



## Access to Cooling for All

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As populations grow, and temperatures reach new records, the health and economic risks associated with a lack of access to sustainable cooling is higher than ever before

Achieving **Cooling for All** means deploying the most efficient current technology as well as developing new, innovative, efficient solutions for those most in need

*- Rachel Kyte, Special Representative of the U.N. Secretary General for Sustainable Energy for All and CEO of SEforALL*





**1.1 billion people without access to cooling face increasing risks to their health and their productivity because they can't store **fresh food**, receive a **safe vaccine**, or find **shelter** in a heat wave.**



# Access to cooling

Buildings  
and Urban  
Environments



Agricultural  
Cold  
Chains



Medical  
Cold  
Chains



# Spectrum of risks in high temperature environments

## 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 intermittent electricity
- Lower income levels
- Buildings constructed to older standards, ability to run a fan
- Farmers have access to intermittently reliable cold chains
- Vaccines may have exposure to occasional high temperature

## 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



# Three population groups are at risk

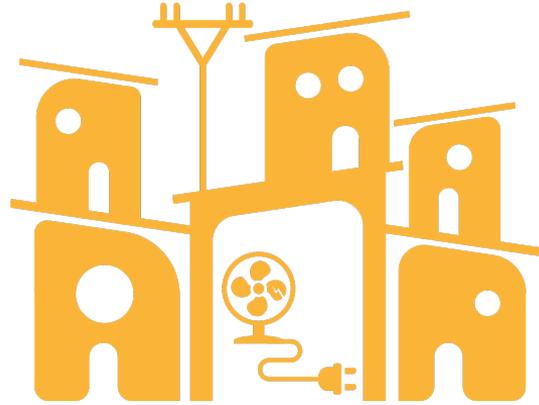


**Rural poor**

**470 million**

Electricity access

Poverty



**Slum dwellers**

**630 million**

Dwelling quality



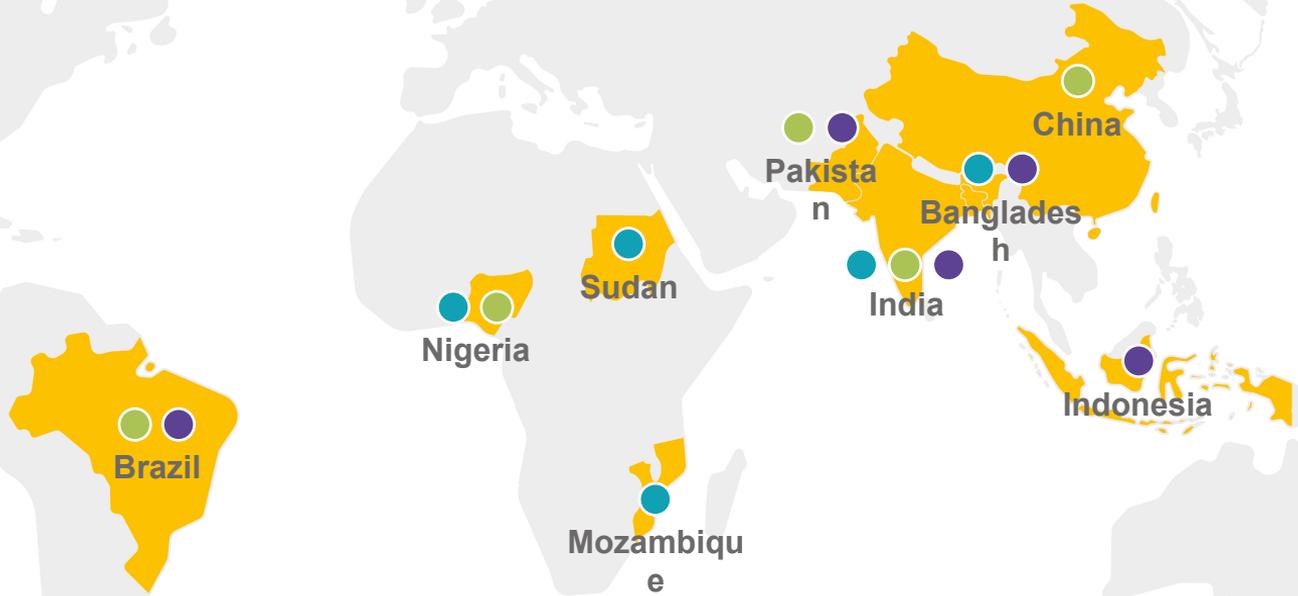
**Carbon captives**

**2.3 billion**

Income

**Governments need to understand who is most at risk and must develop national cooling plans that address the needs of these vulnerable people.**

1 dot = 1 risk  
2 dot = 2 risks  
3 dot = 3 risks



**Rural poor**



**Slum dwellers**



**Carbon captives**



# Rural poor



470 million people who don't have good electricity and have access to reliable cold chains to sell their goods.

## 10 countries with largest Rural Poor population

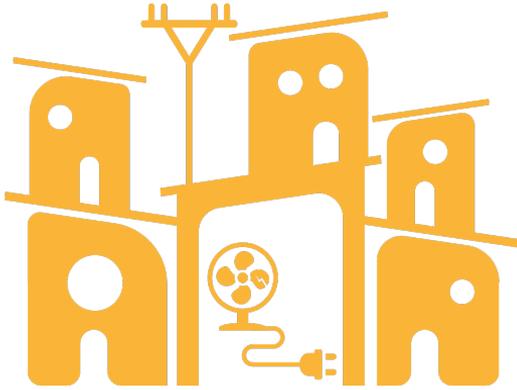
- |               |           |
|---------------|-----------|
| 1. India      | 6. Niger  |
| 2. Nigeria    | 7. Malawi |
| 3. Bangladesh | 8. Uganda |
| 4. Sudan      | 9. Angola |
| 5. Mozambique | 10. Yemen |

## Key solutions

**Solar power / Decentralized solutions can help rural people run fans and fridges.**

# Slum dwellers

630 million people. Children and adults who may have only unreliable access to electricity.



## 10 countries with largest Slum dwellers population

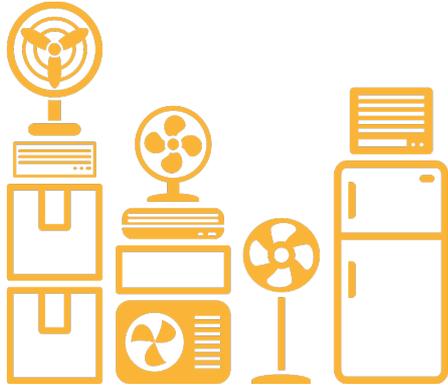
1. China
2. India
3. Nigeria
4. Brazil
5. Pakistan
6. Bangladesh
7. Indonesia
8. Philippines
9. Sudan
10. Iraq

## Key solutions

Simple solutions like cool roofs and walls can keep temperatures down.

# Carbon captives

2.3 billion people who may soon be able to afford an air conditioning system or a fridge but only with inefficient available options.



## 10 countries with largest Carbon Captives population

1. India
2. Indonesia
3. Pakistan
4. Bangladesh
5. Brazil
6. Vietnam
7. Philippines
8. Iran
9. Egypt
10. Nigeria

## Key solution

Performance standards ensure they have efficient, affordable appliances.

# ACCESS TO COOLING | NEXT STEPS



**All countries produce more granular data to measure access gaps**



**Finance and technical assistance for access to cooling solutions, including through National Cooling Plans**



**Engage industry and finance to scale-up affordable and sustainable technologies**

1.1bn





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