

iFOREST

INTERNATIONAL
FORUM
FOR ENVIRONMENT,
SUSTAINABILITY
& TECHNOLOGY



**SHAKTI
SUSTAINABLE ENERGY
FOUNDATION**



**COP28
UAE**

SIDE EVENT

Promoting Green Cooling in India and the Global South

**Saturday, 9th December 2023
5:00 PM to 6:30 PM (GST)**

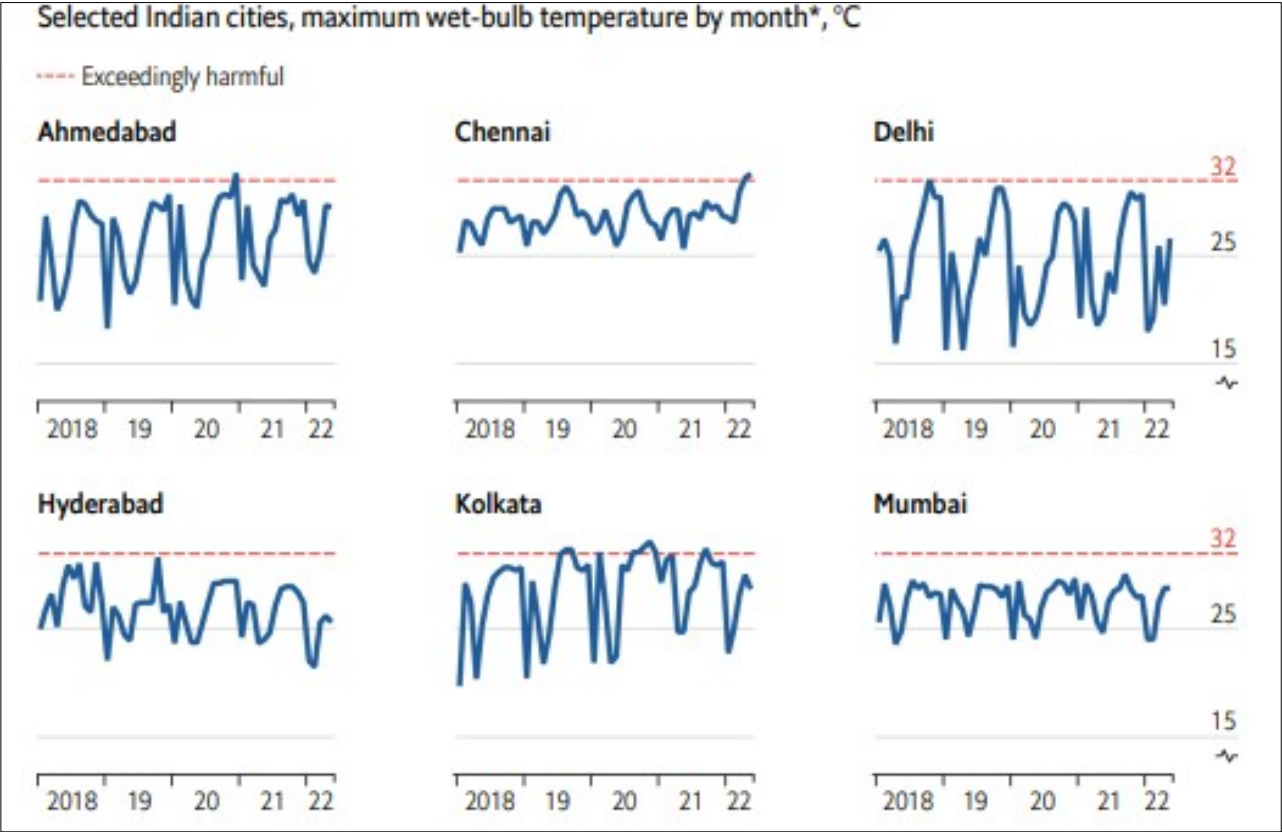


AEEE

Jayanta Chaudhuri

Director, AEEE

India's worsening heat crisis



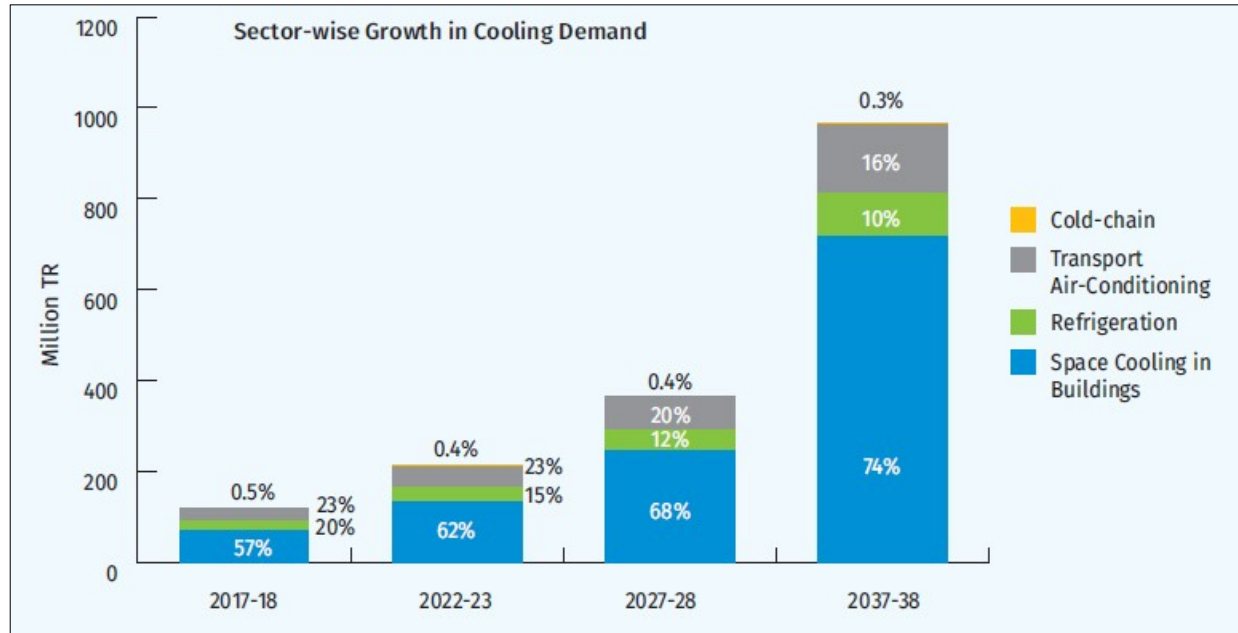
The wet-bulb temperature (WBT) has started to touch the 32°C mark and is expected to breach 34°C in the next 8 years. Even heat-adapted people cannot carry out normal outdoor activities past a WBT of 32°C.

	India	China	US
Population	1.4 bn	1.4 bn	0.3 bn
Cooling Degree Days (CDD)	2,200	650	650
Person CDD	3 tr	30% India	6% India

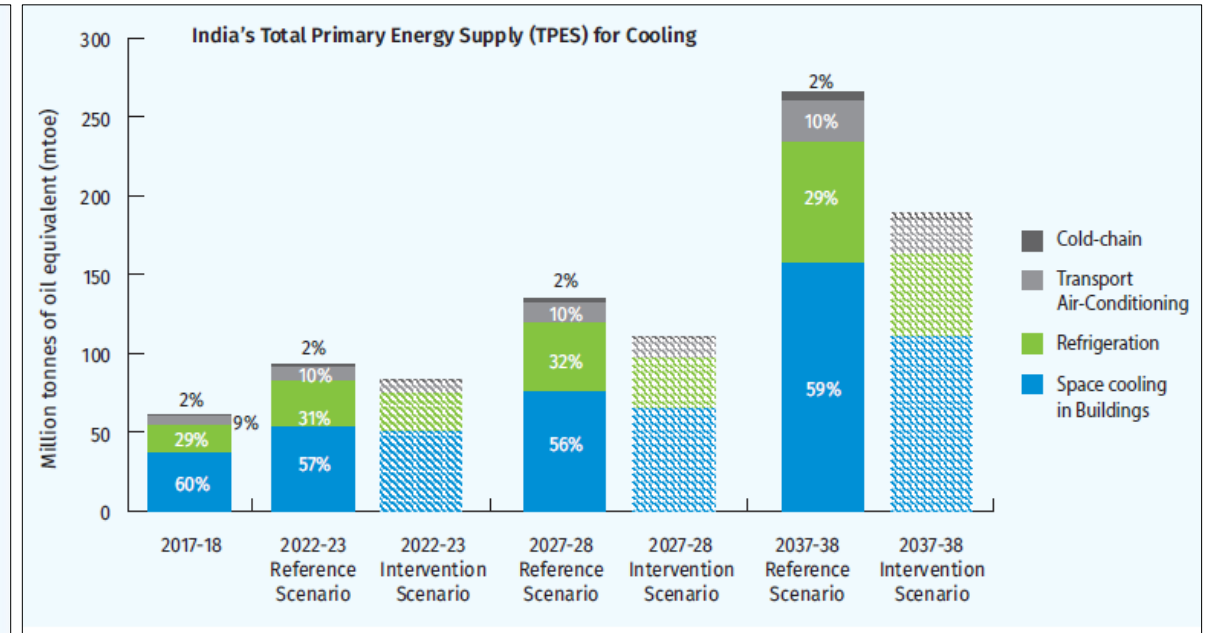
India's AC penetration is very low compared to its cooling demand.

- 11 out of 15 warmest years in India occurred after 2007.
- A study in the Lancet estimates the annual number of deaths related to high temperatures in India to be 83,700.
- All India peak power demand met reached a record high of ~240 GW on 1 September 2023.
- 75% of the Indian labour force work in heat-exposed sectors such as agriculture, mining, and construction.
- Only 8%-10% of Indian households have air-conditioning.

India: A perfect cooling storm



Cooling demand in India is projected to grow 8X in the next two decades; the cooling demand in buildings can be reduced by 20% in two decades through climate-appropriate building envelopes driven by the higher adoption of building energy codes



The total primary energy consumption for cooling will grow 4.5X in the business-as-usual scenario, with a 30% savings potential

Cooling = complexity

Multiple ministries:

No one and everyone owns cooling!

Public enterprises

MSDE, NSDC, ESSCI	DST, Mission Innovation	BEE
CSIR	NCCD	EESL

Industry, private & knowledge sector

RAMA	REGMA	ACMA
Manufacturers	R&D Institutions	IPUA

National priorities & agendas

- Housing For All
- Doubling Farmers' Income
- AMRUT – Public Transportation
- FAME India
- Smart Cities Mission
- Energy Conservation Building Code
- Others...



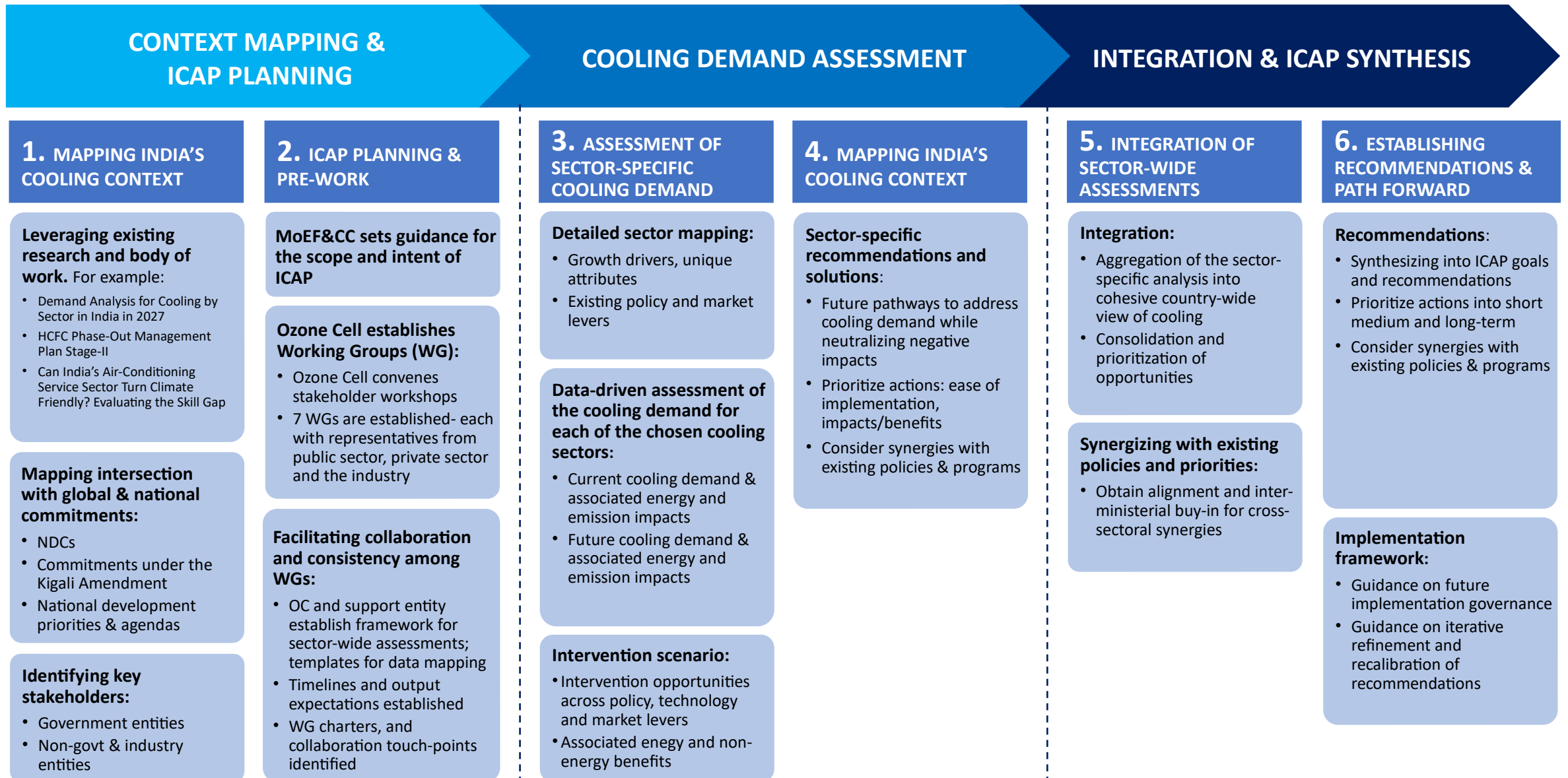
International commitments/priorities:

- NDCs
- Kigali Amendment to the Montreal Protocol
- SDGs

State Departments & ULBs

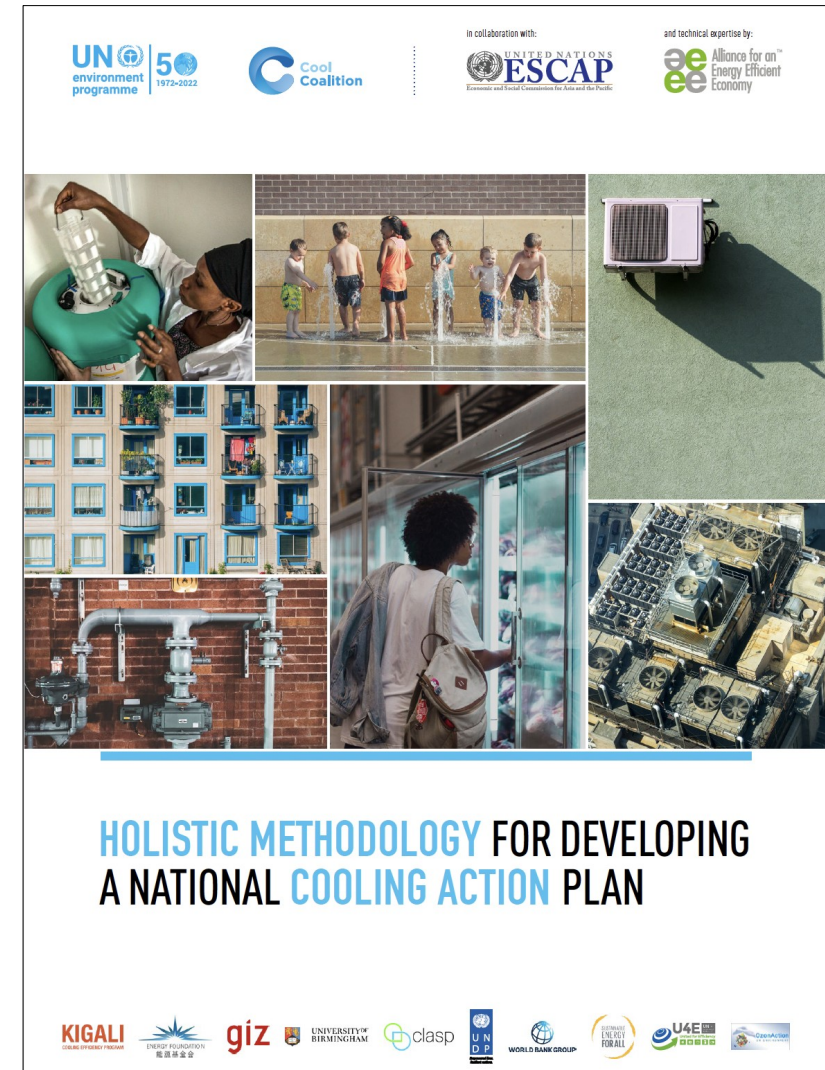
The answer lies in integrated policymaking!

India Cooling Action Plan development

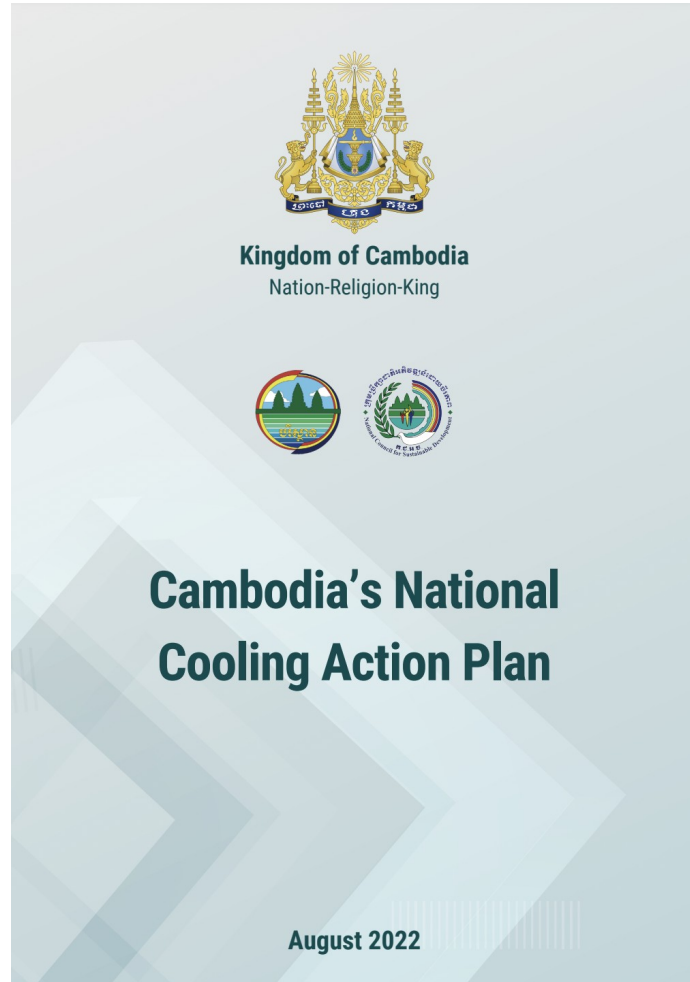


Key learnings and takeaways

- Importance of a nodal/ coordinating entity that owns and drives the process
- Adopting a triple-sector engagement model, right from the start
- Ensuring inter-ministerial coordination and buy-in
- Data is key, but need not be a show-stopper
- Importance of an implementation framework
- Balancing comprehensiveness and timeliness



South-South cooperation in climate-friendly cooling



- Cambodia and Indonesia pilot the innovative NCAP Methodology, showcasing South-South cooperation

Cambodia NCAP:

- Developed collaboratively by multiple entities
- Aims to realize Cambodia's sustainable development vision
- Establishes a national framework for collaboration in the cooling sector
- Supports Sustainable Development Goals, Paris Agreement, and Kigali Amendment

A photograph of a modern office hallway with white cubicles and potted plants. A large, semi-transparent green and purple geometric overlay is positioned on the left side of the image. The text "Thank You !" is centered in white over the overlay.

Thank You !