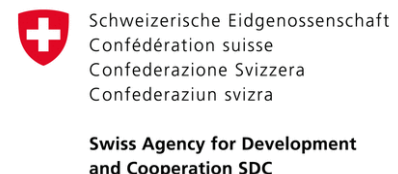




16 July 2020 – OEWG 42 Side Event - #ThisIsCool

Launch of the Cooling for All solutions campaign & Chilling Prospects, Tracking Access to Sustainable Cooling 2020

Special thanks to the Cooling for All funders:



OVERVIEW

- THIS IS COOL
- COOLING FOR ALL AND COVID-19
- THE PRODUCTIVITY PENALTY
- GLOBAL TRENDS IN COOLING ACCESS
 - INDIA CASE STUDY
- SUSTAINABLE COOLING SOLUTIONS & THIS IS COOL
- Q&A

WHO IS PRESENTING | Four members of SEforALL's Cooling for All team



Sejla Mehic

Moderator



Ben Hartley

This Is Cool
Cooling and COVID-19
The Productivity
Penalty



Alice Uwamaliya

Global Trends in
Cooling Access



Alvin Jose

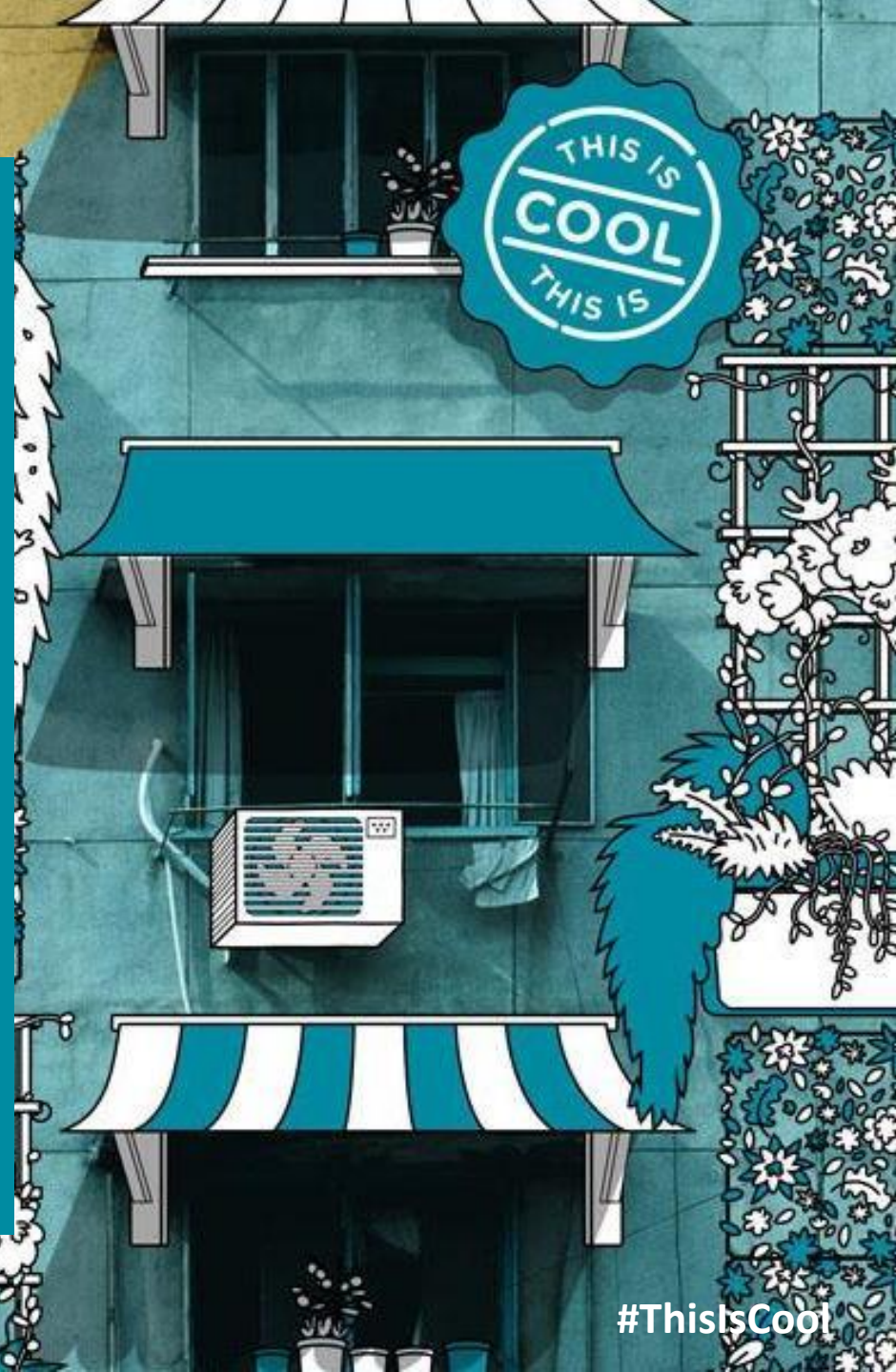
India Case Study
Sustainable Cooling
Solutions

#ThisIsCool

CAMPAIGN

Over 1 billion people lack access to sustainable cooling and a further 2.2 billion have inefficient cooling. In a warming world, access to sustainable cooling is not a luxury. It is an issue of equity and a service that must be delivered to everyone.

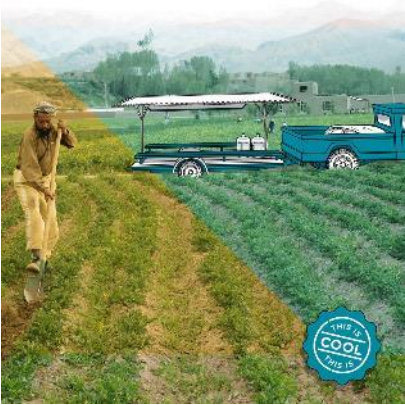
This Is Cool is a campaign to show what can be done across the world to make sustainable cooling a reality.



#ThisIsCool

SOCIAL MEDIA CONTENT

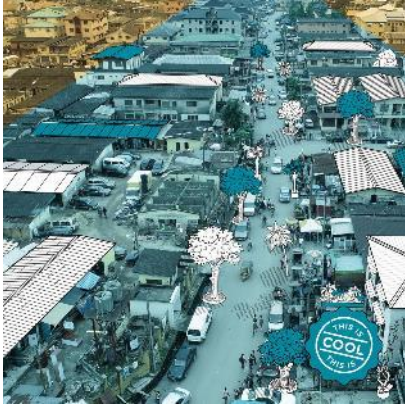
We have a bank of social media assets written and formatted to cover a range of topics from health security, productivity and urban planning to passive cooling, final mile and transportation. Everything has been created to spread the word.



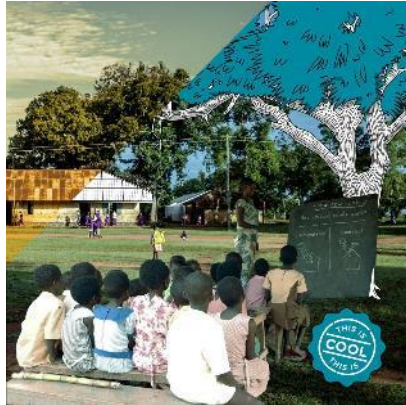
PORTABLE SHADE
Productivity



PASSIVE COOLING
Transition



COOL ROOFS
Urban planning



COOL SCHOOLS
Heat stress



TRANSPORTATION
Food security

IMAGES TELL THE STORY

Each post and topic has a selection of photography and graphics designed to start a conversation about the importance of sustainable cooling for all.



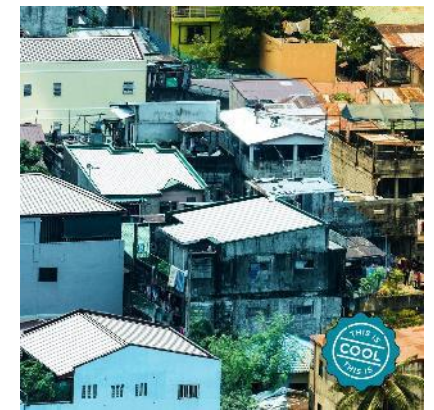
URBAN PLANNING
Heat action plans



HEALTH SECURITY
Final mile



PASSIVE COOLING
Simple solutions



COOL ROOFS
Urban design

GRAPHICS AND STICKERS BRING IT TO LIFE

Use our interactive assets to highlight changes and solutions that can
Implemented easily in your business or community.



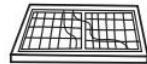
BIG FAN
[VIEW ANIMATION]



5° AC
[VIEW ANIMATION]



TREE
[VIEW ANIMATION]



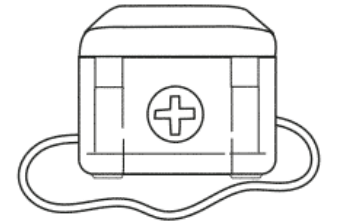
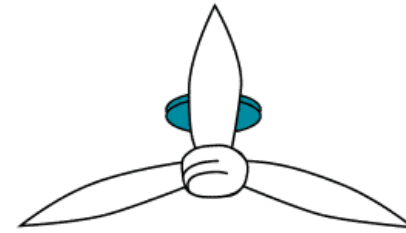
PV PANEL
[VIEW ANIMATION]



COOL BOX
[VIEW ANIMATION]



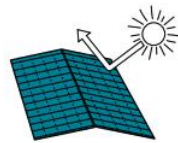
ALERT



WHITEWASH



GREEN WALL



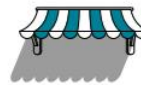
COOL ROOF



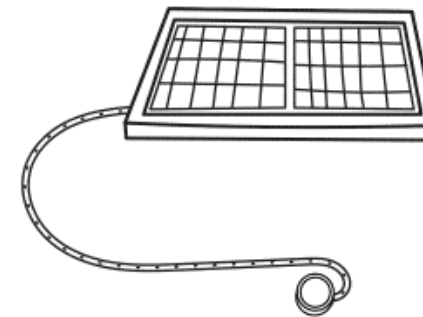
E-BIKE



MOBILE COOLING



SHADE




SOCIAL POSTS IN ACTION

SEforALL
SEforALLorg

#Cities can transition from 🏠 to 🌳 through a combination of passive cooling & #NatureBased solutions:

- 🌿 Natural vegetation
- 🏠 External shades & overhang
- 🏗️ Innovative building materials

#ThisIsCool urban planning reduces AC demand & increases comfort.



4:17 PM · Aug 14, 2020 ·

18k Retweets 160 Likes

Sustainable Energy for All



120 Likes

Sustainable Energy for All

Extreme heat can lower a child's ability to learn. In the US, studies have found every 0.5 °C (1°F) increase in average outdoor temperature over a school year reduces student learning by 1%.

As climate change causes temperatures to rise, this challenge will become more pronounced in the global South. For children in these regions, cooling solutions include:

- 🏠 Building design that reduces solar heat gain and achieves passive cooling
- 🌿 Planting trees to provide natural shade
- 🌱 Increasing vegetation to cool surrounding buildings
- 💡 Installing solar-powered fans

#ThisIsCool education for all. How does heat affect education, or work, where you live?

View all 16 comments

Sustainable Energy for All

What do 🍌 & 🥑 have in common? The answer: cold chain solutions 🌡️

A third of India's banana production, 9 million tons, is produced within the state of Tamil Nadu.

But, over the years, farmers in the region witnessed a post-harvest loss of 30%. Bananas were being wasted in a country in urgent need of food for 300 million people.

Implementation of a sustainable cold chain – effectively, a temperature-controlled supply chain – can reduce food waste, increase the income of rural farmers, and support local employment.

Read our #ThisIsCool case study to learn how the banana cold chain model, currently being evaluated in India as a best practice, could be replicated in Kenya for the mango market or in Indonesian fisheries.



21 Comments 16 Shares

Like Share

View more 16 Comments

Write a comment



INTACT COLD CHAINS
EXTEND THE QUALITY
AND SHELF LIFE
OF PRODUCE.





SIMPLE ACTIONS YOU CAN TAKE TODAY

1. **Rethink your approach to cooling**

Our resources include tools and assets to help you reconsider your cooling choices to improve lives, reduce emissions and be more efficient.

2. **Learn why sustainable cooling is so important**

Ensure you know why sustainable cooling matters and understand why it is so important to build a stronger, more resilient world.

3. **Spread the word with the campaign**

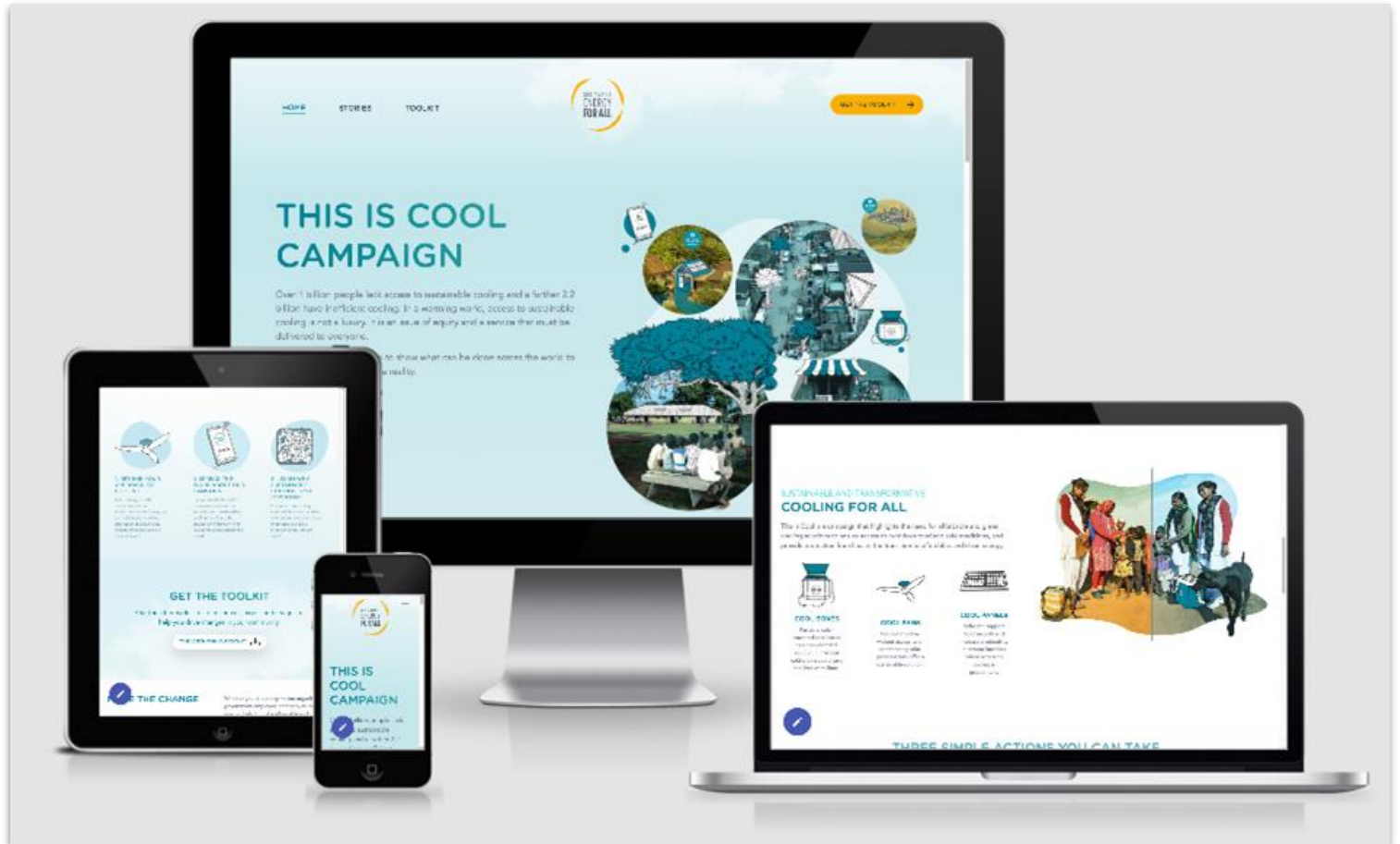
Use our toolkit to start a conversation about the importance of sustainable cooling for all and the impact it will have on high risk communities across the world.



CAMPAIGN WEBSITE

Our microsite is a great place to access everything you need to start a conversation about the importance of sustainable cooling for all.

- Case studies
- How-to toolkit
- Social media assets
- Image library
- Stickers, gifs and animations



#ThisIsCool



Go to

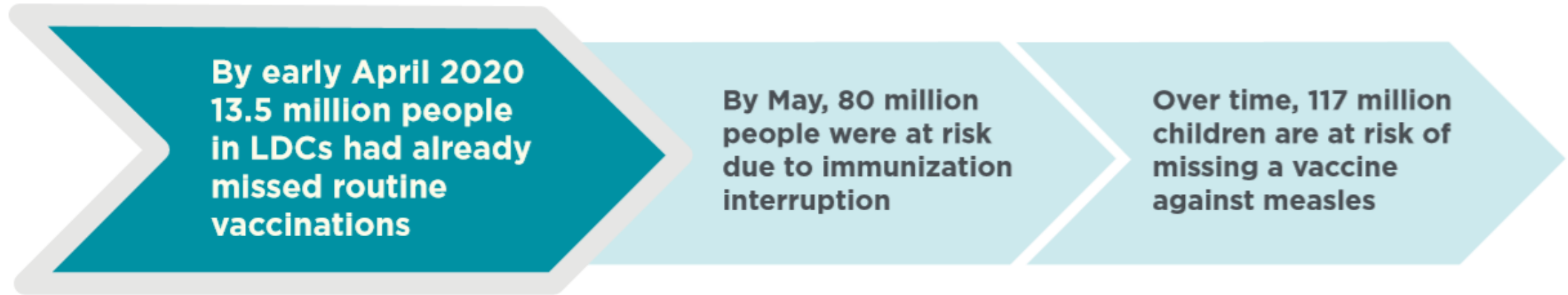
thisiscool.seforall.org

The background is a blue-tinted photograph of a city street. It shows several multi-story buildings with numerous windows. Many of the windows have air conditioning units installed on the exterior. The perspective is from a low angle, looking down the street. The overall tone is professional and urban.

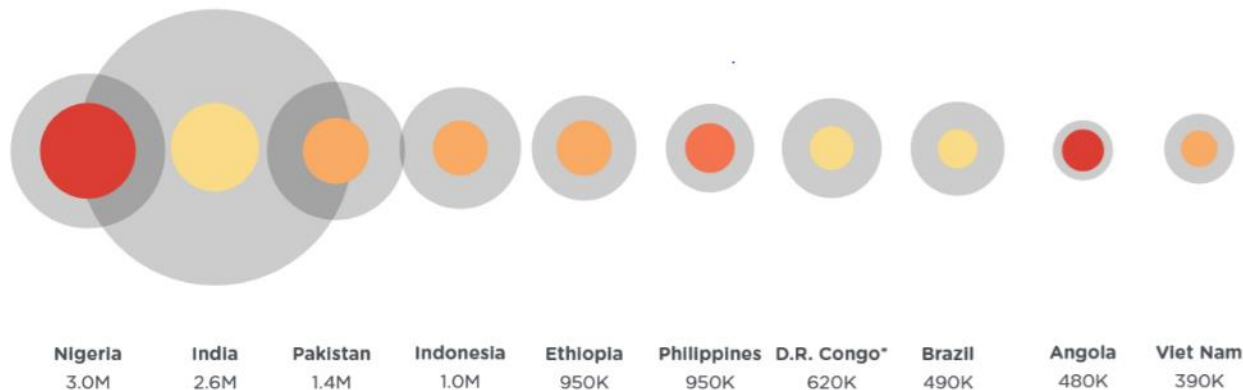
COOLING FOR ALL AND COVID-19



Challenges in vaccine delivery before and during the pandemic



Just 10 countries account for 60% of unprotected children



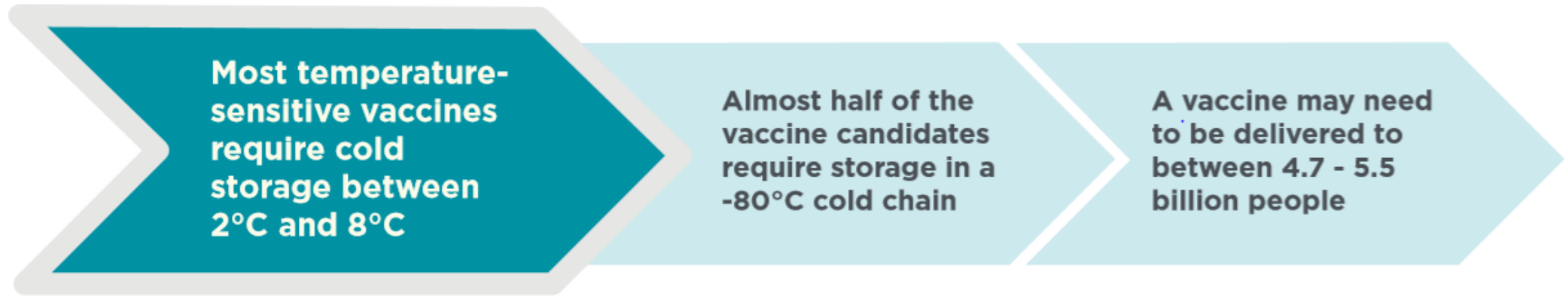
- In 2018, DPT3 vaccine coverage was 86%, and only 76% in Africa
- Of the 10 countries that account for 60% of unvaccinated children, **five are in the critical nine for access to cooling**

*Preliminary survey suggests lower coverage and higher number of unvaccinated





Cold chain to deliver a vaccine



- Only 10 percent of health facilities in Gavi-supported countries were equipped with the recommended cold chain equipment
- Unreliable electricity access further compounds the challenge of powering cold chain. **Across Sub-Saharan Africa only 28% of healthcare facilities enjoy the reliable electricity supply**
- Other challenges include transport and delivery capacity at the last mile and communications challenges with vaccine campaigns



Nutritional preferences

- Nutritional preferences in Asia favour fresh foods that require cold chain
- In India, for example, 34 percent of households reported that they now anticipate spending 20 percent of their income or more on fresh food than they did prior to the pandemic, with that number increasing to 52 percent after

COUNTRY	INDIA	INDONESIA	THAILAND
% of respondents selecting stable availability of fresh food products among top 3 factors for store selection	39%	41%	34%
Anticipated consumption of fresh foods during COVID-19 (% of households reporting an increase in spending of 20% or more)	34%	31%	23%
Anticipated consumption of fresh foods after COVID-19 (% of households reporting an increase in spending of 20% or more)	52%	30%	14%
Production of milk, meat, seafood, fruit and vegetables lost due to lack of cold chain	18%	22%	22%

Nutritional preferences and food loss due to lack of cold chain

Malnourishment

Prior to the pandemic, 135 million people, including 73 million in Africa, were facing crisis or emergency levels of food insecurity

In poor countries, calories from nutritious foods are often as much as 10-times more expensive than cereals or grains in caloric terms, and vulnerable groups typically prioritize less nutritious foods with higher caloric value when income is reduced

Should the pandemic produce a reduction on global GDP between 2 percent and 10 percent, **the number of undernourished people in net-food importing countries could increase from 14.4 to 80.3 million**



Finding social distance as temperatures rise

- On 28 April 2020, at the height of the pandemic, Delhi recorded its highest temperature of the year at 43.7°C, eclipsing the previous hottest day of 42.1°C five days earlier on April 23
 - Later in May, nearly 80 migrant workers in India died of starvation or heat stress while moving from crowded cities to their home villages
- Many vulnerable groups are susceptible to both heat stress and COVID-19
- Inhabitants of dense urban centres with limited green space have amongst the worst COVID-19 outcomes due to pre-existing exposure to air pollution and high rates of non-communicable diseases
- Inhabitants of slums and informal urban settlements will not be able to stay indoors during a heatwave due to an inability to cool their homes

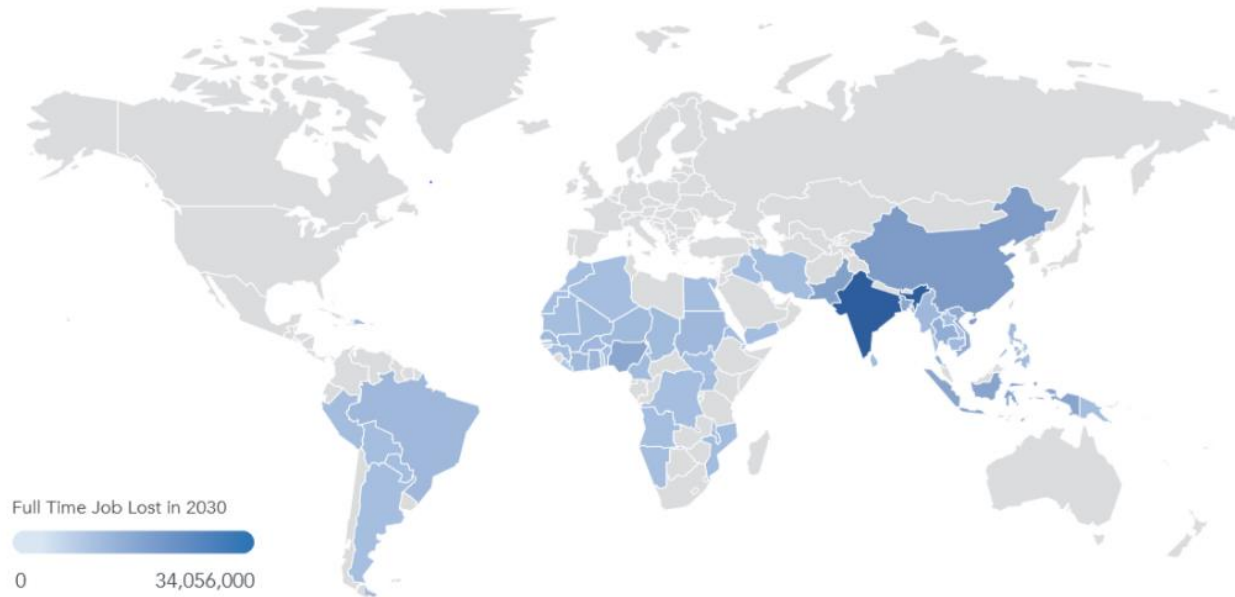


THE PRODUCTIVITY PENALTY



It will be developing economies, and the sectors that support their growth, that face the most significant **productivity penalty** due to a lack of access to sustainable cooling, in particular:

- Outdoor and migrant works, who are more vulnerable than others
- Women, who make up 50% of the agricultural labour force in Sub-Saharan Africa, but face a wage gap of 15-60%



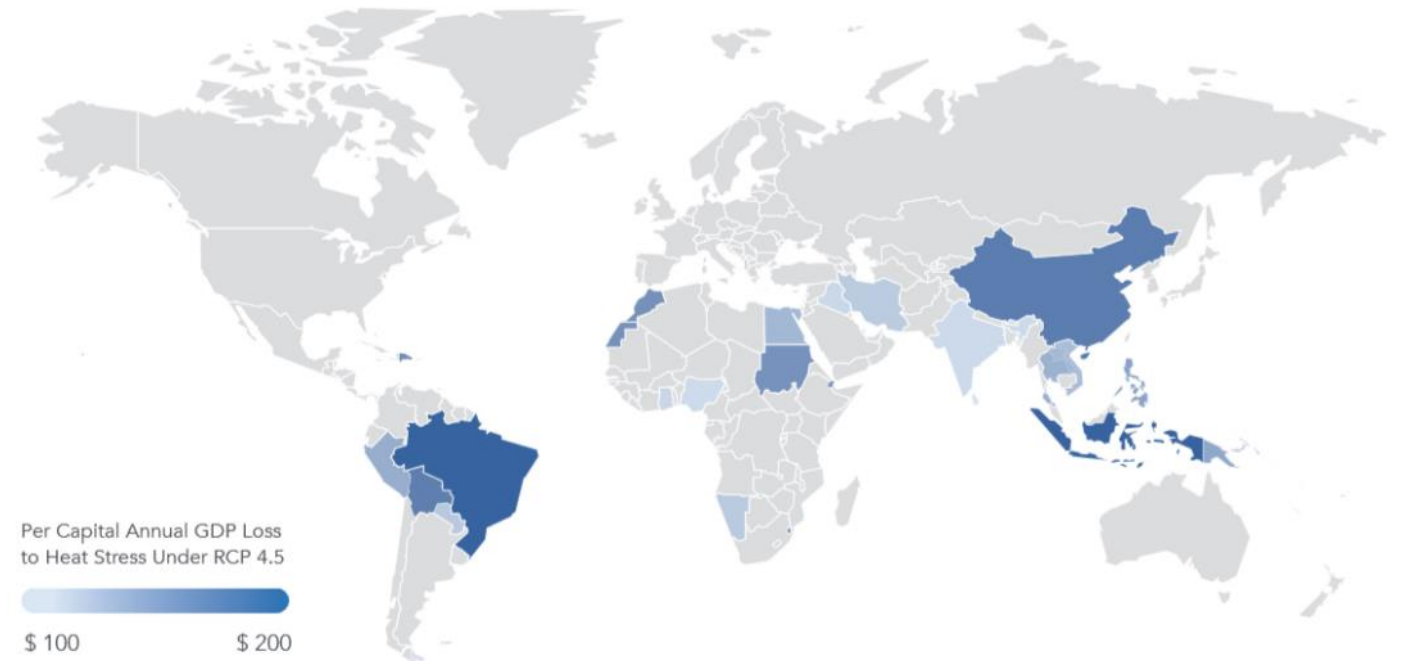
In 2019 ILO estimated that by 2030 the global economy would suffer lost productivity worth USD 2.4 trillion annually due to heat stress, the **equivalent of 80 million full-time jobs**.

- **73.7 million jobs** will be lost in **high impact countries** for access to cooling
- **The critical nine** countries for access to cooling account for **57.6 million job losses**



Productivity losses

- Across 54 high impact countries, the estimated annual economic loss due to heat stress is currently **USD 630 billion**
- In the critical nine for access to cooling, the annual economic loss is **USD 517.5 billion**



In GDP per capita terms, **23 high-impact countries already exhibit losses over USD 100**

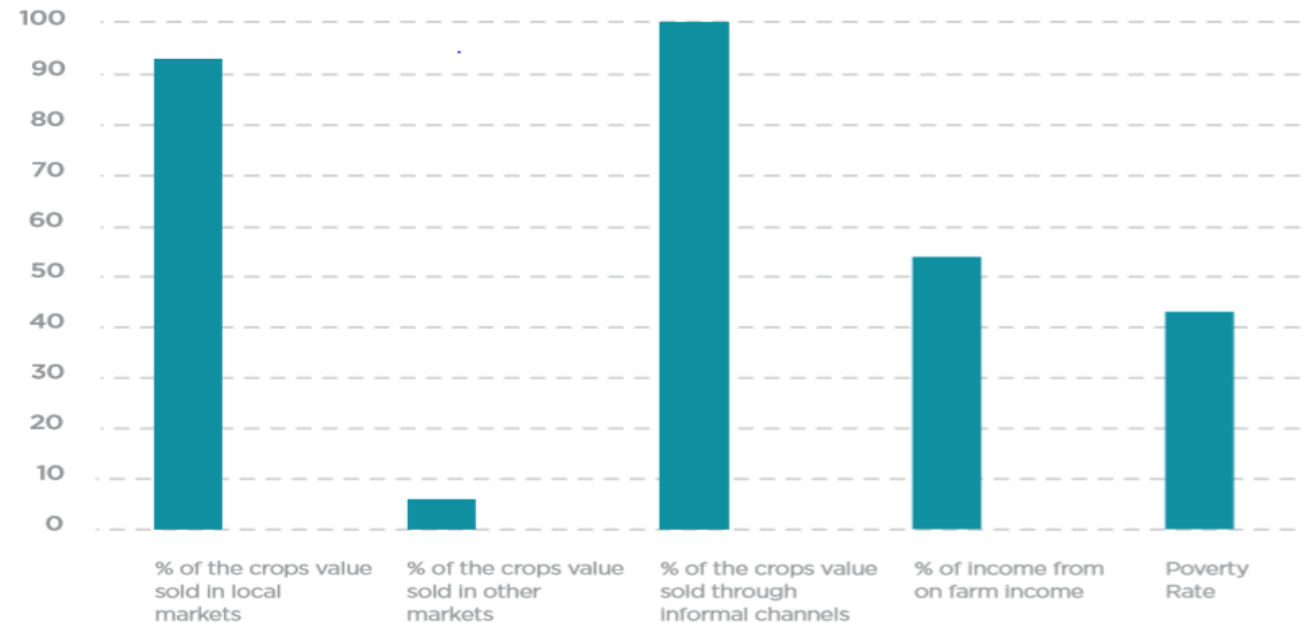


Case study: Nigeria's agricultural sector

- Nigeria relies on agriculture for 66.5% of GDP
- 80% of farmers are smallholder
- 3.36% annual productivity loss due to heat in the sector
- 31% of rural Nigerians have access to basic electricity services

Indicators of a lack of access to cooling

- Strong preference for sale of crops locally and through informal channels
- Low energy access rates that enable access to electrical cooling



Markets and Income for Smallholder Farmers in Nigeria in 2013

The background is a blue-tinted photograph of a city street. It shows several multi-story buildings with windows and balconies. Many of the buildings have external air conditioning units mounted on their facades. The perspective is from a low angle, looking down the street. The overall tone is professional and modern.

GLOBAL TRENDS IN COOLING ACCESS

POPULATIONS IDENTIFIED IN CHILLING PROSPECTS | POPULATION AT RISK



**RURAL
POOR**



**URBAN
POOR**



**LOWER-MIDDLE
INCOME**



**MIDDLE
INCOME**

- Likely to be subsistence farmers without access to an intact cold chain;
- may lack access to electricity and properly stored vaccines.

- May have some access to electricity, but live in housing of poor quality;
- may have a refrigerator, but food often spoils due to intermittent power.

- May purchase an affordable thus likely inefficient air conditioner or refrigerator that raises energy consumption and GHG emissions.

- May be able to afford a more efficient air conditioner or minimize its use;
- may move to energy efficient housing and working environments.

ACCESS TO COOLING | LEVEL OF RISK

HIGH RISK

- No access to electricity
- Income below poverty line
- Poor ventilation and construction
- No access to refrigeration for food
- Farmers lack access to controlled cold chains
- Vaccines exposed to high temperatures

MEDIUM RISK

- Access to electricity
- Lower income levels
- Ability to run a fan, buildings constructed to older standards
- Food is refrigerated
- Farmers have access to intermittently reliable cold chains
- Vaccines may have exposure to occasional high temperatures

LOW RISK

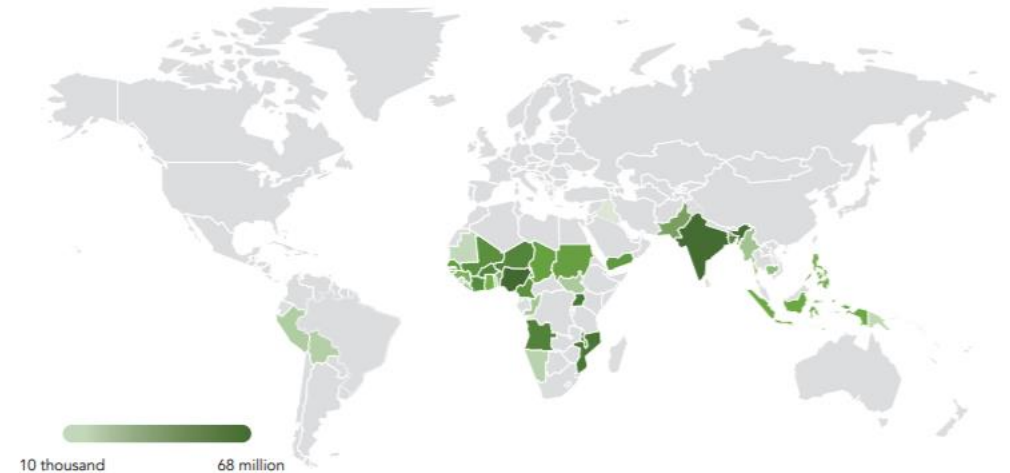
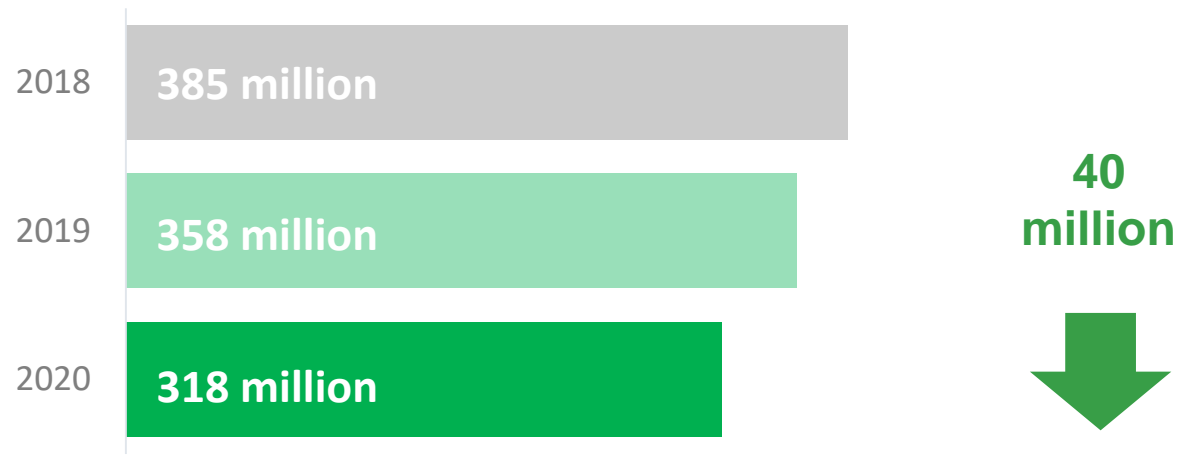
- Full and stable access to electricity
- Middle income and higher
- Well built home, can include insulation, passive design, air conditioning
- Food is refrigerated reliably
- Farmers goods and vaccines have well controlled cold chains

TRENDS IN COOLING ACCESS | POPULATION AT HIGHEST RISK

RURAL POOR: APPROXIMATELY 318 MILLION



- Likely to be subsistence farmers without access to an intact cold chain
- May lack access to electricity and properly stored vaccines



- Significant increase in rural energy access that can provide energy for fans or refrigerators
- Positive trend in electrification, with major improvements in India
- Increased vulnerability in Bangladesh and Angola

Source: SEforALL analysis, Chilling prospects 2020

All maps were produced by SEforALL and they are based on the UN Map of the World, which can be found here: <https://www.un.org/Depts/Cartographic/map/profile/world.pdf>

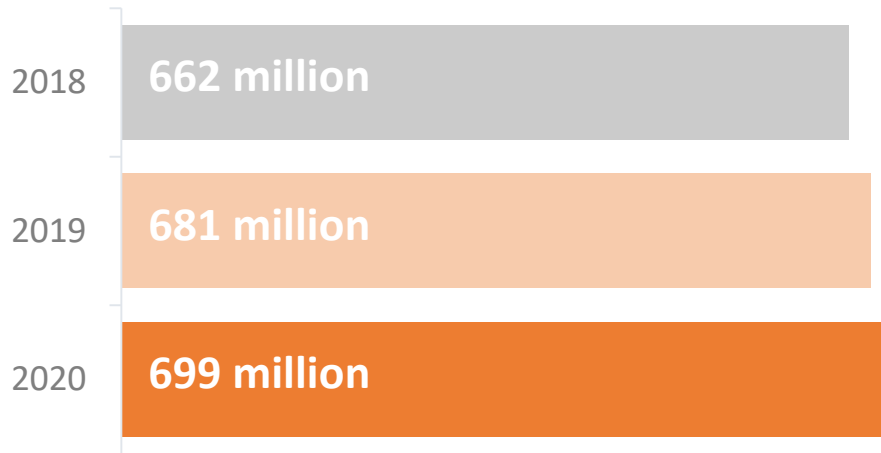
The boundaries, colors, denominations and any other information shown on these maps do not imply, on the part of SEforALL, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries.

TRENDS IN COOLING ACCESS | POPULATION AT HIGHEST RISK

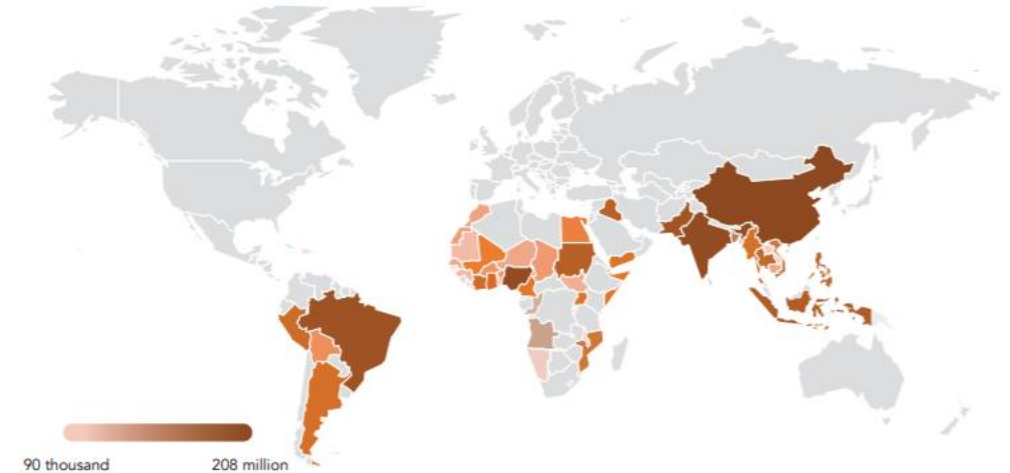
URBAN POOR: APPROXIMATELY 699 MILLION



- May have some access to electricity, but live in housing of poor quality
- May have a refrigerator, but food often spoils due to intermittent power



18
million



- Continued urbanization and fast-growing cities in Asia and Africa
- Alarming trend in countries where **more than 50% of urban population is at risk** (Bangladesh, Cambodia, Yemen)

Source: SEforALL analysis, Chilling prospects 2020

All maps were produced by SEforALL and they are based on the UN Map of the World, which can be found here: <https://www.un.org/Depts/Cartographic/map/profile/world.pdf>

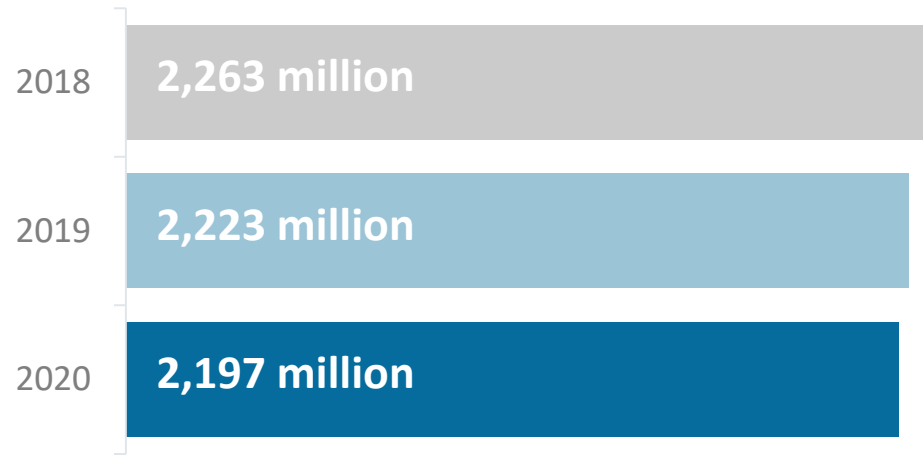
The boundaries, colors, denominations and any other information shown on these maps do not imply, on the part of SEforALL, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries.

TRENDS IN COOLING ACCESS | POPULATION AT MEDIUM RISK

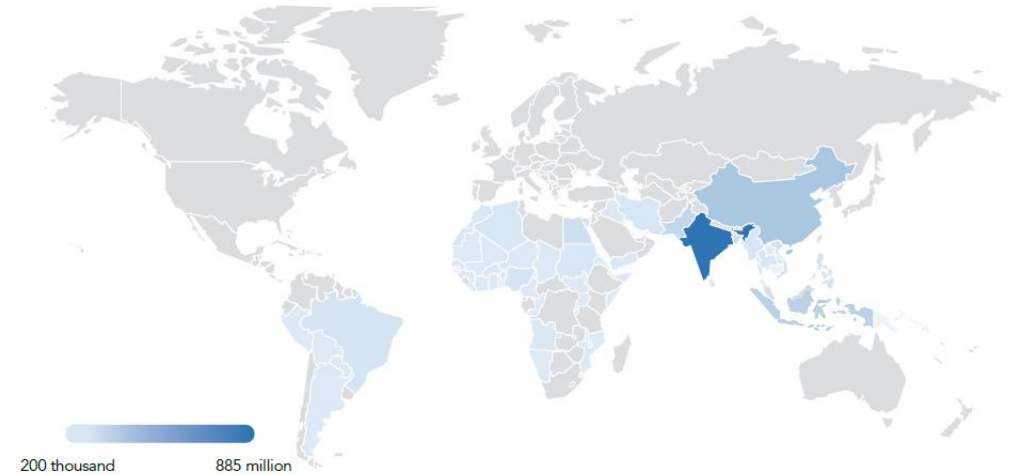
LOWER-MIDDLE INCOME: APPROXIMATELY 2.2 BILLION



- May purchase an affordable thus likely inefficient air conditioner or refrigerator that raises energy consumption and GHG emissions



26
million



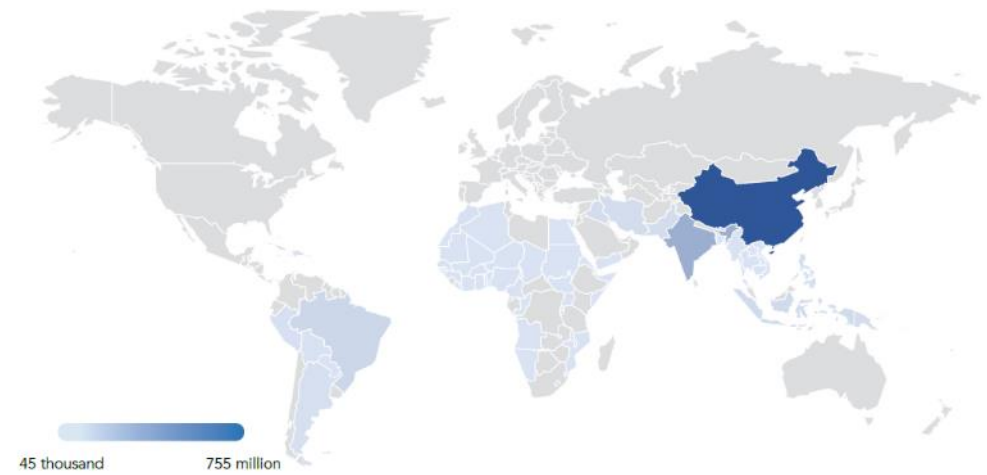
- Risk of purchasing less-sustainable cooling devices associated with income growth and lower prices for entry-level units

TRENDS IN COOLING ACCESS | POPULATION AT LOW RISK

MIDDLE INCOME: APPROXIMATELY 1.4 BILLION



- May be able to afford a more efficient air conditioner or minimize its use;
- May move to energy efficient housing and working environments



- Increased purchasing power and growth of an established middle class
- COVID-19 may challenge purchasing power in the future

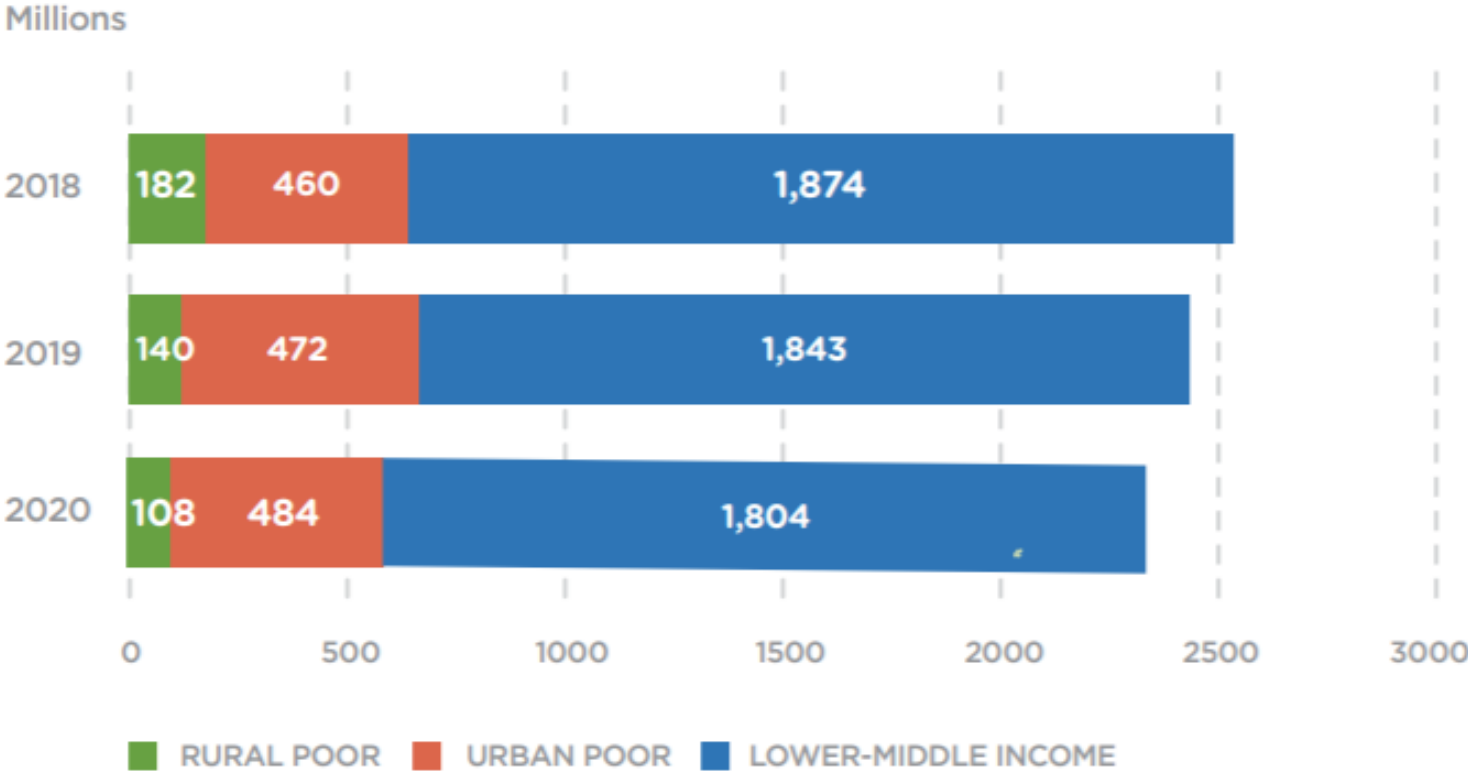
Source: SEforALL analysis, Chilling prospects 2020

All maps were produced by SEforALL and they are based on the UN Map of the World, which can be found here: <https://www.un.org/Depts/Cartographic/map/profile/world.pdf>

The boundaries, colors, denominations and any other information shown on these maps do not imply, on the part of SEforALL, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries.

TRENDS IN COOLING ACCESS | POPULATION AT RISK

3-Year Trend: High Impact Countries in Asia and the Middle East

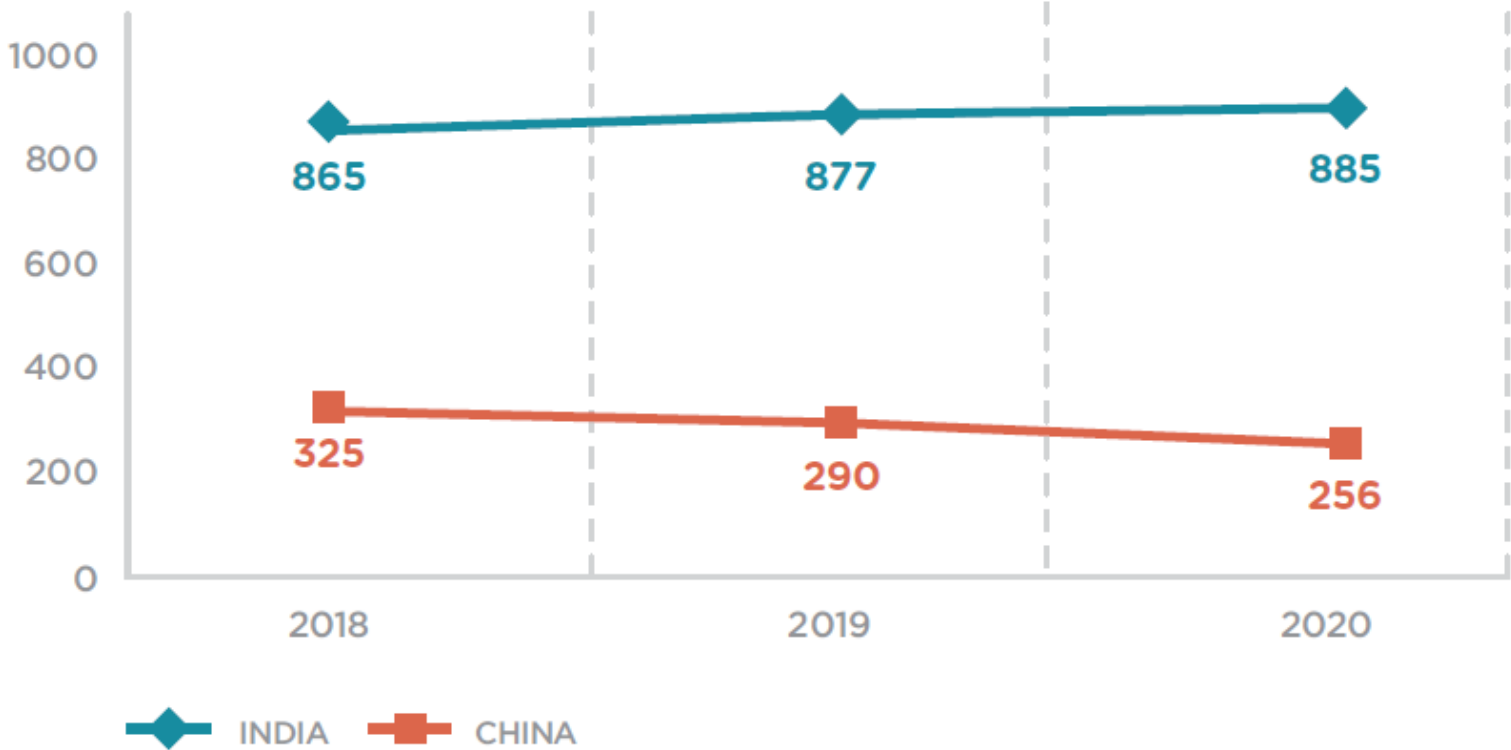


Source: SEforALL analysis, Chilling prospects 2020

TRENDS IN COOLING ACCESS | DIVERGING PATHWAYS IN CHINA AND INDIA

LOWER-MIDDLE INCOME POPULATION

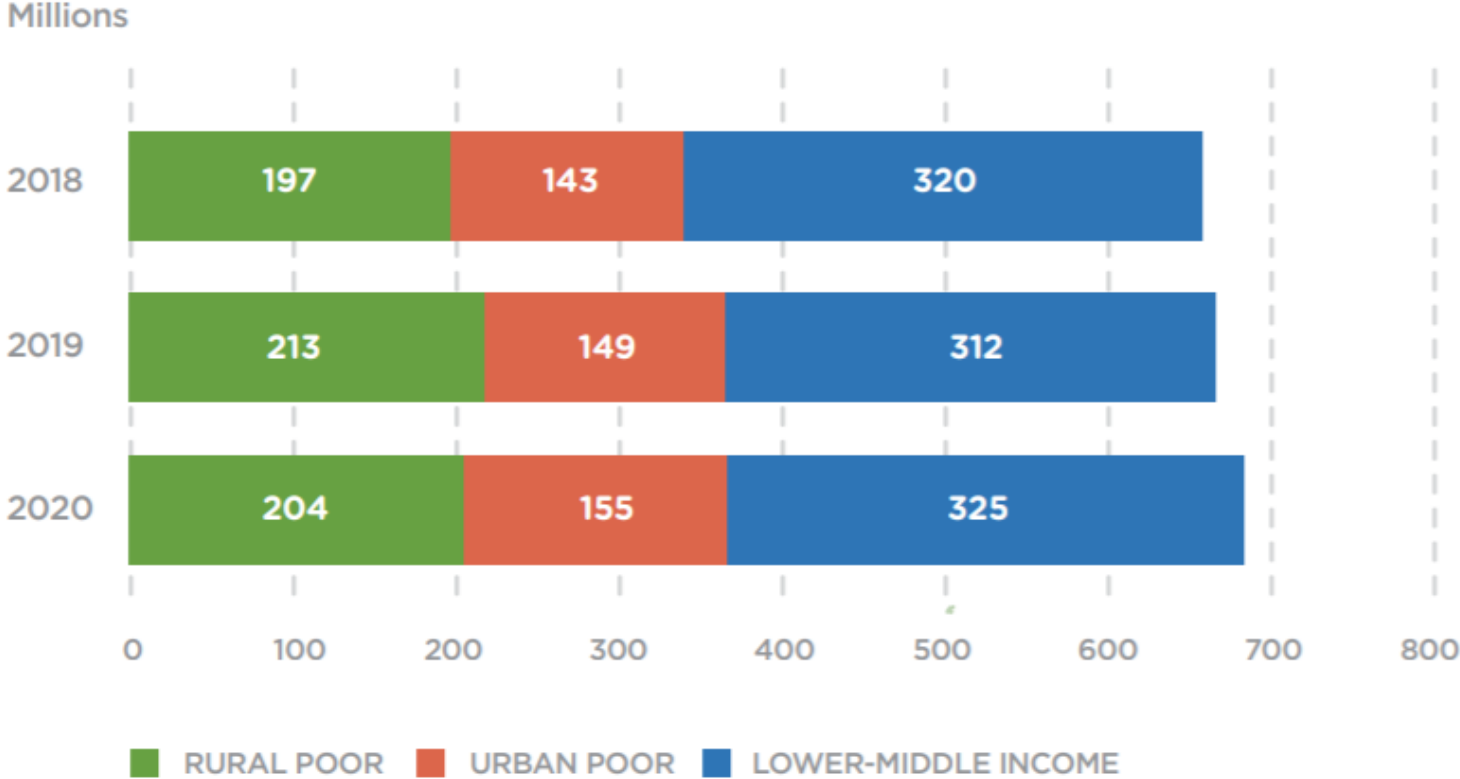
Diverging Pathways in China and India (Millions)



Source: SEforALL analysis, Chilling prospects 2020

TRENDS IN COOLING ACCESS | POPULATION AT RISK

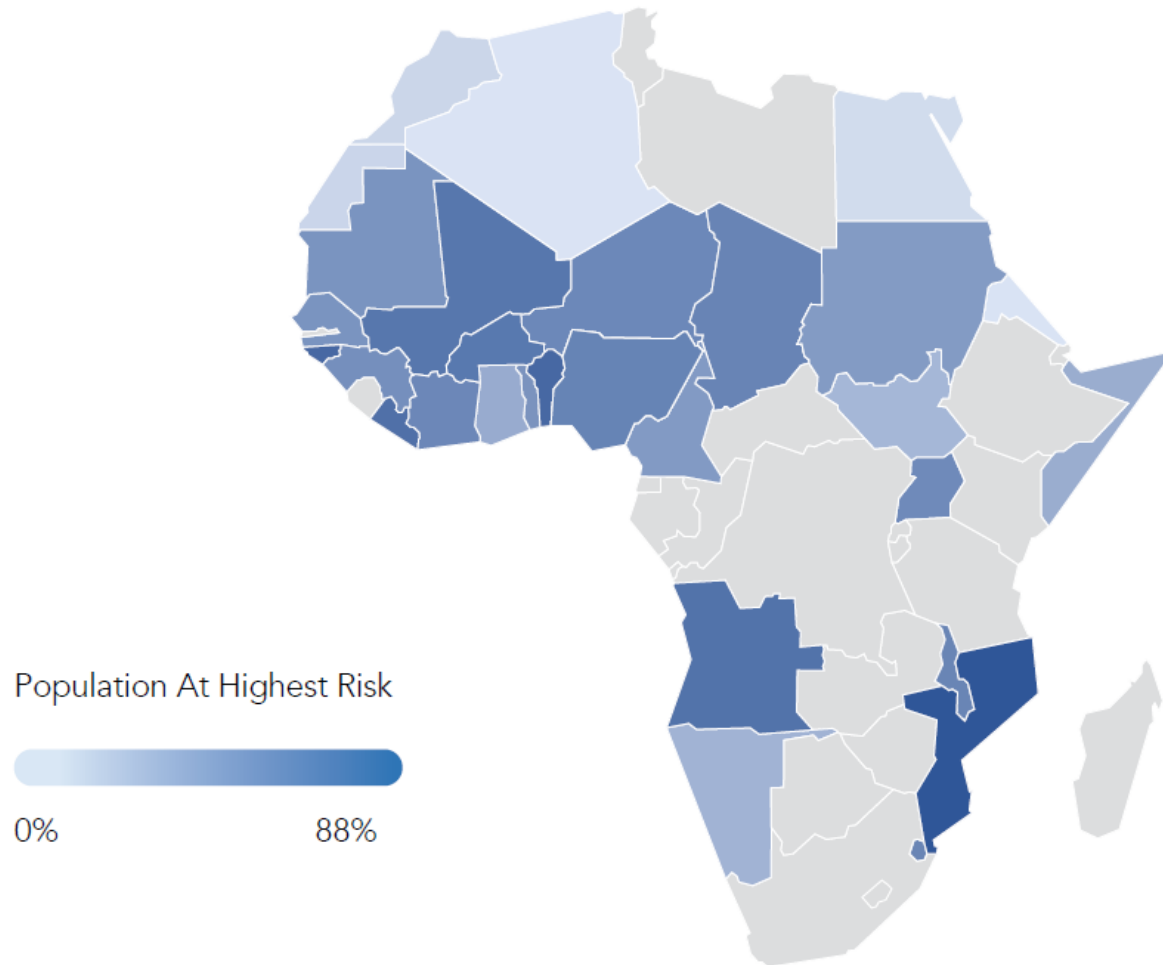
3-Year Trend: High Impact Countries in Africa



Source: SEforALL analysis, Chilling prospects 2020

SHARE OF POPULATION AT HIGHEST RISK 2020

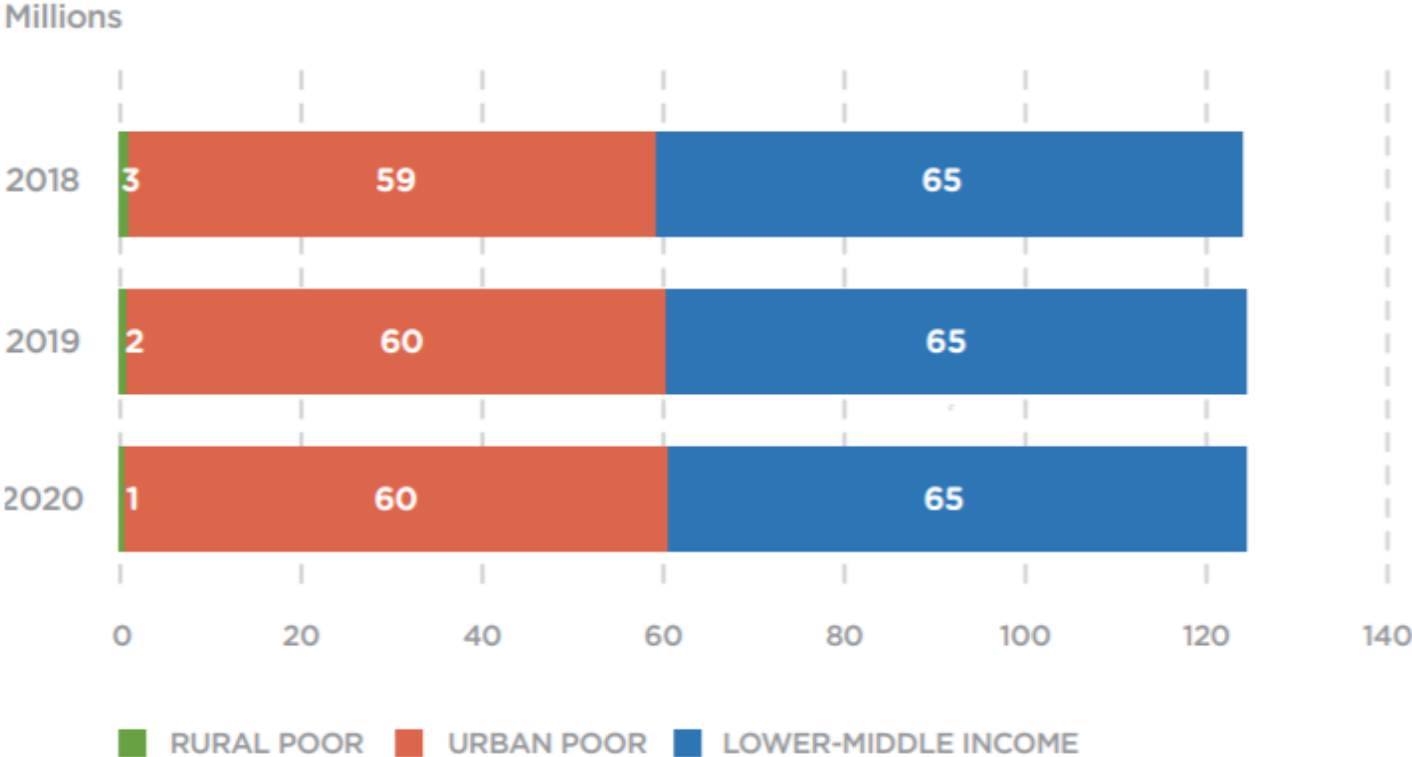
Share of urban poor and rural poor combined, 2020



- Of the African countries identified as high impact, 10 still have **over 60 percent of their populations at highest risk** – Angola, Benin, Burkina Faso, Djibouti, Guinea-Bissau, Liberia, Malawi, Mali, Mozambique and Togo
- Overall, of the high-impact countries in Africa, **45 percent of their total populations are categorized as high risk**

TRENDS IN COOLING ACCESS | POPULATION AT RISK

3-Year Trend: High Impact Countries in Latin America and the Caribbean



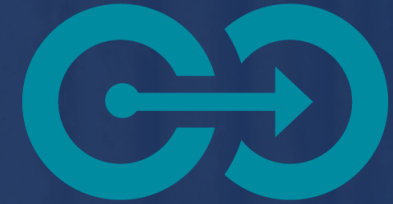
Source: SEforALL analysis, Chilling prospects 2020



1.02 billion remain at highest risk, compared to 1.05 in 2019 and 1.1 billion in 2018.



While energy access lowers risk exposure, it does not necessarily imply enhanced access to cooling.



Changes in volume do not necessarily imply a transition from one population at risk to another.

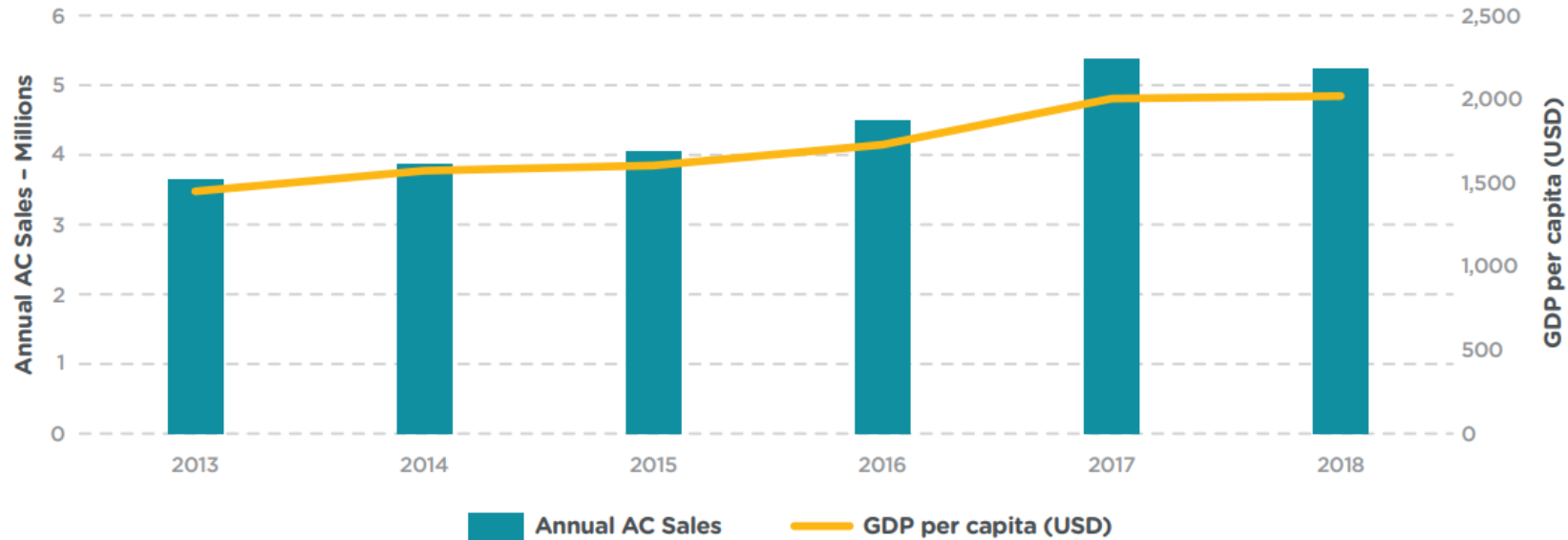
The background is a dark blue, monochromatic illustration of a city street. It shows a perspective view of buildings with windows and balconies. A person is riding a bicycle on the street. The overall style is a fine-lined, architectural drawing.

INDIA CASE STUDY

Assessing Sub-national Cooling Vulnerabilities

TRENDS IN COOLING ACCESS | ASSESSING SUB-NATIONAL COOLING VULNERABILITIES IN INDIA

The estimated annual AC sales is growing and closely follows the per capita income trends in India.

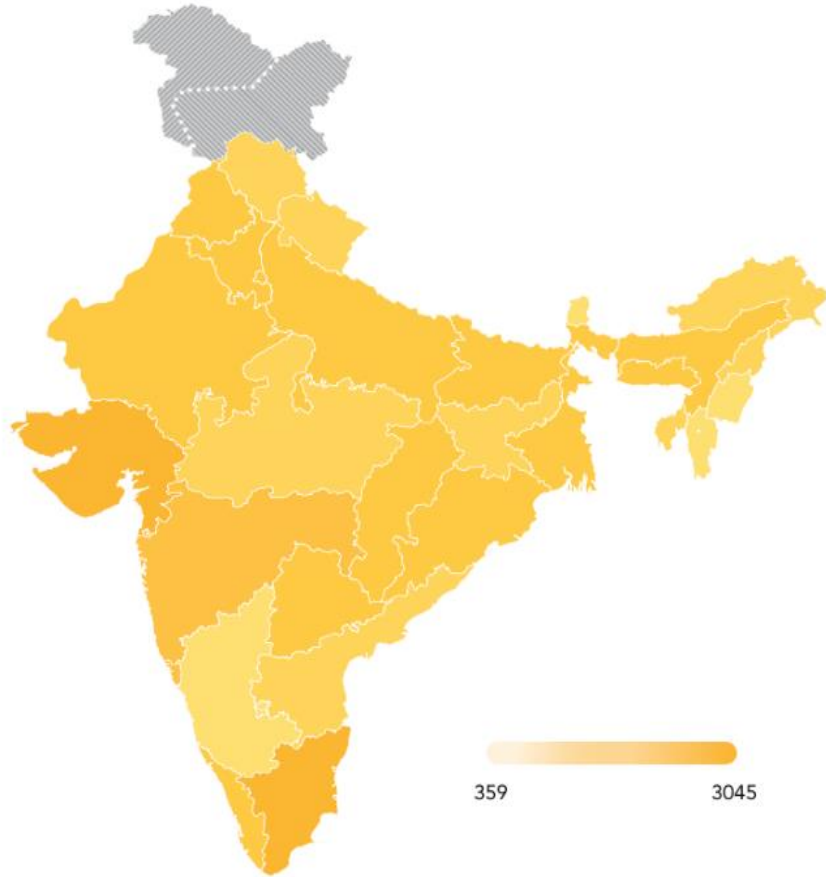


The rural poor population at risk due to lack of access to cooling has decreased significantly over 5 years, while there is a slow but steady growth in both urban poor population and lower middle income.

Risk Category	2016	2017	2018	2019	2020
Rural Poor	198,836,743	146,482,572	129,511,367	94,960,997	63,093,075
Urban Poor	100,696,430	103,062,877	105,479,705	107,949,448	110,470,962
Lower-Middle Income	843,383,618	871,458,902	865,329,473	876,726,294	885,388,896

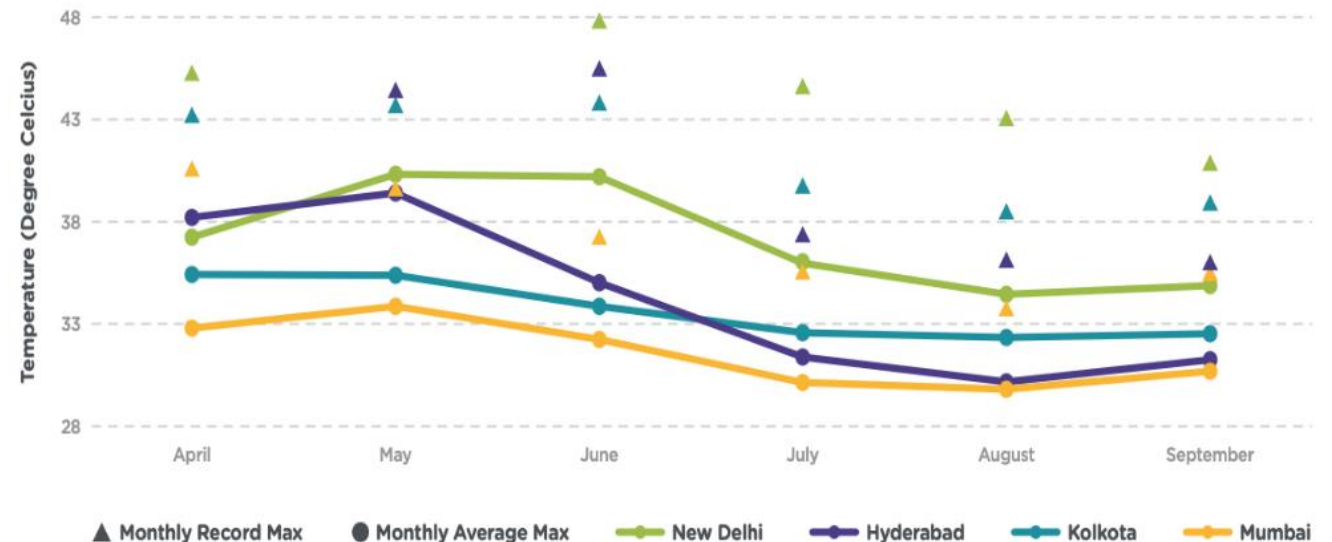
TRENDS IN COOLING ACCESS | ASSESSING SUB-NATIONAL COOLING VULNERABILITIES IN INDIA

Average Cooling Degree Days (CDDs) in India



Cooling Degree Days alone do not indicate risk to heat stress, and monthly temperature peaks are important to track, particularly in a warming planet.

- There have been **22,383 deaths** due to **heat wave incidents** between **1992-2015**.
- India's average temperature increased by **0.7 °C** between **1901 and 2018** and by the end of this century the average temperature is expected to rise by **4.4°C** - an estimated **42% increase in CDD**.
- Currently only **18 percent of Indian households own a cooling system** (air conditioner or cooler) and of these, only **10 percent have an AC unit**.



Source: SEforALL analysis, Chilling prospects 2020

All maps were produced by SEforALL and they are based on the UN Map of the World, which can be found here: <https://www.un.org/Depts/Cartographic/map/profile/world.pdf>.

For India map, the dotted line represents approximately the Line of Control in Jammu and Kashmir by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

The boundaries, colors, denominations and any other information shown on these maps do not imply, on the part of SEforALL, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries.

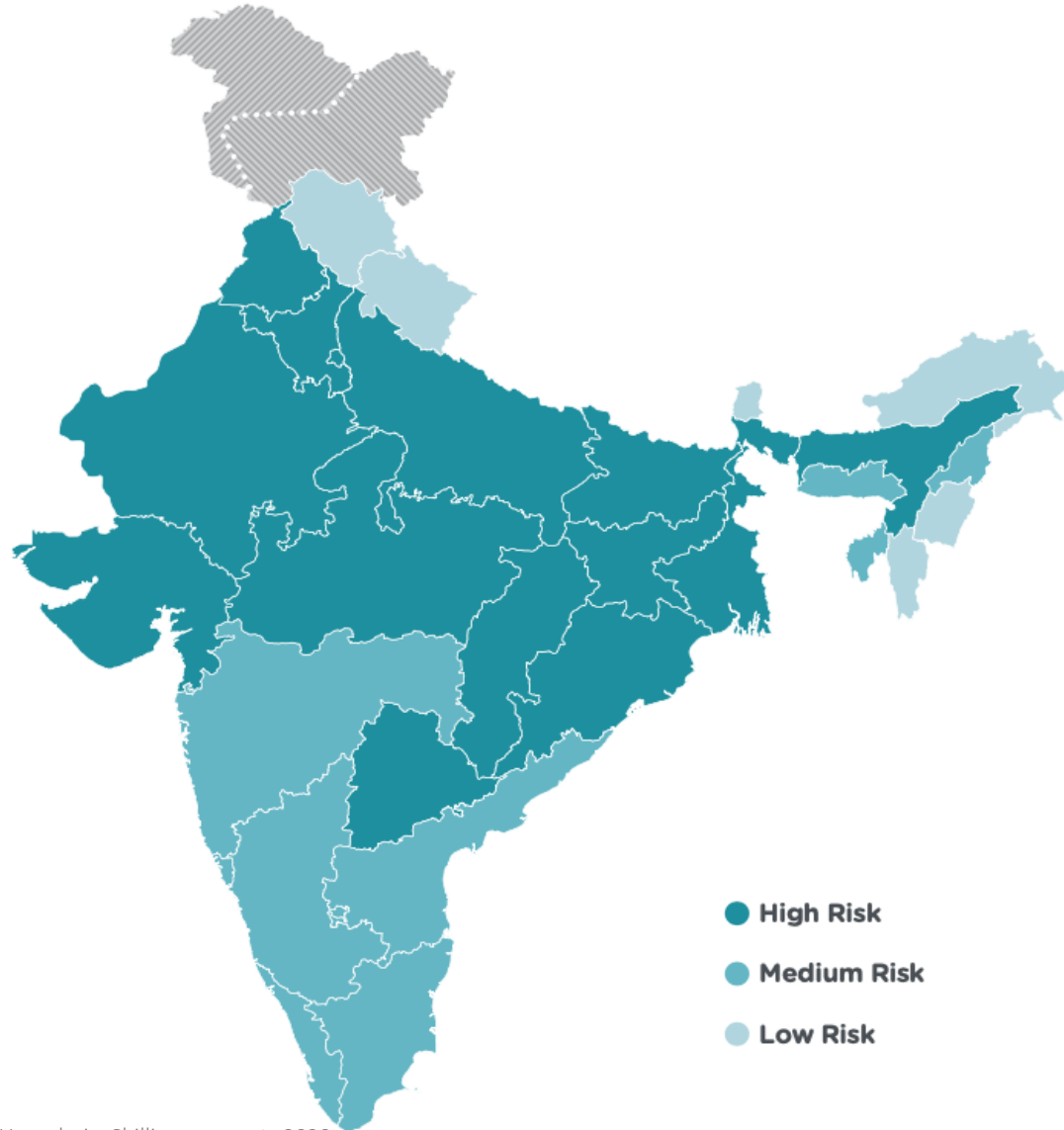
Criteria to Determine Risk to Lack of Access to Cooling

	High Risk	Medium Risk	Low Risk
Income per day	Less than \$1.90/day	Between \$1.90-\$5.50/day	Above \$5.50/day
Average maximum temperature	Above 35°C	Between 35°C and 25°C	Below 25°C
Cooling degree days	Above 1,900	Between 1,900 and 1,000	Below 1,000

Factors used for risk assessment of India States

- The criteria include income, average maximum temperature and CDDs, with criteria to indicate the level of risk. Initially, a state is considered high risk if two or more of the high-risk criteria are met.
- The initial rankings are then adjusted for ownership of cooling appliances (refrigerator, ACs and fans) to assess the overall vulnerability of each state.
- States with fewer cooling appliances, high average temperatures (or CDDs) and low income will have a higher risk than states with more cooling appliances, lower temperatures (or CDDs) and relatively higher incomes.

TRENDS IN COOLING ACCESS | ASSESSING SUB-NATIONAL COOLING VULNERABILITIES IN INDIA



Results of risk assessment:

- **14 states** (including 1 union territory) **that have over 815 million people** at **high risk**
- **9 states** that have **over 300 million people** at **medium risk**
- **7 states** (including 1 union territory) **that have over 27 million people** at **low risk**
- Bihar, Jharkhand and Uttar Pradesh are 3 states with highest risk to lack of access to cooling

Source: SEforALL analysis, Chilling prospects 2020

All maps were produced by SEforALL and they are based on the UN Map of the World, which can be found here: <https://www.un.org/Depts/Cartographic/map/profile/world.pdf>.

For India map, the dotted line represents approximately the Line of Control in Jammu and Kashmir by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

The boundaries, colors, denominations and any other information shown on these maps do not imply, on the part of SEforALL, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries.

The background is a blue-tinted photograph of a city street. It shows several multi-story buildings with balconies and numerous air conditioning units mounted on the exterior walls. The perspective is from a low angle looking down the street. The overall tone is professional and modern.

SUSTAINABLE COOLING SOLUTIONS

ACCESS TO COOLING | FROM COOLING NEEDS ASSESSMENT TO SOLUTIONS

COOLING SOLUTION APPROACH FOR OPTIMIZATION

THREE COOLING FOR ALL - COOLING NEEDS

COMFORT
& SAFETY



FOOD
& NUTRITION



HEALTH
& CARE



TECHNOLOGY



SERVICES



POLICY



FINANCIAL



FOUR COOLING FOR ALL - COOLING SOLUTION PILLARS

ACCESS TO COOLING | COOLING FOR ALL NEEDS



COMFORT & SAFETY



Human Comfort, Productivity and Safety



Comfort & Safety includes the need for people to have access to cooling for living, learning, working and mobility. There are levels of need, including for human thermal comfort and associated well-being; for productivity and linked incomes; and safety and health in extreme weather conditions.



FOOD & NUTRITION



Food, Nutrition Security and Agriculture



Food & Nutrition includes the need for the agriculture sector to have access to cooling for food and nutrition security, rural incomes, and the agriculture cold chain.



HEALTHY & CARE



Health Services and Infrastructure



Health & Care includes the need for the health care sector to have access to cooling for safe medical clinics and the secure transport and storage of vaccines and medical products.

ACCESS TO COOLING | COOLING SOLUTION APPROACH FOR OPTIMIZATION



PROTECT



Affordability
Safety
Reliability



REDUCE



Passive cooling
Urban planning
Building design
Nature



SHIFT



Cooling approach
System type
Refrigerant type
Energy source



IMPROVE



Equipment efficiency
Operation efficiency



LEVERAGE



Partnership
Cooperation
Collective impact



Protect approaches and measures reduce the vulnerability of people, businesses and governments to heat by using cooling solutions that are affordable, safe and reliable.



Reduce approaches and measures reduce the need for active or mechanical cooling solutions, and include using planning and design to reduce or even avoid the demand for active cooling.



Shift approaches and measures are those where simply a change of approach can deliver energy or emissions savings, such as through the use of renewable energy, natural refrigerants or conservation measures.



Improve approaches and measures include pure efficiency measures to achieve the same cooling service while using less energy (i.e. not using energy conservation measures).



Leverage approaches and measures support the achievement of a collective impact that is greater than the sum of individual efforts through cooperation and collaboration.

ACCESS TO COOLING | COOLING FOR ALL SOLUTIONS PILLARS



TECHNOLOGY



Passive
Active



SERVICES



Preparation
Operation



POLICY



Regulation
Information
Incentives



FINANCIAL



Funding
Finance
Fiscal

ACCESS TO COOLING | COOLING FOR ALL TECHNOLOGY SOLUTIONS



TECHNOLOGY



SERVICES



POLICY



FINANCIAL

Nature-based and Passive Technology Solutions

Shade		Umbrellas, overhangs, fins, external blinds, solar panels, & plants		
Insulation		Roof and wall insulation, insulated windows, insulated containers		
Reflection		Cool roofs, walls, vehicles, containers and other surfaces		
Airflow		Natural ventilation, building or vehicle openings, exhaust		
Water		Flowing water, mist, pools, rivers, lakes, ocean, heat sinks		
Plants		Ground cover, green roofs, green walls, shade trees		
Earth		Earth tunnel, earth berm, heat sinks		
Thermal		Thermal mass, thermal storage		

Nature-based and passive technology solutions include a combination of traditional or indigenous low-tech and modern high-tech solutions.

ACCESS TO COOLING | COOLING FOR ALL TECHNOLOGY SOLUTIONS



TECHNOLOGY



SERVICES



POLICY



FINANCIAL

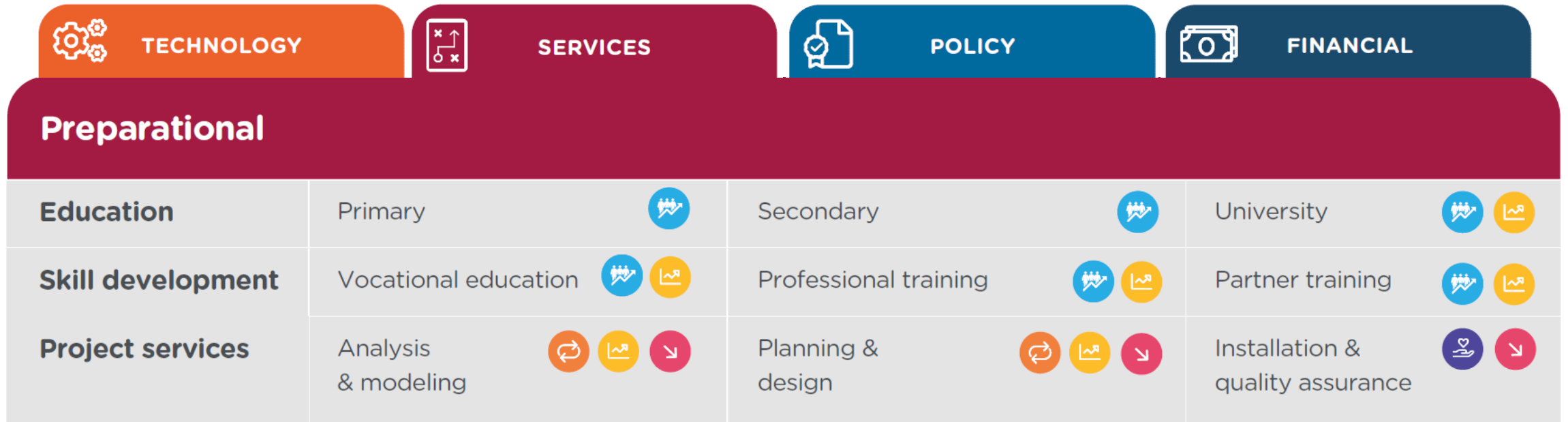
Active Technology Solution Sustainability Drivers

Device efficiency		The features of the device impact how efficient the technology is at delivering cooling (e.g. how it controls, makes, stores, moves and uses cold ⁷).
Refrigerant type		The type of refrigerant impacts the global warming potential emissions from owning, operating and decommissioning a technology.
Energy source		The type and source of energy used by the technology impacts the emissions and in some cases the efficiency of the technology

Active technology sustainable cooling solutions are a much wider group of solutions that range from a simple fan to a large district cooling system. Each technology has a range of achievable sustainability, and those technologies that are more efficient and have a smaller emissions impact are often more sustainable than others.

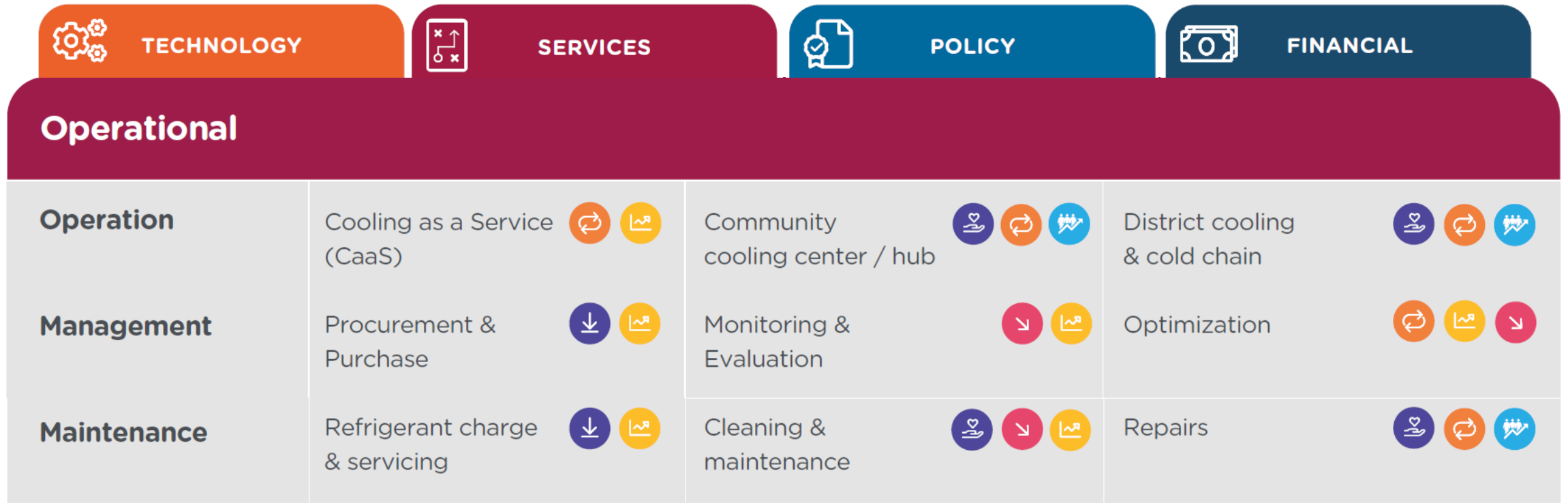
See the Centre for Sustainable Cooling [Technology Landscape](#) website for a broader list of technology types.

ACCESS TO COOLING | COOLING FOR ALL SERVICES SOLUTIONS



Preparational services, including fundamental education, skills development and project services, are key to improving behaviour and long-term decision-making on cooling.

ACCESS TO COOLING | COOLING FOR ALL SERVICES SOLUTIONS



Operational services include the direct operation of cooling services, the management that supports cooling services and the maintenance that ensures that cooling services and technologies are operating sustainably.

ACCESS TO COOLING | COOLING FOR ALL POLICY SOLUTIONS



TECHNOLOGY



SERVICES



POLICY
























FINANCIAL

Regulatory Policies

Codes	Building energy codes, planning and zoning codes					
Standards	Minimum energy performance standards					
Disclosure	Mandatory labels, certificates and public disclosure					
Certification	Mandatory testing, benchmarking and certification					
Evaluation	Mandatory audits and evaluation					
Utility obligations	Regulation of utilities to support sustainable cooling					
Public procurement	Minimum sustainability of government purchases					
Import/export control	Minimum sustainability of imported and exported products					







Regulatory policies can be one of the most effective measures but are often the hardest to adopt and implement, depending on the cultural context and enforcement procedures. While regulatory policies are often difficult to enforce when they are initially created, having the policy in place can support common understanding of what is more sustainable.

ACCESS TO COOLING | COOLING FOR ALL POLICY SOLUTIONS

TECHNOLOGY	SERVICES	POLICY	FINANCIAL
Information Policies			
Disclosure	Public database of products, buildings, vehicles and services	    	
Certification	Product, service or educational certificates	   	
Labels	Branding, endorsement and comparison labels	    	
Voluntary standards	High energy performance or sustainability standards	  	
Awareness	Information and behavior campaigns	   	

Information policies, including the use of voluntary information disclosure, certification, labels that indicate the level of sustainability, voluntary standards, and awareness-raising campaigns that inform people about cost-effective sustainable solutions enable more sustainable behaviour and support better decision-making.

ACCESS TO COOLING | COOLING FOR ALL POLICY SOLUTIONS

TECHNOLOGY	SERVICES	POLICY	FINANCIAL
Incentive Policies			
Non-financial	Expedited permitting / approvals, expanded scope allowance		  
Financial	Policies to deliver financial solutions		  

Incentive policies can include both financial and non-financial incentives. While many first consider financial incentives to encourage people to purchase sustainable technologies or services, it is often the non-financial incentives that can be more sustainably delivered and achieve results. These policies should be considered in collaboration with the financial solutions that can enable private investment in sustainable solutions.

ACCESS TO COOLING | COOLING FOR ALL FINANCIAL SOLUTIONS



TECHNOLOGY



SERVICES



POLICY



FINANCIAL

Finance

Loans	Credit lines / loans / subordinated loan	
Risk sharing	Risk sharing / loan guarantees / insurance	
Contracts	Energy performance contracting / service agreements	
Bulk purchase	Government or ESCO or buyer's club	
Leasing	Leasing	
Repayment	On-bill or on-tax repayment	
Equity	Equity investment	
Bonds	Green bonds / corporate bonds	
Investment funds	Sustainability or energy investment funds	
Crowdsourcing	Community finance / crowdfunding	

ACCESS TO COOLING | COOLING FOR ALL FINANCIAL SOLUTIONS



TECHNOLOGY



SERVICES



POLICY



FINANCIAL

Fiscal

Energy pricing

Energy pricing and subsidies (to reflect actual costs)



Tax

Energy or carbon tax (on unsustainable energy sources)



Tax credits

Tax credits (on more sustainable solutions)






Import/export duties

Import/export duties (reduced on more sustainable solutions)



Fiscal solutions enable governments to influence decisions and can entail either income or expense for the government.

ACCESS TO COOLING | COOLING FOR ALL FINANCIAL SOLUTIONS

TECHNOLOGY		SERVICES		POLICY		FINANCIAL	
Funding							
Grants	Direct financial contribution to a project						
Rebates	Direct financial contribution as a result of purchasing a product or service						
Subsidy	Direct financial contribution to reduce the cost of a product or service						

Funding solutions, such as grants or rebates, can be expensive compared to the total impact received, when compared to finance solutions that directly recoup the funds used to support the purchase of more sustainable cooling technologies or services.

ACCESS TO COOLING | COOLING FOR ALL POLICY SOLUTIONS



TECHNOLOGY



SERVICES



POLICY



FINANCIAL

Regulatory Policies

Codes

Building energy codes, planning and zoning codes



Standards

Minimum energy performance standards



Disclosure

Mandatory labels, certificates and public disclosure



Certification

Mandatory testing, benchmarking and certification



Evaluation

Mandatory audits and evaluation



Utility obligations

Regulation of utilities to support sustainable cooling



Public procurement

Minimum sustainability of government purchases



Import/export control

Minimum sustainability of imported and exported products



COOLING SOLUTION APPROACH FOR OPTIMIZATION

THREE COOLING FOR ALL - COOLING NEEDS

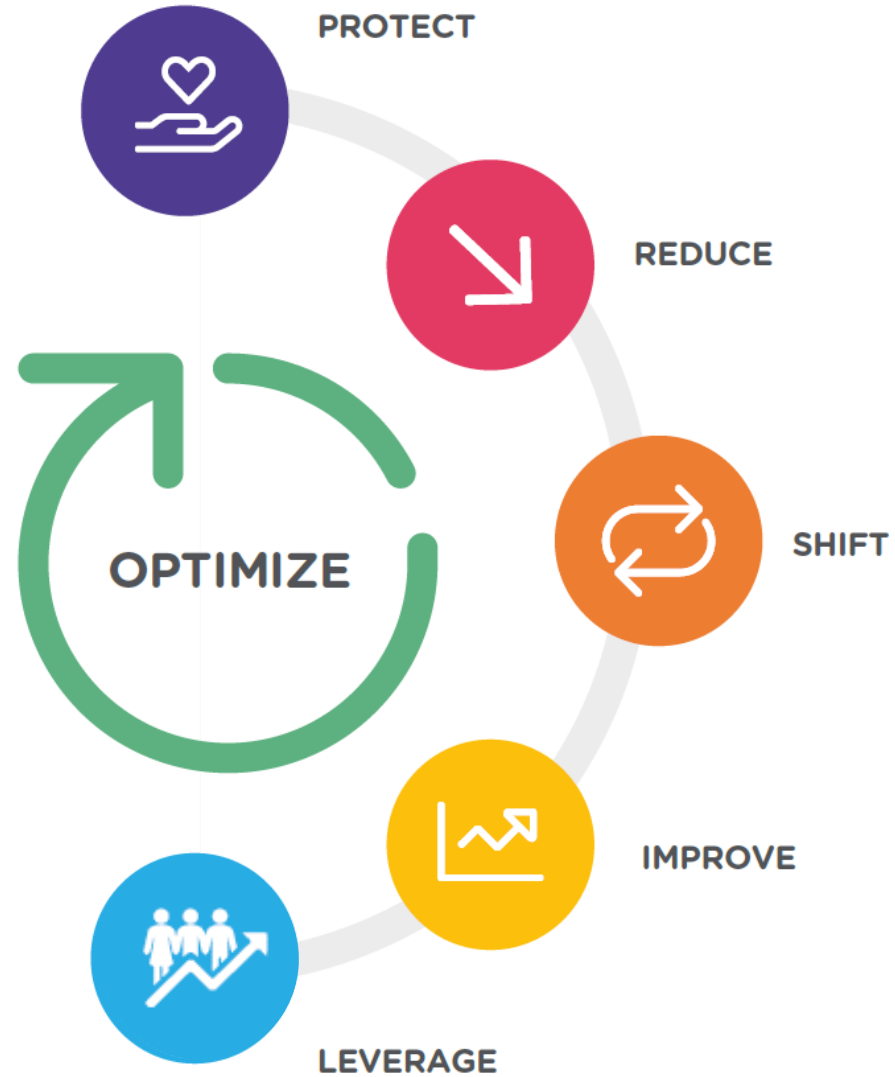
COMFORT & SAFETY



FOOD & NUTRITION



HEALTH & CARE



TECHNOLOGY



SERVICES



POLICY



FINANCIAL



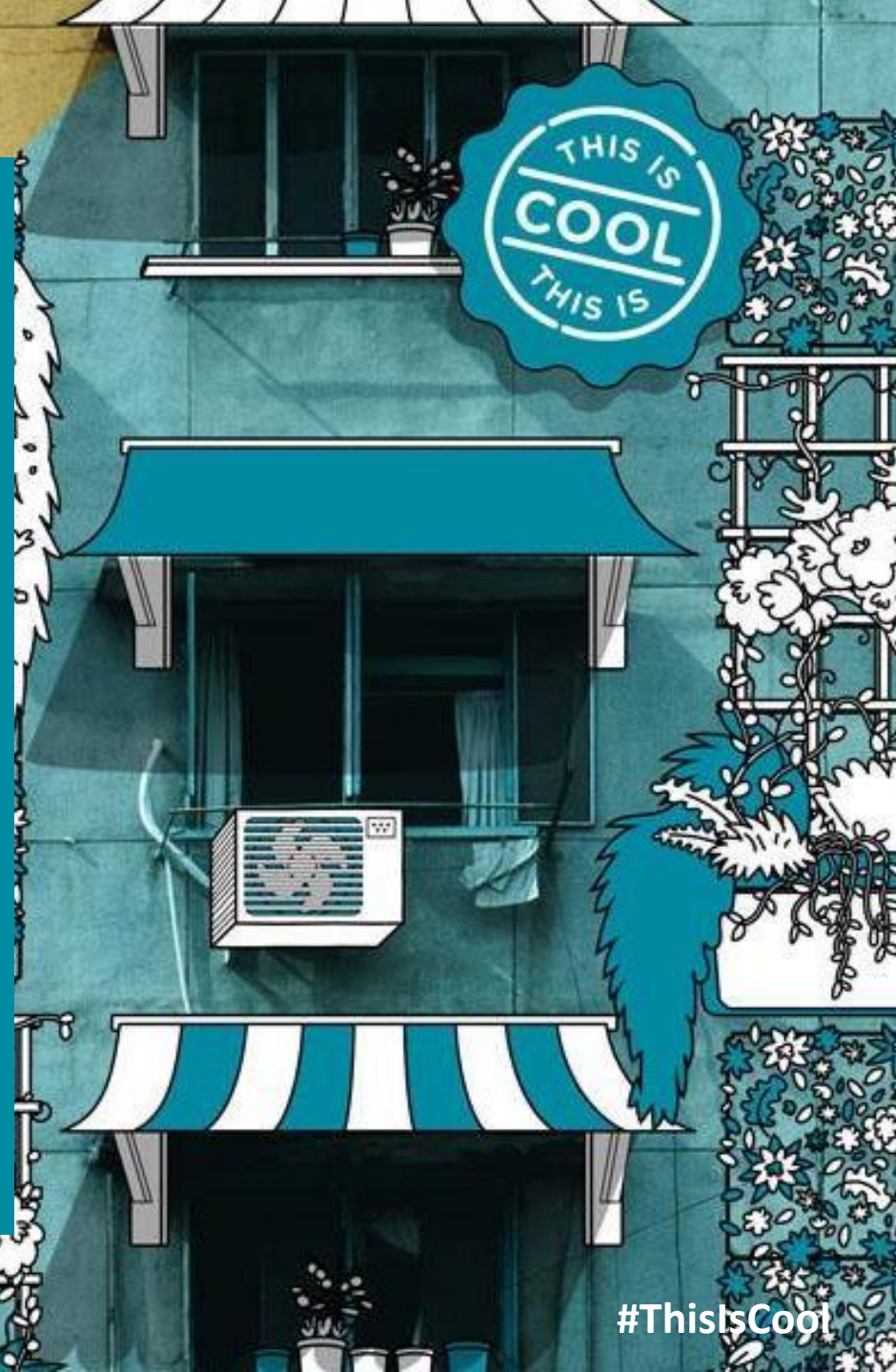
FOUR COOLING FOR ALL - COOLING SOLUTION PILLARS

#ThisIsCool

CAMPAIGN

Over 1 billion people lack access to sustainable cooling and a further 2.2 billion have inefficient cooling. In a warming world, access to sustainable cooling is not a luxury. It is an issue of equity and a service that must be delivered to everyone.

This Is Cool is a campaign to show what can be done across the world to make sustainable cooling a reality.



#ThisIsCool



SIMPLE ACTIONS YOU CAN TAKE TODAY

1. **Rethink your approach to cooling**

Our resources include tools and assets to help you reconsider your cooling choices to improve lives, reduce emissions and be more efficient.

2. **Learn why sustainable cooling is so important**

Ensure you know why sustainable cooling matters and understand why it is so important to build a stronger, more resilient world.

3. **Spread the word with the campaign**

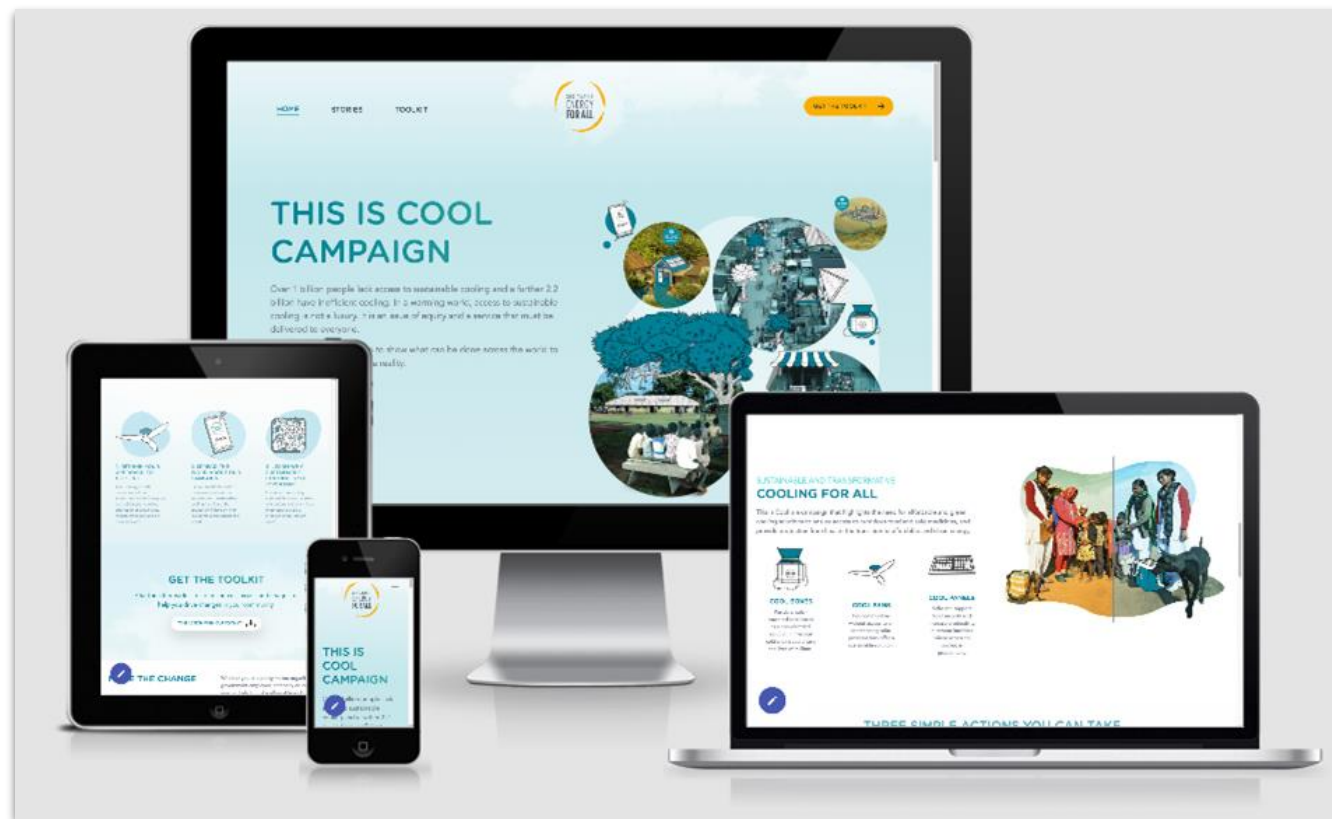
Use our toolkit to start a conversation about the importance of sustainable cooling for all and the impact it will have on high risk communities across the world.



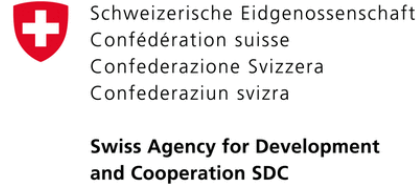
#ThisIsCool

Go to

thisiscool.seforall.org



WITH SPECIAL THANKS TO OUR FUNDERS & SUPPORTERS



Q&A



Vienna Office

Andromeda Tower, 15th Floor
Donau City Strasse 6 – 1220, Vienna, Austria
Telephone: +43 676 846 727 200

Washington, D.C. Office

1750 Pennsylvania Ave. NW
Washington, DC 20006, USA
Telephone: +1 202 390 0078

coolingforall@seforall.org

www.SEforALL.org

THANK YOU!



Vienna Office

Andromeda Tower, 15th Floor
Donau City Strasse 6 – 1220, Vienna, Austria
Telephone: +43 676 846 727 200

Washington, D.C. Office

1750 Pennsylvania Ave. NW
Washington, DC 20006, USA
Telephone: +1 202 390 0078

www.SEforALL.org