



WEBINAR

Sustainable Cooling for All in Asia


📅 18th July 2022 ⌚ 10:00 CEST / 13:30 IST / 15:00 WIB



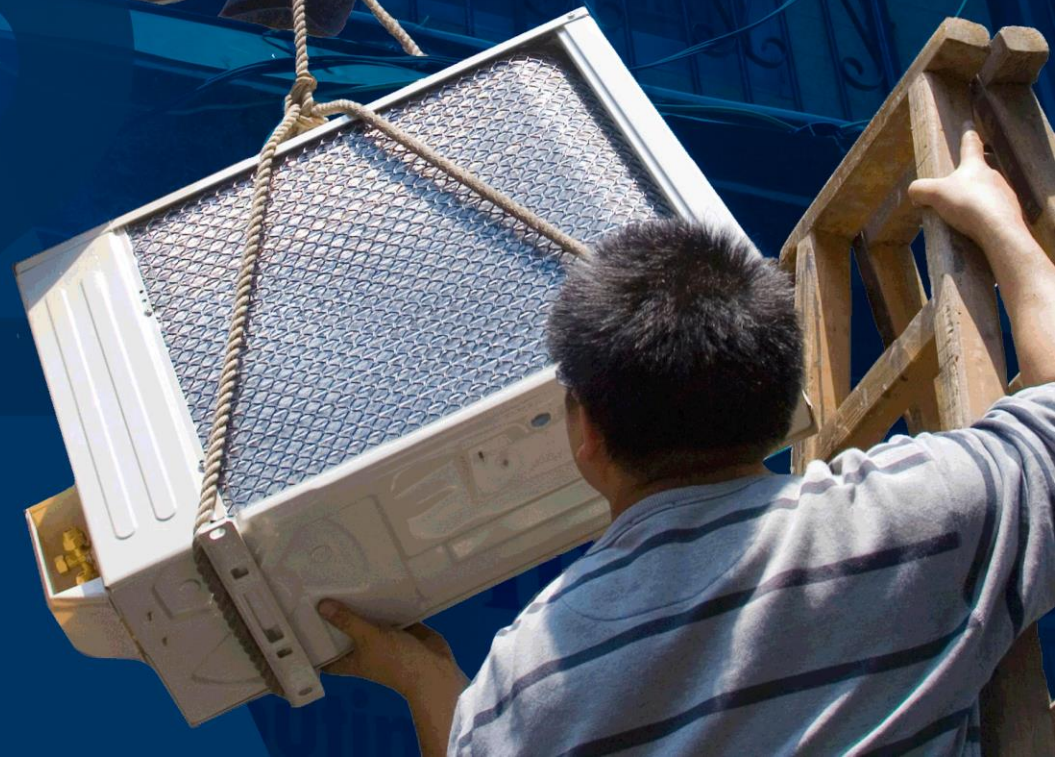


Chilling Prospects

TRACKING SUSTAINABLE
COOLING FOR ALL

 Schweizerische Eidgenossenschaft
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Swiss Agency for Development
and Cooperation SDC





OVERVIEW

1. TRACKING AND FORECASTING COOLING ACCESS RISKS
2. COOLING NEEDS: GLOBAL TRENDS & REGIONAL DATA
3. SUSTAINABLE COOLING FOR CITIES
4. TRACKING THE ENABLING ENVIRONMENT
5. COOLING FOR ALL SOLUTIONS

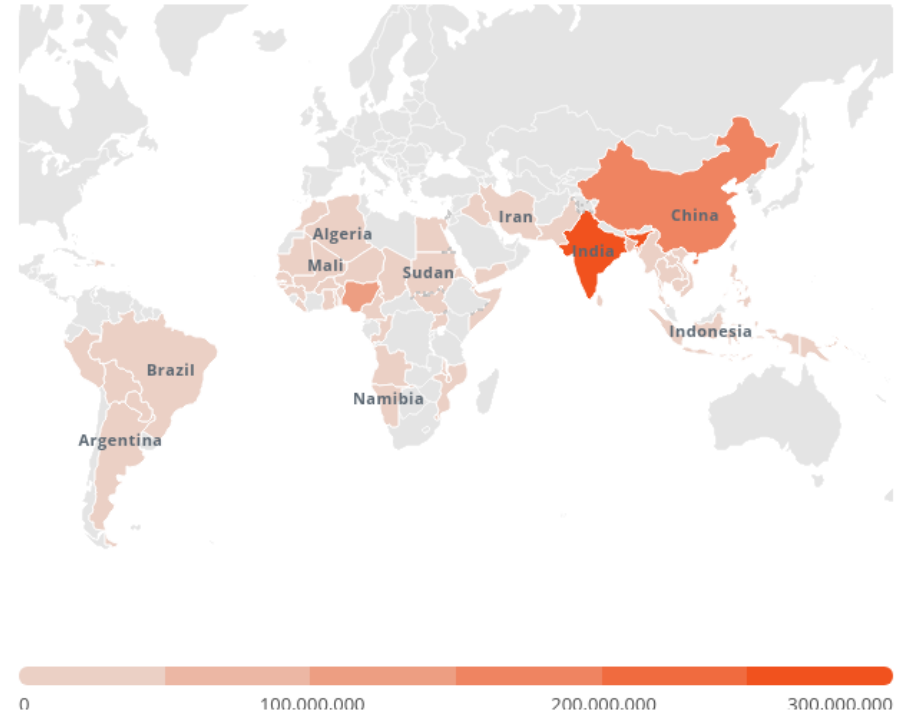
1.2 billion people are at high risk because they lack access to cooling, an increase of 28 million from 2021.

2.47 billion people are at medium risk, purchasing cooling devices with limited affordable, efficient, climate-friendly options.

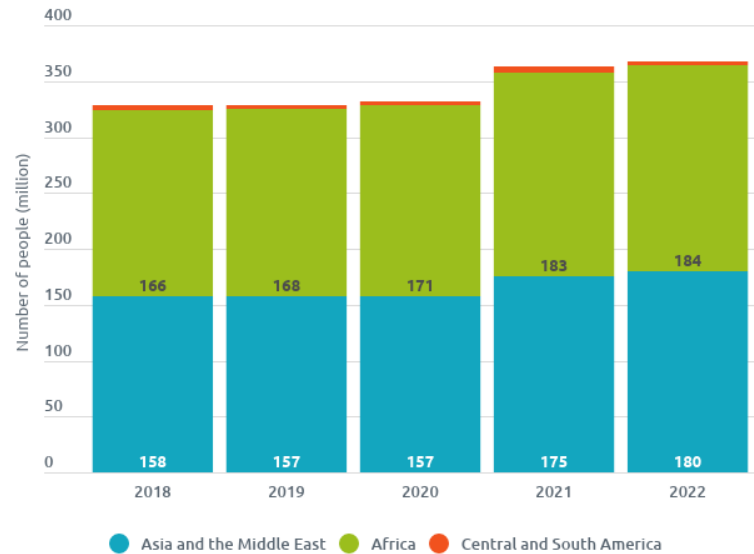
Populations at high risk includes:

- **371 million rural poor** in high-impact countries
- **797 million urban poor** in high-impact countries
- **30.5 million** people in 22 additional countries with **sub-national** cooling access risks.

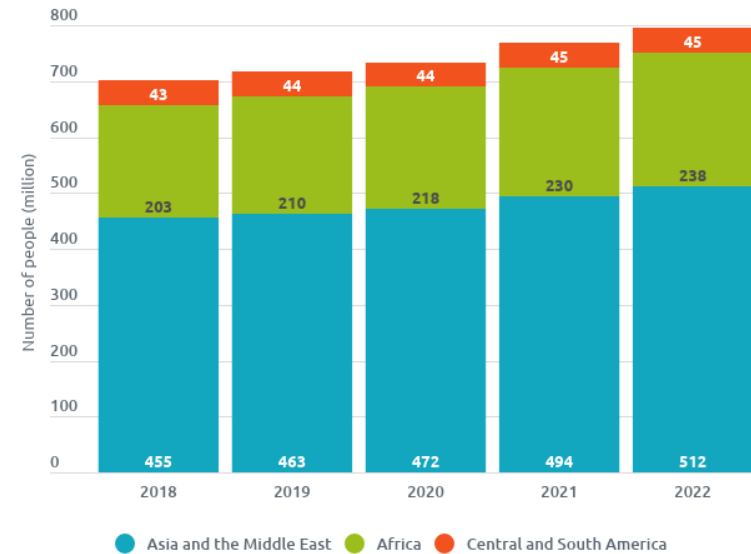
Populations at high risk by country, 2022



Rural poor population regional breakdown (2018-2022)



Urban poor population regional breakdown (2018-2022)



In 2022, 16 high-impact countries in Asia¹ are home to:

- **48% of the rural poor** in high-impact countries, with India and Bangladesh in the top 10
- **64% of the urban poor**, with India, Bangladesh, China, Indonesia and Pakistan in the top 10
- **81% of the lower-middle income population** at medium risk
- **Subnational-risks** in 11 additional countries (most notably, Nepal) due to local weather, socio-economic and infrastructure conditions.

¹ Bangladesh, Cambodia, China, India, Indonesia, Iran, Iraq, Lao PDR, Myanmar, Pakistan, Philippines, Sri Lanka, Thailand, Timor-Leste, Vietnam, Yemen

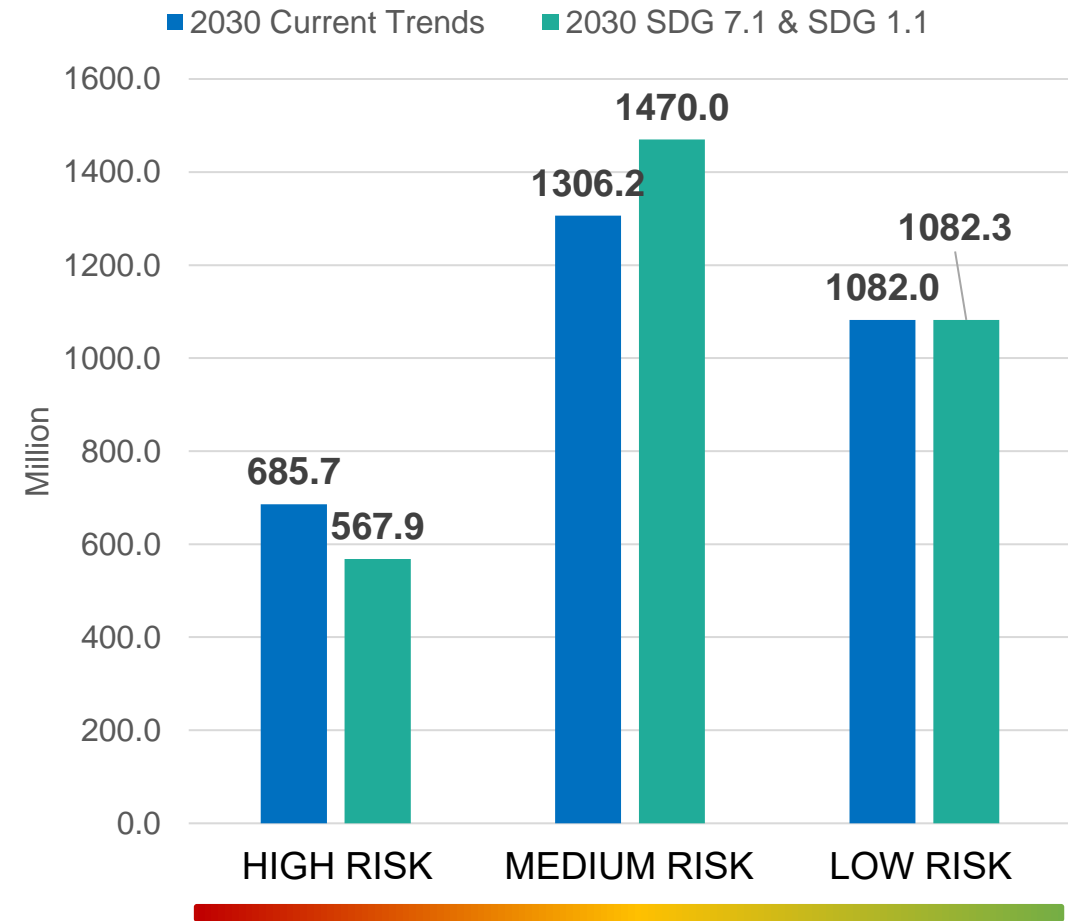
Globally, achieving **universal access to electricity** and **eradicating extreme poverty** by 2030 could:

- Lift over **430 million people – particularly rural poor - out of high risk** compared to current trends,
- Result in over **2 billion people** at medium risk.

A majority of the population at risk in 2030 would be in **Asia**, including:

- Over **359 million urban poor** still at high risk in an optimistic scenario, more than in 2022
- Almost **1.5 billion lower-middle income** people at medium risk

Populations at risk in high-impact countries in Asia, 2030





Globally:

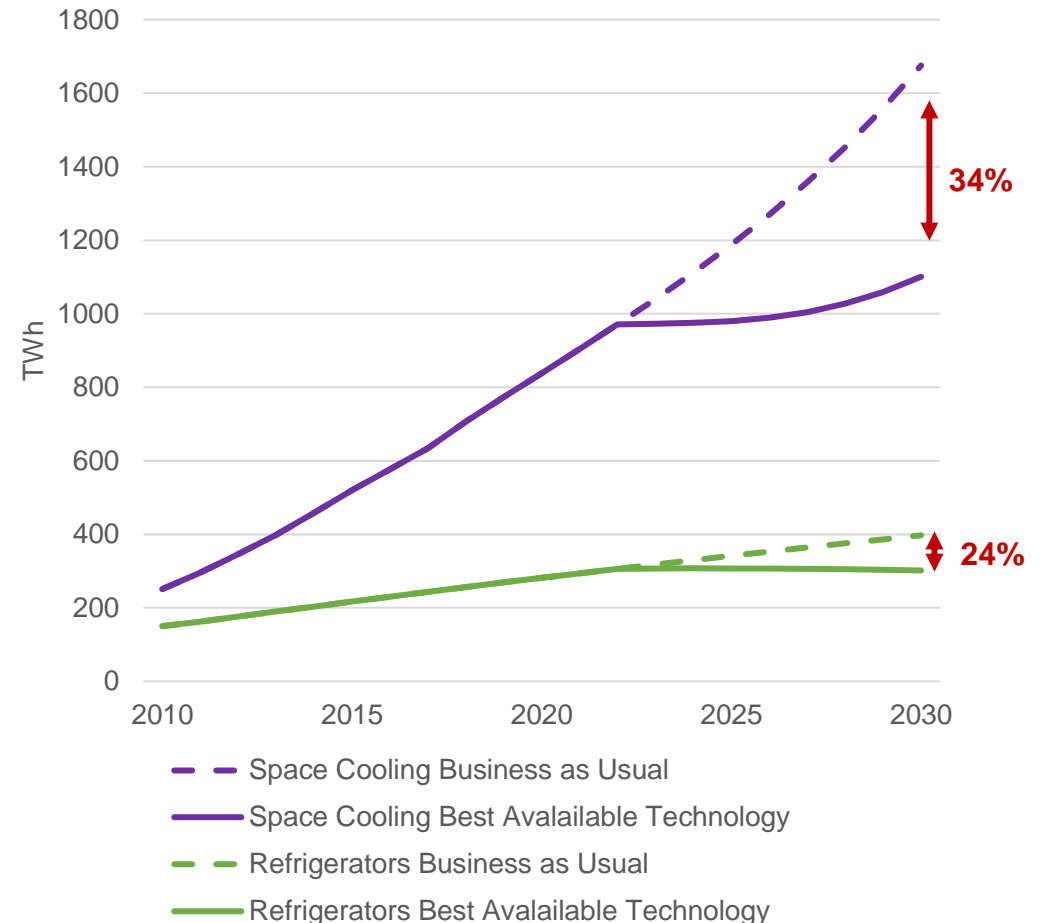
- **356,000 people** died of extreme heat in 2019
- In 2020, **295 billion hours of potential work** were lost to heat stress, with losses in Bangladesh, India and Pakistan 2.5-3x the world average.

In Asia:

In 2030, 12 high-impact countries¹ will account for:

- Almost **2.2 billion space cooling units** in use, of which 63% in China and 22% in India
- Almost **1.4 billion refrigerators** in use
- Deploying **best available technologies** could save over **2,900 TWh** of cumulative final energy use in 2023-2030

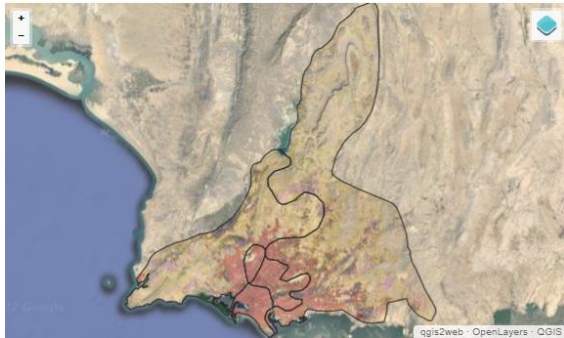
Projected final energy consumption from AC, fans and refrigeration in 12 high-impact countries¹ in Asia, 2010-2030



Source: SEforALL analysis of CLASP data

¹ Bangladesh, Cambodia, India, Indonesia, Iran, Lao PDR, Pakistan, Philippines, Sri Lanka, Thailand, China (mainland), Viet Nam

The IPCC warns that in South and Southeast Asia, up to **1.1 billion urban dwellers** could experience heat waves lasting more than 30 days a year by 2080.



Dhaka, Jakarta, Karachi, Mumbai and Shanghai

- In 2015-2019, built-up area increased by a combined 18.29 km². Shanghai and Karachi had the highest growth.
- All cities (except for Jakarta) will see a significant number of dangerous heat days.
- Cultivated areas boomed in Karachi but decreased in Dhaka, while informal settlements expanded in Mumbai.

How to mitigate risks?

- Green spaces and passive cooling reduce the urban heat island effect and energy demand for cooling, and benefit the most vulnerable dwellers.

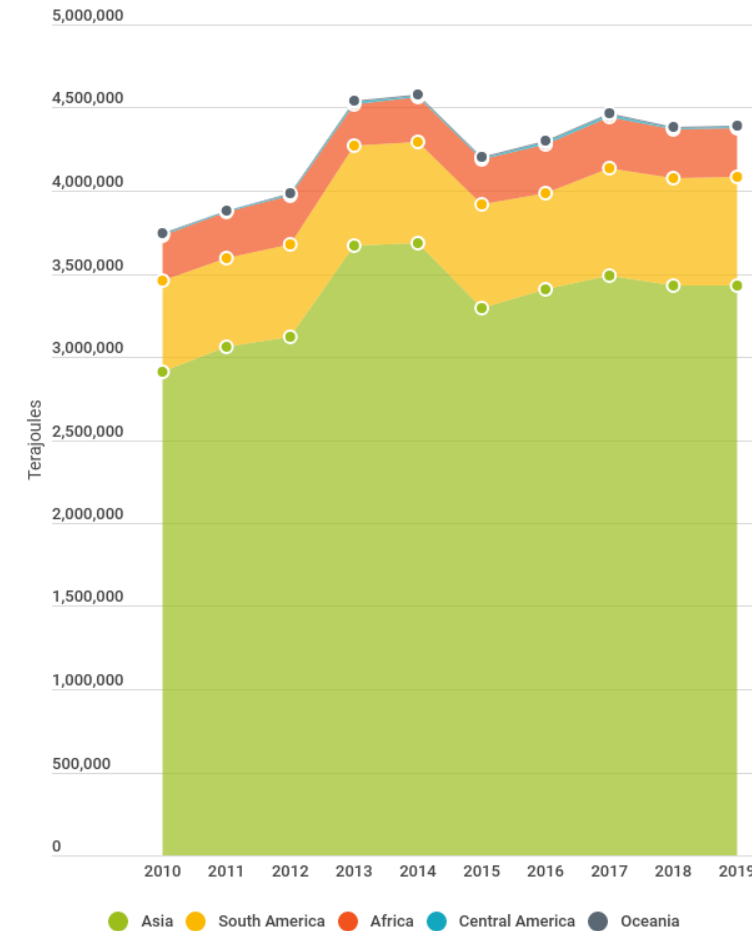
Globally:

- A lack of sustainable cold chains leads to **526 million tons of food production loss** every year, and -15% in smallholder farmers' income

In Asia:

- China (>50%), India (17%), and Pakistan (7%) have the highest **volume of food losses** among high-impact countries
- Food **losses per capita** are highest in China and Pakistan (>57 kg/person), Iran (>47 kg/person), followed by India, Iraq, Thailand and the Philippines
- 16 countries in Asia account for 78% of **energy use for food production** in high-impact countries

Food production energy use by region for high-impact countries



Source: SEforALL analysis of FAO data

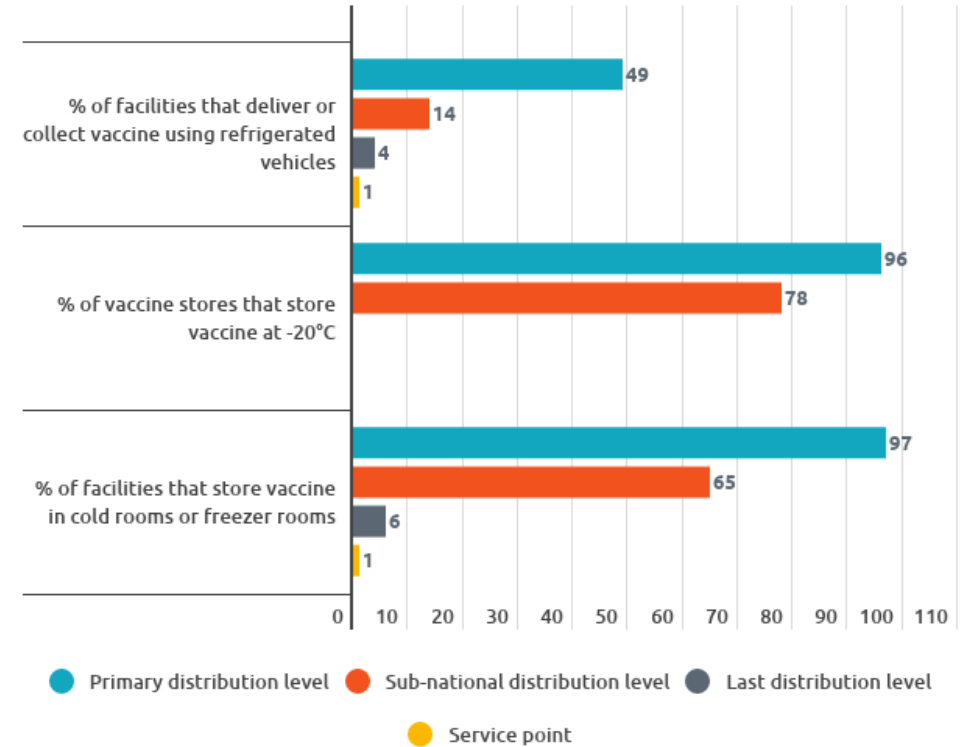
Globally:

- Up to 90% of health facilities in 57 Gavi-eligible countries **lack sufficient cold chain**.
- Over 50% of health facilities assessed by WHO experience significant **voltage fluctuations**.

In Asia:

- Vaccine storage capacity and management have improved in Southeast Asia over the last decade
- Still, few countries meet the EVM standard for **temperature monitoring** along the supply chain

WHO EVM cold chain indicators for 86 countries (2009-2020)



Source: WHO Effective Vaccine Management Assessment (2009-2020)

TRACKING THE ENABLING ENVIRONMENT | NATIONAL COOLING ACTION PLANS



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>
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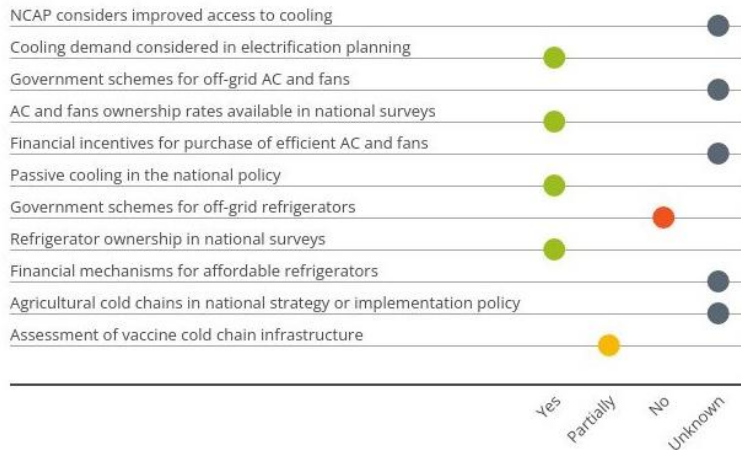
Cooling For All Policy Tracking Approach and Key Findings

What is the status of the National Cooling Action Plan? PUBLISHED

Access to cooling

To what extent do policies enhance access to cooling?

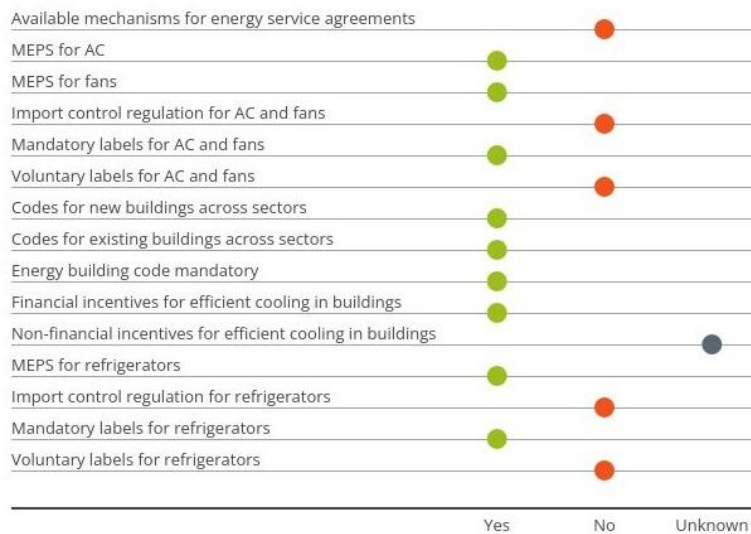
Bangladesh



Energy efficiency for cooling

To what extent do policies enhance efficiency of ACs, fans, refrigerators and buildings?

Bangladesh



Climate mitigation from cooling

To what extent is cooling reflected in climate targets?

Bangladesh





A team from Indonesia won the [Million Cool Roofs Challenge](#) by GCCA, installing cool roofs on 70 buildings in 15 cities.



Innovators in India are providing cooling solutions for farmers and cool homes with grant funding from Ashden's [Fair Cooling Fund](#).



Two teams from Korea and China won the [Global Cooling Prize](#) with their low climate impact prototypes in India.



West Bengal is improving inland waterway infrastructure for a better-performing cold chain transportation network.




Visit www.thisiscool.seforall.org to learn more and take action!



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