nexus of rural cooling and energy access, the #ThisisCool Youth Challenge, and the historic replenishment of the Multilateral Fund for the Implementation of the Montreal Protocol.

#### *Cooling for All Training Events and Curriculum*

The Cooling Programme developed and launched a full training curriculum for policymakers and practitioners related to access to cooling, covering cities, buildings, and cold-chains. The primary target audience was public sector officials with the capacity to implement sustainable cooling solutions at scale in their communities. However, the training content was designed to be flexible and modular, allowing adaptation to other audiences, specific contexts, and training needs. There are four foundational training modules (though this can be broken up or down).

The four foundational training modules are the following:

- **An Overview of Cooling for All:** This module provides an overview of the essential role of cooling, exploring the drivers behind the increasing demand for cooling, the consequences of heat exposure, cooling access data, the cooling-energy nexus, the relationship between cooling and the Sustainable Development Goals (SDGs), and a pathway to achieving sustainable cooling.
- **Cool Cities & Buildings:** This module delves into the basics of human thermal comfort and introduces the urban heat island effect. It covers urban heat assessment risk factors, basic building physics, and the influence of building design on the risk of overheating.
- **Cooling in the Agricultural Cold-chain:** This module explains the agriculture and food cold-chain, discussing the consequences and food loss resulting from a lack of a cold-chain. It explores the role of energy and cooling in agriculture and food systems, offering insights into sustainable cooling solutions for agricultural systems.
- **Cooling in Healthcare:** This module teaches the importance of cooling in healthcare settings, encompassing cold-chains in health systems, thermal comfort, and the health burden of heat stress.

### Cooling Efficiency Marketplace

On 24 April 2024, Sustainable Energy for All and Mission Efficiency held a [cooling efficiency marketplace workshop in Accra](#), Ghana to foster collaboration and accelerate investment in cooling and energy efficiency solutions. Over 40 participants, including regulators, development partners, finance experts, and energy researchers from the Energy Commission, the Environmental Protection Agency, the United Nations Capital Development Fund, the United Nations Development Fund, GIZ, C40 Cities, SUNREF, Calbank and Access Bank Ghana, attended the Mission Efficiency Marketplace session. The event in Accra showcased real-world examples like Solar Taxi and SUNREF, along with strategies from partners on how to finance energy efficiency projects, including Ghana's Energy Transition Investment Plan, which emphasizes energy efficiency and sustainable cooling as key parts of reaching clean energy goals. Barbara White Nkoala, Country Director, SNV noted that the Mission Efficiency Marketplace is a valuable platform for identifying bankable cooling and energy efficiency projects for commercial financing.

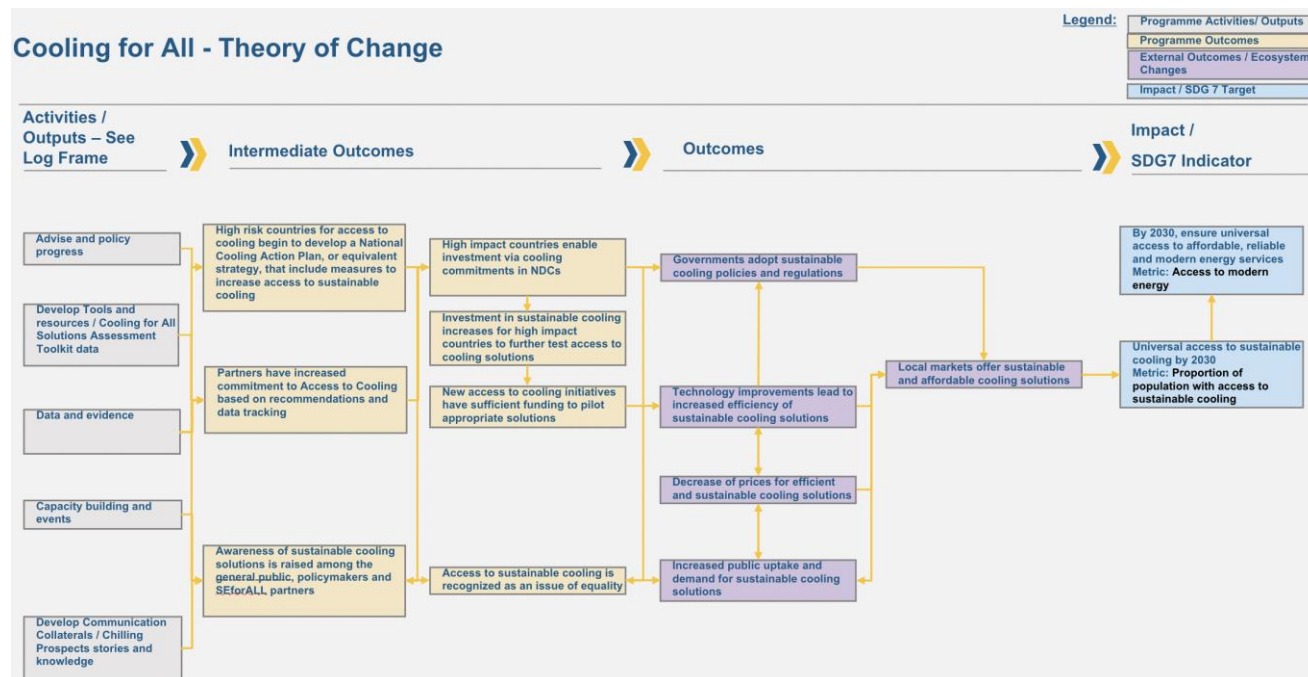
In Kenya, two Cooling Efficiency Marketplace workshops were held in 2024. [On 29 February 2024](#) technical working groups were formed during the first workshop to support the bankable projects pitched, including a financing working group, an inter-ministerial working group, and an inter-agency working group. The second workshop was held on 19 June 2024, beginning with a roundtable on finance and investment. This session provided a valuable opportunity for financial institutions to commit to working with energy efficiency projects, ensuring they gain access to funding and support from potential investors to help with de-risking mechanisms.

Through the energy efficiency and cooling marketplace workshops, SEforALL has been able to identify 8 initial projects, assist in bringing together different derisking mechanisms like Green Max Capital G4A 1st loss guarantee and match the projects with potential investors with partner financial institutions in Kenya like 1st tier one banks and micro-finance institutions. Further key workgroup committees were formed at the 2nd workshop to evaluate the cooling access barriers (both technical and financial) and propose a raft of technical assistance and financial mechanisms to address issues of access to finance and bankability of projects.

### Progress Against Results Framework

Activity	Indicator(s)	Definition(s)	End of grant target	31 December 2024
Events	SDC KPI G.a) No. of Cooling for All capacity building sessions delivered, speaking engagements and Cooling for All convened meetings	Number of Cooling for All capacity building sessions delivered, Cooling for All convened meetings and speaking engagements on access to cooling.	40	64
	SDC KPI G.b): No. of participants at cooling for all events (disaggregated by event type)	Total number of people that have participated in Cooling for All capacity building sessions and Cooling for All convened meetings. The Cooling for All capacity building sessions could be delivered by SEforALL or delivered by partners using SEforALL training material.	500	11,725

## 2.2. Validation of the Programme's Theory of Change



The Sustainable Cooling for All Programme is strongly aligned with its Theory of Change (ToC), as demonstrated by its influence on policy development, investment mobilization, and improved access to sustainable cooling solutions. The Programme's activities and outputs have led to measurable intermediate outcomes and high-level outcomes, which have translated into tangible policy and investment shifts, ultimately contributing to the Programme's expected long-term impact of universal access to sustainable cooling by 2030.

A key pillar of the Programme's ToC is policy transformation, which it has successfully realized through several achievements including the Programme's support in developing and implementing NCAPs and inclusion in NDCs, inclusion of cold-chain solutions in Integrated Energy Plans, etc. A few examples of these policy transformations include:

- Kenya's National Cooling Action Plan: which was developed with technical and communications support from SEforALL. Kenya's NCAP has been fully implemented, providing a model for other nations to integrate cooling strategies into their national policies.
- Cambodia's National Cooling Action Plan: The Programme provided technical assistance through the Cool Coalition to support the government of Cambodia in the development of its NCAP which was launched in 2023.
- Indonesia's National Cooling Action Plan: The Programme provided technical assistance through UNEP for the development of Indonesia's NCAP. The approval and adoption of Indonesia's NCAP further reinforces the Programme's effectiveness in shaping national cooling policies.
- Madagascar Integrated Energy Plan (IEP): The Programme's contribution led to the incorporation of cold-chain solutions in the country's IEP, which was the first time an analysis dedicated to improving the agricultural and medical cold-chain through integrated energy and cooling solutions was featured in an IEP addressing critical cooling needs in agriculture and medical sectors.

- Nigeria and Malawi's Integrated Energy Plans: The Programme supported the IEP team in integrating cold-chains into Nigeria and Malawi's integrated energy planning processes
- The integration of cooling strategies into Nationally Determined Contributions (NDCs) of high-impact countries supported by the Programme, ensuring cooling is recognized as a climate resilience and mitigation priority.
- The Global Cooling Pledge is projected to cut 78 billion tonnes of CO<sub>2</sub>e emissions by 2050 and reduce electricity bills for end users by USD 17 trillion cumulatively between 2022 - 2050, aligning with global climate goals.

The Programme has also driven investment in sustainable cooling solutions, aligning with the ToC's intermediate outcomes. By supporting partners to mobilize USD 326 million for access to sustainable cooling initiatives, the Programme has strengthened technological innovation, market readiness, and infrastructure expansion, leading to technology innovation and deployment - supporting market-driven solutions to expand access to sustainable cooling in high-impact countries, and enhanced private sector engagement: Encouraging industry investment in energy-efficient cooling technologies and renewable-powered cold-chains.

Additionally, the Programme has played a vital role in enhancing knowledge-sharing and institutional capacity, ensuring that policymakers, financial institutions, and private-sector players have the resources to implement sustainable cooling strategies such as the #ThisIsCool campaign and knowledge-sharing platforms, which have increased awareness of sustainable cooling solutions and stakeholder engagement.

By aligning its activities, outputs, and results with the expected outcomes outlined in the Theory of Change, the Sustainable Cooling for All Programme has been able to validate its strategic approach. The Programme's continued focus on policy impact, investment mobilization, and knowledge dissemination enhances its contribution toward global sustainable cooling access and climate resilience goals.

It is important to note that as a result of learnings and course corrections throughout the review period, the Programme revised its ToC in 2023 for its 2024 - 2026 implementation period (see

**Annex 1**) for the evolved ToC). The Programme made a strategic shift towards a broader, more global vision of sustainable cooling by placing stronger emphasis on large-scale mobilization of financial and political resources, the creation of replicable pathways for other countries, and the integration of sustainable cooling solutions within broader energy and climate plans. This shift, however, is grounded in practical in-country engagement, where data-driven planning, technical assistance, and investment facilitation at the national level are central to generating scalable, systemic outcomes. Some of the differences in the ToC are highlighted below:

- **Impact Statement:** The Programme's 2021-2023 Business Plan ToC focused on achieving universal access to sustainable cooling by 2030, aligning with SDG7 targets of ensuring affordable, reliable, and modern energy services, with a particular emphasis on improving

access to cooling solutions and encouraging their adoption by governments. The 2024 - 2026 Business Plan ToC, however, expands this vision to a broader, more holistic goal of meeting the needs of vulnerable populations with sustainable cooling solutions at the speed and scale necessary to deliver just, equitable energy transitions in countries vulnerable to the impacts of extreme heat and a lack of access to cooling. It positions country-level access to cooling initiatives as a lever for broader global progress on SDG7 and the Paris Agreement.

- **Long-Term Outcomes:** These reflect an evolution from standalone national interventions to a systemic global approach anchored in country-level implementation. In the 2021-2023 Business Plan ToC, the focus is on high-impact countries developing and adopting NCAPs or similar strategies to increase access to sustainable cooling, with an emphasis on investments, technology improvements, and recognizing cooling as an equity issue. The 2024 - 2026 Business Plan ToC, adopts a broader, global perspective, highlighting the need to mobilize political will and financial capital at a scale sufficient to meet SDG7 and the Paris Agreement targets. It emphasizes the creation of replicable pathways and the establishment of momentum within the Programme's partner countries, aiming to generate a multiplier effect that encourages other countries to adopt similar strategies and scale up sustainable cooling solutions.
- **Intermediate Outcomes:** These also reflect a more global focus on widespread political and financial commitments enabled by in-country demonstration and technical support. The 2021-2023 Business Plan ToC's emphasizes is on high-impact countries making commitments through NDCs and other strategies. The 2024 - 2026 Business Plan ToC, however, builds on past commitments (e.g., through NDCs), but places greater emphasis on generating widespread political and financial commitment by demonstrating success through country-level delivery of scalable, investment-ready cooling solutions. It underscores the importance of replicable pathways and investments in sustainable cooling, with the goal of scaling these solutions to other countries.
- **Short-Term Outcomes:** These highlight a shift from immediate technological and market-based goals to broader awareness and capacity-building efforts delivered through country-level engagement. In the 2021-2023 Business Plan ToC, the focus is on increasing public uptake of sustainable cooling solutions, promoting the adoption of sustainable cooling policies, and reducing prices for efficient and sustainable cooling solutions, with an emphasis on achieving immediate market and policy changes. The 2024 - 2026 Business Plan ToC, however, prioritizes raising awareness of sustainable cooling, particularly among the public, policymakers, and SEforALL partners. It highlights the need for greater efforts by governments and international actors to advance policy progress and attract additional investment in sustainable cooling, alongside building the knowledge and capacity of relevant stakeholders in SEforALL partner countries.
- **Activities and Outputs:** The 2024 - 2026 Business Plan ToC introduces a more comprehensive and integrated approach. The 2021 - 2024 Business Plan ToC's activities focus on providing advice and policy progress, developing tools and resources, and organizing events to build capacity and raise awareness. These activities aim to meet the immediate needs for data, communication, and policy development to increase access to sustainable cooling. While the 2024 - 2026 Business Plan ToC builds on the current activities, it also expands them to support the integration of cooling considerations into broader energy and climate plans, such as ETIPs, IEPs, and NCAPs. It also emphasizes providing data analytics, technical advisory services,

training, and solutions templates to a wider range of stakeholders, including governments, the private sector, and development actors. This more integrated approach focuses not only on cooling-specific activities but also on embedding cooling into broader energy and climate frameworks with concrete in-country delivery informing and driving scalable global outcomes.

### 2.3. Integration of Cross-Cutting Themes

The Programme has taken a holistic approach by embedding cross-cutting themes such as gender inclusion, youth empowerment, and climate resilience into its initiatives. For instance:

- **Gender Inclusivity:** The Programme published the “Chilling Prospects Special: Gender and Access to Cooling Analysis” which provided a first-of-its-kind sex-disaggregated data analysis on cooling access and revealed significant disparities, with women making up 53% of those at high risk due to lack of cooling. The programme advocated for gender-responsive cooling strategies to ensure equitable access.
- **Youth Engagement:** The Programme’s “This Is Cool Youth Challenge” held in 2022 and 2023 help mobilize innovative youth-led solutions that accelerate access to sustainable cooling. The 2023 challenge attracted over 200 submissions from 50+ countries, culminating in winners pitching their projects at COP28, showcasing the role of young innovators in sustainable cooling for all. The initiative amplified youth-driven solutions in sustainable cooling.
- **Climate Resilience:** The Programme supported the integration of sustainable cooling strategies into national climate policies, such as Kenya’s National Climate Change Action Plan (2023-2028) and Mozambique’s IEP Cooling Module, highlighting the Programme’s commitment to climate adaptation.

## 3. Highlight of Key Successes

### 3.1 Significant Successes

The Sustainable Cooling for All Programme has achieved remarkable milestones in policy transformation, investment mobilization, knowledge dissemination, and stakeholder engagement. These successes underscore the Programme’s impact in advancing sustainable cooling solutions globally, particularly for vulnerable populations. Some of the significant successes of the Programme include:

#### **Supporting Financing and Scale Up of Access to Cooling Solutions:**

A key highlight of the Programme has been its exceptional financial mobilization, which significantly surpassed targets:

- USD 326 million was raised by SEforALL partners for access to cooling initiatives, more than double the target of USD 140 million, demonstrating strong partner engagement and investor confidence.

- The funds have been deployed to support cold-chain infrastructure, energy-efficient cooling appliances, and renewable energy-powered cooling solutions, expanding cooling access in high-impact regions.
- The mobilized investments by SEforALL partners have also driven private-sector engagement, incentivizing market-driven innovations for sustainable cooling.

### **Supporting Countries to Develop and Enhance NCAPs, NDCs or equivalent**

The Programme has played an instrumental role in shaping national policies by providing technical assistance and strategic support to governments in developing and implementing National Cooling Action Plans (NCAPs) and integrating cooling solutions into Nationally Determined Contributions (NDCs).

- 30 high-impact countries successfully incorporated cooling access into their NCAPs and NDCs with the Programme's support, exceeding the target of 27 countries.
- Direct support was provided to 8 countries, while 22 countries received indirect support
- 46 high-impact countries implemented sustainable cooling initiatives, nearly doubling the target of 25, advancing global cooling efforts.
- Madagascar's Integrated Energy Plan (IEP) included cold-chain solutions for the first time, addressing cooling challenges in agriculture and healthcare.
- The Programme also supported Nigeria and Malawi in integrating cold-chain solutions into their IEPs, ensuring a cross-sectoral approach to sustainable cooling.

### **The Global Cooling Pledge and International Commitments**

The Programme played a pivotal role in shaping the Global Cooling Pledge, in collaboration with the UAE COP Presidency and the Cool Coalition, including the secondment of an SEforALL staff member to the COP 28 Presidency who led outreach on the Pledge. The pledge aims to establish collective global targets to reduce cooling related emissions by 68% from today by 2050, significantly increase access to sustainable cooling by 2030, and increase the global average efficiency of new air conditioners by 50%.

- The Global Cooling Pledge has secured commitments from over 60 countries, including Nigeria, Kenya, Ghana, Brazil, and the United States, underscoring a global movement toward sustainable cooling.
- The pledge is projected to reduce global emissions by 78 billion tonnes of CO<sub>2</sub>e by 2050 and save USD 17 trillion in electricity costs between 2022 and 2050.

### **Engagement and Outreach Success:**

The Programme's stakeholder engagement and capacity-building activities significantly outperformed expectations:

- 11,615 participants attended cooling-related events, surpassing the initial target of 500.
- 64 capacity-building sessions, speaking engagements, and convened meetings were held, exceeding the goal of 40.
- 33 partners and governments utilized SEforALL's Cooling for All data, tools, and resources, surpassing the target of 20 partnerships.

### **Advancing Gender and Youth Inclusion:**

The Programme has made significant strides in promoting gender-responsive and youth-led cooling solutions:

- **Gender Inclusion:** The Chilling Prospects 2023 Special provided the first-ever sex-disaggregated data on cooling access, revealing that 53% of the global high-risk population due to lack of cooling are women. SEforALL's Chilling Prospect Country Briefs for Kenya and Ghana emphasized the need for gender-focused cooling strategies.
- **Youth Engagement:** The This Is Cool Youth Challenge (2022 & 2023) successfully mobilized youth-led innovations in sustainable cooling. The 2023 challenge attracted over 200 submissions from 50+ countries, with winning teams presenting their solutions at COP28, showcasing the role of youth in accelerating cooling access.

### **Strengthening Climate Resilience:**

- The Programme supported the integration of cooling solutions into climate action frameworks, including Kenya's National Climate Change Action Plan (2023-2028) and Mozambique's IEP Cooling Module, reinforcing cooling as a climate adaptation strategy.
- The Programme delivered transformational results, surpassing key targets, and influencing global policy, finance, and innovation. Its contributions to policy development, investment mobilization, gender and youth engagement, and climate resilience have positioned it as a key driver of sustainable cooling solutions worldwide. However, continued investment, knowledge dissemination, and strengthened partnerships are critical to scaling its impact beyond 2025.

## **3.2 Best Practices**

The Sustainable Cooling for All Programme has identified and implemented several best practices that have been instrumental in advancing global access to sustainable cooling solutions. These best practices have enhanced programmatic impact, strengthened partnerships, and improved policy implementation, ultimately driving long-term sustainable outcomes. The best practices include:

### **Multi-Stakeholder Engagement**

A key driver of the Programme's success has been its effective multi-stakeholder collaboration by ensuring broad participation from governments, private sector entities, development organizations, and civil society groups. By fostering strategic partnerships, the Programme has been able to influence policy decisions through collaboration with national governments; facilitate investment mobilization by engaging with private sector actors and financial institutions; enhance its programmatic reach through partnerships with global initiatives; and improve its implementation efficiency with support from civil society organizations and technical partners. Through these multi-sector collaborations, the Programme has demonstrated that cross-sectoral cooperation is essential for scaling sustainable cooling solutions and ensuring their long-term success.

### **Data-Driven Technical Support for Sectoral Planning, Policy Development, and Investment**

The Programme's successful delivery emphasizes the critical role of data and evidence in shaping effective, evidence-based cooling policies. The use of data-driven insights developed by the Programme has enabled governments and stakeholders to make informed decisions that align with their national climate and energy objectives. Some of these include reports that provided comprehensive, data-backed insights into global cooling access gaps, in-depth country research and policy assessments

to tailor solutions that reflect local needs and leveraging geospatial mapping and climate impact projections which helped identify regions with the highest cooling access risks. By prioritizing data-driven support, the Programme has strengthened government capacity, and improved targeting of investments.

### **Integration of Gender and Youth Considerations**

Ensuring equitable access to sustainable cooling has also been a core focus of the Programme, particularly through the integration of gender and youth perspectives in programme design and implementation. The Programme implemented a few strategies that have supported this goal such as gender-inclusive cooling solutions through e.g. Chilling Prospects and youth engagement and innovations e.g. This is Cool Youth Challenges. The Programme's commitment to youth inclusion has positioned young innovators and entrepreneurs as key actors in accelerating access to sustainable cooling technologies. By mainstreaming gender equality and youth empowerment, the Programme ensures that cooling solutions are inclusive, accessible, and sustainable, benefiting all demographics and vulnerable communities.

These best practices have been fundamental to the success of the Programme. They have enabled the Programme to drive impactful policy change, mobilize large-scale investment, and ensure equitable access to sustainable cooling solutions. Moving forward, scaling these best practices will be critical in expanding programme impact and ensuring long-term sustainability of cooling access globally.

## **4. Highlight of Key Learnings**

### **4.1 Key Insights for Enhancing Programme Implementation, Performance, and Sector-Wide Learning**

The Programme has provided valuable insights that have strengthened programme implementation, performance, and sector-wide learning. These insights stem from policy integration successes, financial mobilization, multi-stakeholder engagement, knowledge-sharing, and gender-responsive approaches.

#### **Multi-Stakeholder Collaboration as a Driver of Policy Change**

One of the key success factors has been effective multi-stakeholder collaboration. The Programme has successfully engaged governments, private sector actors, financial institutions, and civil society organizations, which has resulted in:

- **Stronger policy integration:** the Programme played a key role in supporting National Cooling Action Plans (NCAPs) and Nationally Determined Contributions (NDCs) in Cambodia, Kenya, Ghana, and Indonesia. This support ensured that sustainable cooling solutions are embedded into national climate and energy strategies.
- **Increased funding opportunities:** By partnering with development banks, impact investors, and climate funds, the Programme facilitated access to USD 326 million, exceeding its financial mobilization target.
- **Improved implementation efficiency:** Collaboration with local technical institutions and civil society has accelerated the adoption of cooling initiatives, ensuring that interventions are locally relevant and sustainable.

#### **Strengthening Financial Mobilization and Innovative Funding Mechanisms**

Despite exceeding its initial investment target, gaps in financing access persist, particularly in lower-income regions. From its implementation, the Programme has provided valuable lessons on:

- **The need for blended finance models:** Countries with access to concessional financing have been more successful in scaling cooling initiatives than those relying solely on private investment. Expanding partnerships with multilateral development banks (MDBs) and impact investors could help bridge this gap.
- **Private sector engagement is critical:** Mobilizing private investment remains a challenge due to perceived risks in the cooling sector. Providing credit guarantees and risk-sharing mechanisms could incentivize more private sector participation in sustainable cooling markets.
- **Targeted financing for underserved communities:** Many low-income and rural populations still lack access to cooling solutions due to high upfront costs. Developing micro-financing and pay-as-you-go (PAYG) models for sustainable cooling could improve affordability and access.

### Expanding Policy and Regulatory Support

The Programme has demonstrated that sustained policy engagement leads to stronger national commitments and long-term impact. Key insights include:

- **Regulatory alignment accelerates progress:** Countries that have integrated cooling into energy efficiency regulations, building codes, and climate policies (such as Kenya and Ghana) have been more successful in implementing national cooling strategies.
- **Technical assistance is essential:** Many governments require capacity-building support to implement and monitor cooling policies effectively. Expanding technical training and workshops for policymakers could enhance the execution of NCAPs and cooling-related policies.
- **Regional cooperation strengthens outcomes:** Cross-border collaboration on cooling technology standards and trade policies could help reduce costs and accelerate the adoption of energy-efficient cooling solutions.

### Leveraging Knowledge and Data for Decision-Making

Knowledge-sharing has played a crucial role in advancing programme objectives, however, more targeted approaches are needed to ensure that knowledge translates into action. Key insights include:

- **The role of data in policymaking:** Evidence-based reports such as Chilling Prospects have been instrumental in identifying populations at high risk due to lack of cooling. Governments that have used these insights to inform policy and investment decisions have been more effective in implementing sustainable cooling initiatives.
- **Challenges in knowledge adoption:** While the Programme produced extensive research, adoption by policymakers and private sector stakeholders remains inconsistent. Tailoring knowledge-sharing strategies—such as country-specific policy briefs and interactive digital platforms—could improve knowledge uptake and application.
- **Capacity building is key:** The launch of the Cooling for All training curriculum, which was piloted in Kenya and Ghana, was successful in equipping policymakers with the necessary skills to integrate cooling strategies into national policies. Expanding these training programmes could further enhance the effectiveness of cooling interventions. in ensuring

## 4.2 Key Learnings, Challenges and Barriers

One of the most significant learnings from the Programme is that long-term technical engagement with governments is crucial for achieving meaningful policy impact. Countries that have received continuous support from the Programme, such as Kenya and Ghana, have made substantial progress in integrating sustainable cooling solutions into their national policies. In contrast, nations with limited technical assistance have faced challenges in embedding cooling strategies into long-term planning.

Despite the Programme's success in mobilizing investments, access to financing remains a critical barrier, particularly for governments and businesses in developing markets. Many stakeholders struggle to secure the necessary funding for implementation, which hampers the scaling of sustainable cooling solutions. Strengthening partnerships with multilateral lenders and financial institutions is essential to bridging this funding gap and ensuring that investments translate into on-the-ground impact.

Another key challenge is the limited adoption of knowledge products and research outputs. While the Programme has developed extensive policy recommendations and technical studies, the uptake of these resources by policymakers and industry stakeholders remains uneven. Enhancing dissemination strategies and investing in tailored capacity-building initiatives could improve the application of research insights in policy formulation and business strategies.

Although gender inclusion in sustainable cooling remains an area requiring significant attention, gender-responsive cooling policies remain underdeveloped in many national frameworks. To address this, there is a need for stronger policy interventions that prioritize women's access to sustainable cooling technologies and financing mechanisms.

Another major challenge has been policy implementation at the national level. While many countries have developed NCAPs, the actual implementation of these plans has been inconsistent, often due to bureaucratic delays, insufficient technical expertise, and competing national priorities. Addressing these challenges will require stronger collaboration between governments, financial institutions, and technical partners to ensure that policies translate into tangible outcomes.

Finally, supply chain limitations for cooling equipment, particularly in remote and underserved areas, have hampered programme implementation. The high costs and logistical challenges of distributing sustainable cooling technologies have made it difficult to ensure widespread access.

## 5. Significant Adaptations and Course Corrections

The programme has undergone several key adaptations to enhance its effectiveness. One major shift was the increased focus on policy integration, particularly through direct technical support for NCAPs in Cambodia, Kenya, and Indonesia. Another significant course correction was the expansion of financial mobilization efforts. Recognizing the persistent funding gap, the Programme strengthened its engagement with private sector investors and development finance institutions, leading to a significant increase in funding availability.

The Programme also adjusted its youth engagement strategy, particularly with the This Is Cool Youth Challenge. Based on feedback from participants, the 2023 edition expanded to include four thematic categories, resulting in over 200 submissions from 50+ countries and winners showcasing their innovative solutions at COP28. Additionally, recognizing the need for more structured knowledge-sharing, the Programme launched a full training curriculum for policymakers and practitioners, covering topics such as urban cooling, cold-chains, and building efficiency. The curriculum has been piloted in Kenya and Ghana, with plans for expansion to Southeast Asia.

The Programme's strategy and course corrections were also shaped and influenced by the recommendations which were generated from the Cooling for All Evaluation. The evaluation covered the Programme's implementation between July 2017 to May 2021 and produced several recommendations which the Programme addressed. These are summarized below:

Recommendations from 2021 Evaluation	Programme's Adaptations / Course Corrections
<p><b>1. Strengthen niche:</b> Refine and focus Cooling for All's messaging to confirm its niche as the expert on access to sustainable cooling.</p>	<ul style="list-style-type: none"> <li>• The Programme focused specifically on ensuring its messaging was related to vulnerable populations and access to extreme heat, in particular by highlighting themes related to adaptation and vulnerability to extreme heat.</li> <li>• The Programme promoted data, knowledge, and solutions that explicitly target supporting low-income populations gaining access to solutions.</li> </ul>
<p><b>2. Engage with food, agriculture and health policymakers and investors:</b> Engage and convene more actively with these strategic stakeholders.</p>	<ul style="list-style-type: none"> <li>• The Programme provided targeted support to World Bank ESMAP in the development of a guidance note on rural access to cooling interventions across health, agriculture, and energy access.</li> <li>• The Programme provided technical assistance in developing NCAPs in countries such Kenya, and supported the development of communities of practice which created enabling environments for enhancing ongoing development of reliable cold-chains in agriculture and healthcare</li> <li>• The Programme supported Madagascar in integrating agricultural and vaccine cold-chains into its Integrated Energy Plan</li> <li>• The Programme's Cooling for ALL Training Curriculum includes modules on "Cooling in the Agricultural Cold-chain" and "Cooling in Healthcare"</li> <li>• The Programme plans to expand its country support offer on sustainable cold-chains for vaccines and agriculture to include data and evidence, capacity building and mobilization of finance. This approach will be piloted in Mozambique and will include use of the cold-chain optimization tool.</li> </ul>
<p><b>3. Target Chilling Prospects:</b> Segment and tailor Chilling Prospects data and messaging</p>	<ul style="list-style-type: none"> <li>• The Programme identified an opportunity to produce tailored "Chilling Prospect Country Briefs" focusing on Kenya and Ghana, which will</li> </ul>

Recommendations from 2021 Evaluation	Programme's Adaptations / Course Corrections
for specific sectors using relatable language and examples.	ensure sector-specific messaging and actionable analysis
<b>4. Reconsider in-country direct support:</b> Evaluate whether to provide direct support or leverage partners.	<ul style="list-style-type: none"> <li>Consistent with the SEforALL 2021-2023 business plan, the Programme did provide direct support to countries including Malawi and Madagascar.</li> </ul>
<b>5. Provide case studies:</b> Develop and disseminate diverse case studies of successful access to cooling policies.	<ul style="list-style-type: none"> <li>The Programme is developing several case studies including a pilot study of dairy milk cold-chain profile and technologies in Thailand which is expected to be published in Q3 2025</li> </ul>
<b>6. Mainstream gender:</b> Integrate gender considerations as an equity issue throughout all programme outputs.	<ul style="list-style-type: none"> <li>The Programme has integrated gender considerations in its implementation. For instance, through the publication of the "Chilling Prospects Special: Gender and Access to Cooling" report</li> </ul>
<b>7. Encourage Global Panel networking:</b> Define a role for Global Panel members to enhance networking and sector-specific engagement.	<ul style="list-style-type: none"> <li>The Programme instead worked with the Cool Coalition to encourage Global Panel members to become 'Cool Champions'</li> </ul>
<b>8. Increase high-level advocacy for sustainable cooling:</b> Boost high-level strategic advocacy to drive government commitments.	<ul style="list-style-type: none"> <li>The Programme supported the development of the Global Cooling Pledge by engaging with the UAE COP Presidency and international forums, demonstrating high-level strategic advocacy.</li> </ul>
<b>9. Increase convening:</b> Expand stakeholder convening to include a wider range of participants.	<ul style="list-style-type: none"> <li>The Programme significantly increased its convening efforts, as evidenced by its reported 11,615 event participants and 60 capacity-building sessions</li> </ul>
<b>10. Conduct wider, regular, and sector-specific research and evaluation:</b> Implement ongoing evaluations and research to refine the Programme.	<ul style="list-style-type: none"> <li>The Programme focused on sector specific research and knowledge, with a focus on gender, off-grid cooling, and the energy access and sustainable cooling nexus.</li> </ul>

## 6. Opportunities for Future Funding & Strategic Recommendations for Future Implementation

The Programme has demonstrated several high-impact achievements that offer pathways for expanded funding, deeper engagement, and greater long-term sustainability. These opportunities combined with

strategic recommendations can help strengthen the Programme's ability to deliver universal access to sustainable cooling.

### **Opportunities for Future Funding and Expanded Impact**

- **Strengthen gender and youth inclusion:** SEforALL's Chilling Prospects research and #ThisisCool Youth Challenge have highlighted a key need: actionable analysis on the gender- and youth-based impacts of extreme heat and strategies to support the socio-economic empowerment of these groups with sustainable cooling solutions.
- **Scale financial support mechanisms:** High first-costs, expensive or low access to credit, and a lack of locally suitable business and investment models are constraining investment in sustainable cooling for the most vulnerable. Improving access to investment and concessional financing for sustainable cooling initiatives, especially in low-income regions, through locally tailored support and implementing innovative financing mechanisms in cold chains and passive cooling that advance market maturity and affordability are key areas of opportunity.
- **Enhance sectoral planning at the country and sub-national level:** Data innovation, local capacity building, and awareness raising offer important opportunities to enable expanded access to cooling. Specific opportunities include **analytics for cold chain infrastructure demand**, replicating the Programme's integration of cold chains into Madagascar's Integrated Energy Plan in other countries. This would offer investment-ready analytics for investors in energy access, agriculture, and health care sectors. Another is **urban heat stress mapping and resilience** measures. Increasing urban heat vulnerability provides a compelling rationale to scale SEforALL's efforts to provide GIS-based urban heat mapping and support for Heat Action Plans, to unlock financing for city resilience and passive cooling interventions.
- **Boost knowledge dissemination and awareness:** The success of the Cooling for All training curriculum highlights potential for scaling through partnerships with academic institutions, training organizations, and local governments. Producing high-impact reports, case studies, and digital learning resources and supporting in-person training and awareness raising continues to be a best practice to promote sector-wide learning.
- **Leverage multi-stakeholder partnerships:** With commitments from over 70 countries, the Global Cooling Pledge represents a strategic entry point for mobilizing new financial resources from climate funds, bilateral donors, and multilateral agencies. Providing support to the Cool Coalition and its partners through coordinated collaboration and interventions can drive country specific innovations, increase investment, and scale cooling solutions through coordinated collaborations and interventions.

### **Strategic Recommendations**

- **Finance and Investment**
  - *Enhance Financial Mobilization:* Support country platforms to identify priority cooling investments and design catalytic financing mechanisms, including through commercial feasibility assessments to de-risk investment and target climate-vulnerable areas. Deepen collaboration with multilateral development banks, philanthropic organizations, and climate funds.
  - *Invest in and Implement Cooling Solutions:* Facilitate or lead efforts to finance deployment of sustainable cold chain infrastructure and passive and nature-based solutions. Prioritize approaches that advance market maturity and affordability for vulnerable groups, such as subsidy-based instruments through the Universal Energy Facility—to attract and unlock funding for sustainable cooling projects.

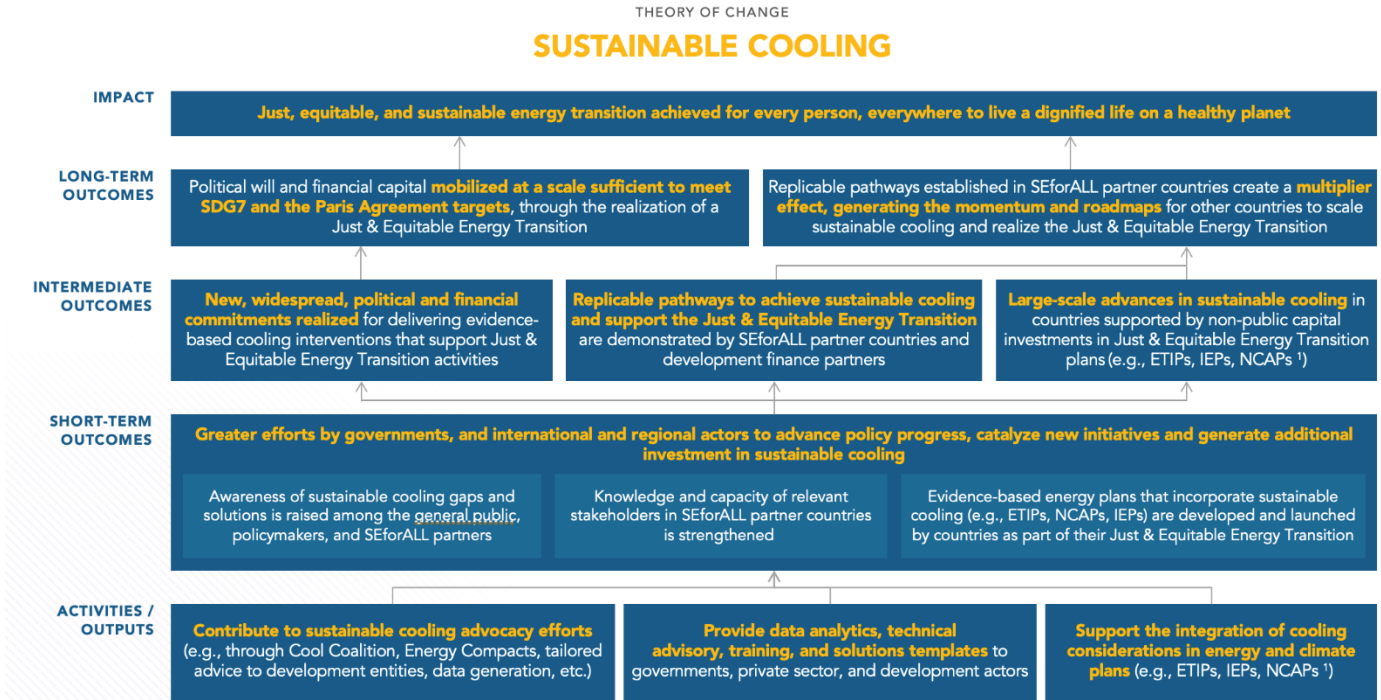
- **Data-driven Technical Support to Support Solution Deployment and Guide Investment**
  - *Develop and Implement Innovative Data Tools*: Prioritize geospatial planning to support countries, sub-national governments, the private sector, and development partners to invest in and deploy sustainable cold chain, passive, and nature-based solutions. Focus on using data evidence to optimize investments and protect vulnerable populations from the impacts of extreme heat.
  - *Strengthen Knowledge-Sharing*: Develop targeted dissemination strategies that promote uptake of knowledge products by decision-makers, funders, and industry. Ensure tools and data are practical, actionable, and context specific.
  - *Strengthen Monitoring, Evaluation, and Learning (MEL)*: Institutionalize sector-specific research, light-touch evaluations, and feedback loops to inform adaptive programming and enable timely course corrections.
  
- **Awareness, Capacity, and Inclusion**
  - *Increase Capacity Building Initiatives*: Scale the Cooling for All training curriculum by partnering with academic institutions and local governments. Tailor content to the needs of policymakers, utilities, and private sector actors.
  - *Advance Gender and Youth Inclusion*: Build on insights from *Chilling Prospects* to mainstream gender across all programme components. Expand youth engagement through innovation challenges and capacity-building initiatives. Inform the sector on opportunities to support the socio-economic empowerment of women and youth with sustainable cooling solutions.
  
- **Policy, Governance, and Planning**
  - *Expand Policy Engagement*: Provide tailored technical support to governments for integrating cooling into NDCs, national development plans, and climate strategies. Target global platforms—such as the G20 and COP Presidencies—to elevate cooling as a policy priority.
  - *Leverage Cross-Sector Partnerships*: Strengthen engagement with ministries beyond energy—including agriculture, health, and urban development—to embed cooling within national strategies and ensure coordinated implementation.

By strategically leveraging these opportunities and implementing the above recommendations, the Programme can deepen its impact, attract sustained funding, and drive global progress toward equitable access to sustainable cooling.

# Annex 1

## Evolved Theory of Change 2024 - 2026: Sustainable Cooling for All

\*Please note this is not the ToC that was active during the review period, rather evolved as a result of learnings and course corrections throughout the review period.



Notes: [1] ETIPs: Energy Transition Investment Plans; IEPs: Integrated Energy Plans; NCAPs: National Cooling Action Plans



## Annex 2

### References

The list of programme documents, key performance data, and stakeholder engagement feedback, reviewed to assess the achievements, challenges, and significant shifts in the Sustainable Cooling Programme's strategy are below.

Reference Documents	Links
ADA Funding Agreement 2022-2025	<a href="https://seforallorg.sharepoint.com/Middle-Earth/Shared%20Documents/Forms/AllItems.aspx?id=%2FMiddle%2DEarth%2FShared%20Documents%2F3%2E%20Team%20Folders%2FResource%20Mobilization%2F00%20SHARED%2FAustria%2F2022%20Austria%2FADA%20Funding%20Agreement%202022%2D2025&amp;viewid=93734b5b%2D95f8%2D4374%2Da8fd%2Dfb5fc67fe94e">https://seforallorg.sharepoint.com/Middle-Earth/Shared%20Documents/Forms/AllItems.aspx?id=%2FMiddle%2DEarth%2FShared%20Documents%2F3%2E%20Team%20Folders%2FResource%20Mobilization%2F00%20SHARED%2FAustria%2F2022%20Austria%2FADA%20Funding%20Agreement%202022%2D2025&amp;viewid=93734b5b%2D95f8%2D4374%2Da8fd%2Dfb5fc67fe94e</a>
Annual Monitoring Review 2022	<a href="https://www.seforall.org/system/files/2023-08/2022-annual-monitoring-review.pdf">https://www.seforall.org/system/files/2023-08/2022-annual-monitoring-review.pdf</a>
Annual Monitoring Review 2023	<a href="https://www.seforall.org/system/files/2024-10/SEforALL-annual-monitoring-review-full.pdf">https://www.seforall.org/system/files/2024-10/SEforALL-annual-monitoring-review-full.pdf</a>
Cooling for All Evaluation 2021	<a href="https://www.seforall.org/system/files/2023-03/Cooling%20for%20All%20evaluation%20final%20report_PUBLIC.pdf">https://www.seforall.org/system/files/2023-03/Cooling%20for%20All%20evaluation%20final%20report_PUBLIC.pdf</a>
External, mid-term evaluation of the Promoting Efficient, Affordable and Clean Cooling for Everyone (PEACCE) project 2019 - 2024.	<a href="https://seforallorg-my.sharepoint.com/:b:/g/personal/elisabeth_strasser-mueller_seforall_org/EV4wrBLfaMNGsdH3s7-GUOcBvi7Zso0dZ-TYj_7POmyRNO?e=3JyQT1">https://seforallorg-my.sharepoint.com/:b:/g/personal/elisabeth_strasser-mueller_seforall_org/EV4wrBLfaMNGsdH3s7-GUOcBvi7Zso0dZ-TYj_7POmyRNO?e=3JyQT1</a>
Efficiency and Cooling Results and Impact PPT	<a href="#">Results and Impact Energy Efficiency and Cooling in Kenya and Ghana - revised.pptx</a>
Efficiency and Cooling Results and Impact Word	<a href="https://seforallorg.sharepoint.com/:w:/g/Middle-Earth/EZgHTXmJVf1j7pfg83OicYBgPEX-BpTRPglZihPvWRgYw?e=aXZbjc&amp;CID=849a019a-5aaf-fab3-92ed-365ee440ec31">https://seforallorg.sharepoint.com/:w:/g/Middle-Earth/EZgHTXmJVf1j7pfg83OicYBgPEX-BpTRPglZihPvWRgYw?e=aXZbjc&amp;CID=849a019a-5aaf-fab3-92ed-365ee440ec31</a>
Programme Annual Progress Report 2022	<a href="https://seforallorg.sharepoint.com/:w:/g/Middle-Earth/EREalrHXyEBErDVhIh2dqckBjSiJaAuFZ8-5jEZliAfwXw">https://seforallorg.sharepoint.com/:w:/g/Middle-Earth/EREalrHXyEBErDVhIh2dqckBjSiJaAuFZ8-5jEZliAfwXw</a>
Programme Annual Progress Report 2023	<a href="https://seforallorg.sharepoint.com/:w:/g/Middle-Earth/EalNCCLlx-BOt9YDkvizk14BK2SWQXf8aM1donG9BYiH8g">https://seforallorg.sharepoint.com/:w:/g/Middle-Earth/EalNCCLlx-BOt9YDkvizk14BK2SWQXf8aM1donG9BYiH8g</a>
SEforALL - ADA Joint Partnership Women and Youth at the Forefront and Sustainable Cooling Update June 2024	<a href="https://seforallorg.sharepoint.com/:b:/g/Middle-Earth/EVGgTpD5iWNIpEpREkEen8kB9dyZZc4QIJjfDX_QmbEKhg?e=2PqVdL">https://seforallorg.sharepoint.com/:b:/g/Middle-Earth/EVGgTpD5iWNIpEpREkEen8kB9dyZZc4QIJjfDX_QmbEKhg?e=2PqVdL</a>
SEforALL - ADA Joint Partnership Women and Youth at the Forefront and Sustainable Cooling	<a href="https://seforallorg.sharepoint.com/:b:/g/Middle-Earth/EXEFSikyioNEgV6uea9neBABmrp3UOvqKDr1G8svARM-Gw?e=QRovdg">https://seforallorg.sharepoint.com/:b:/g/Middle-Earth/EXEFSikyioNEgV6uea9neBABmrp3UOvqKDr1G8svARM-Gw?e=QRovdg</a>
SEforALL Cooling Final Operational & Financial Report 2024	<a href="https://seforallorg-my.sharepoint.com/:w:/g/personal/elisabeth_strasser-">https://seforallorg-my.sharepoint.com/:w:/g/personal/elisabeth_strasser-</a>

Reference Documents	Links
	<a href="https://mueller.seforall.org/EZ7pyjooliNHsWQXUuj_NwsBMBWuk17wcNSpPfp9ygH3fA?e=Tuzrua">mueller.seforall.org/EZ7pyjooliNHsWQXUuj_NwsBMBWuk17wcNSpPfp9ygH3fA?e=Tuzrua</a>
SEforALL Cooling Final Operational & Financial Report 2023	<a href="https://my.sharepoint.com/:w:/g/personal/elisabeth_strasser-mueller_seforall_org/EdLhr5Q4DWxAtdHqNvNf6oQBgmPXmon3DwzAY4APVRSZEw?e=nIMypd">https://my.sharepoint.com/:w:/g/personal/elisabeth_strasser-mueller_seforall_org/EdLhr5Q4DWxAtdHqNvNf6oQBgmPXmon3DwzAY4APVRSZEw?e=nIMypd</a>
SEforALL Cooling Final Operational & Financial Report 2022	<a href="https://seforallorg.sharepoint.com/:w:/s/CoolingforAllInitiative/EbfOp-doT9VEnVxWbSK-oHIB7uZ1kVpO9kPxyY1wfViltA?e=DavhL0">https://seforallorg.sharepoint.com/:w:/s/CoolingforAllInitiative/EbfOp-doT9VEnVxWbSK-oHIB7uZ1kVpO9kPxyY1wfViltA?e=DavhL0</a>
SEforALL High-level Concept: Programmatic reviews of Women at the Forefront and Sustainable Cooling for All	<a href="https://seforallorg.sharepoint.com/:p:/r/Middle-Earth/Shared%20Documents/3.%20Team%20Folders/MEL/5%20-%20Evaluation/completed/ADA%20-%20Sustainable%20Cooling%20for%20All%20and%20Women%20at%20the%20Forefront/high%20level%20concept%20-%20programmatic%20reviews.pptx?d=w969942fcdb6a432f8ea69d0c785b721a&amp;csf=1&amp;web=1&amp;e=Fbl1Hh">https://seforallorg.sharepoint.com/:p:/r/Middle-Earth/Shared%20Documents/3.%20Team%20Folders/MEL/5%20-%20Evaluation/completed/ADA%20-%20Sustainable%20Cooling%20for%20All%20and%20Women%20at%20the%20Forefront/high%20level%20concept%20-%20programmatic%20reviews.pptx?d=w969942fcdb6a432f8ea69d0c785b721a&amp;csf=1&amp;web=1&amp;e=Fbl1Hh</a>
SEforALL Cross Organizational KPI Management Tool	<a href="https://seforallorg.sharepoint.com/:x:/g/Middle-Earth/Eal3UueFh6lOmiK2f3QX0EkB9SbQetEP9qjkbHGFQ_Jglw?e=fe552e&amp;clickparams=eyJBcHBOYW1lIjoiVGVhbXMtRGVza3RvcCIsIkFwcFZlcnNpb24iOiI1MC8yNDEyMDEwMDIxMyIsIkhhc0ZlZGVyYXRlZlVzZXliOmZhbHNlFQ%3D%3D">https://seforallorg.sharepoint.com/:x:/g/Middle-Earth/Eal3UueFh6lOmiK2f3QX0EkB9SbQetEP9qjkbHGFQ_Jglw?e=fe552e&amp;clickparams=eyJBcHBOYW1lIjoiVGVhbXMtRGVza3RvcCIsIkFwcFZlcnNpb24iOiI1MC8yNDEyMDEwMDIxMyIsIkhhc0ZlZGVyYXRlZlVzZXliOmZhbHNlFQ%3D%3D</a>
SEforALL Sustainable Cooling for All KPI Management Tool	<a href="https://seforallorg.sharepoint.com/:x:/s/CoolingforAllInitiative/EUCMajdtkz1LnAZaXh5oMHABYq_XklCfFSvgGbGl6QdoZA?e=nhf8A5&amp;isSPOFile=1&amp;ovuser=64f8b38b-17d4-4852-92f3-552ffbb35764%2CTilayo.Awosemusi%40seforall.org&amp;clickparams=eyJBcHBOYW1lIjoiVGVhbXMtRGVza3RvcCIsIkFwcFZlcnNpb24iOiI1MC8yNDEyMDEwMDIxMyIsIkhhc0ZlZGVyYXRlZlVzZXliOmZhbHNlFQ%3D%3D">https://seforallorg.sharepoint.com/:x:/s/CoolingforAllInitiative/EUCMajdtkz1LnAZaXh5oMHABYq_XklCfFSvgGbGl6QdoZA?e=nhf8A5&amp;isSPOFile=1&amp;ovuser=64f8b38b-17d4-4852-92f3-552ffbb35764%2CTilayo.Awosemusi%40seforall.org&amp;clickparams=eyJBcHBOYW1lIjoiVGVhbXMtRGVza3RvcCIsIkFwcFZlcnNpb24iOiI1MC8yNDEyMDEwMDIxMyIsIkhhc0ZlZGVyYXRlZlVzZXliOmZhbHNlFQ%3D%3D</a>
SEforALL 2024-2026 Cross Organizational and Programmatic KPIs and ToCs	<a href="https://seforallorg.sharepoint.com/:p:/g/Middle-Earth/Ec0Y9XtVhmtLlomm_g5JahYBpGJFkb1Nalyw2-0BpsPvzw?e=noK5XS&amp;isSPOFile=1&amp;ovuser=64f8b38b-17d4-4852-92f3-552ffbb35764%2CTilayo.Awosemusi%40seforall.org&amp;clickparams=eyJBcHBOYW1lIjoiVGVhbXMtRGVza3RvcCIsIkFwcFZlcnNpb24iOiI1MC8yNDEyMDEwMDIxMyIsIkhhc0ZlZGVyYXRlZlVzZXliOmZhbHNlFQ%3D%3D">https://seforallorg.sharepoint.com/:p:/g/Middle-Earth/Ec0Y9XtVhmtLlomm_g5JahYBpGJFkb1Nalyw2-0BpsPvzw?e=noK5XS&amp;isSPOFile=1&amp;ovuser=64f8b38b-17d4-4852-92f3-552ffbb35764%2CTilayo.Awosemusi%40seforall.org&amp;clickparams=eyJBcHBOYW1lIjoiVGVhbXMtRGVza3RvcCIsIkFwcFZlcnNpb24iOiI1MC8yNDEyMDEwMDIxMyIsIkhhc0ZlZGVyYXRlZlVzZXliOmZhbHNlFQ%3D%3D</a>