



Maximizing the Impact of Passive Cooling, Heat Resilient Planning, District Cooling and National Cooling Action Plans (NCAPs)

Lily Riahi, Coordinator, Cool Coalition, UNEP

UNEP Cool Coalition: Partnering for Comprehensive

Launch: First Global Conference on Synergies between the 2030 Agenda and Paris Agreement. Joint effort of global leaders **collaborating on science, knowledge, advocacy and joint action** to support countries and industry in taking a comp cool



SUSTAINABLE DEVELOPMENT GOALS



Kigali Amendment to the Montreal Protocol



Global Cooling Pledge



- Launched on December 5, 2023, at COP28 in Dubai, 71 **countries** - G7 /G20 countries
- Raising ambition for countries to work together to **reduce global cooling-related emissions by 68% by 2050** with significant progress and expansion of access to sustainable cooling by 2030.
- **Over 60** private sector, financial institutions, and IGOs
- **Brunei Darussalam, Cambodia, Vietnam, Singapore**



Commit to establish Minimum Energy Performance Standards (MEPS) by at the latest 2030



Commit to publishing a national cooling action plan, considering cooling when publishing a national action plan, or publishing a regulation or equivalent by 2026, [...] and reflect actions in the NDCs by 2026



Commit to establish national model building energy codes that incorporate market appropriate measures such as passive cooling and energy efficiency strategies at the latest by 2030

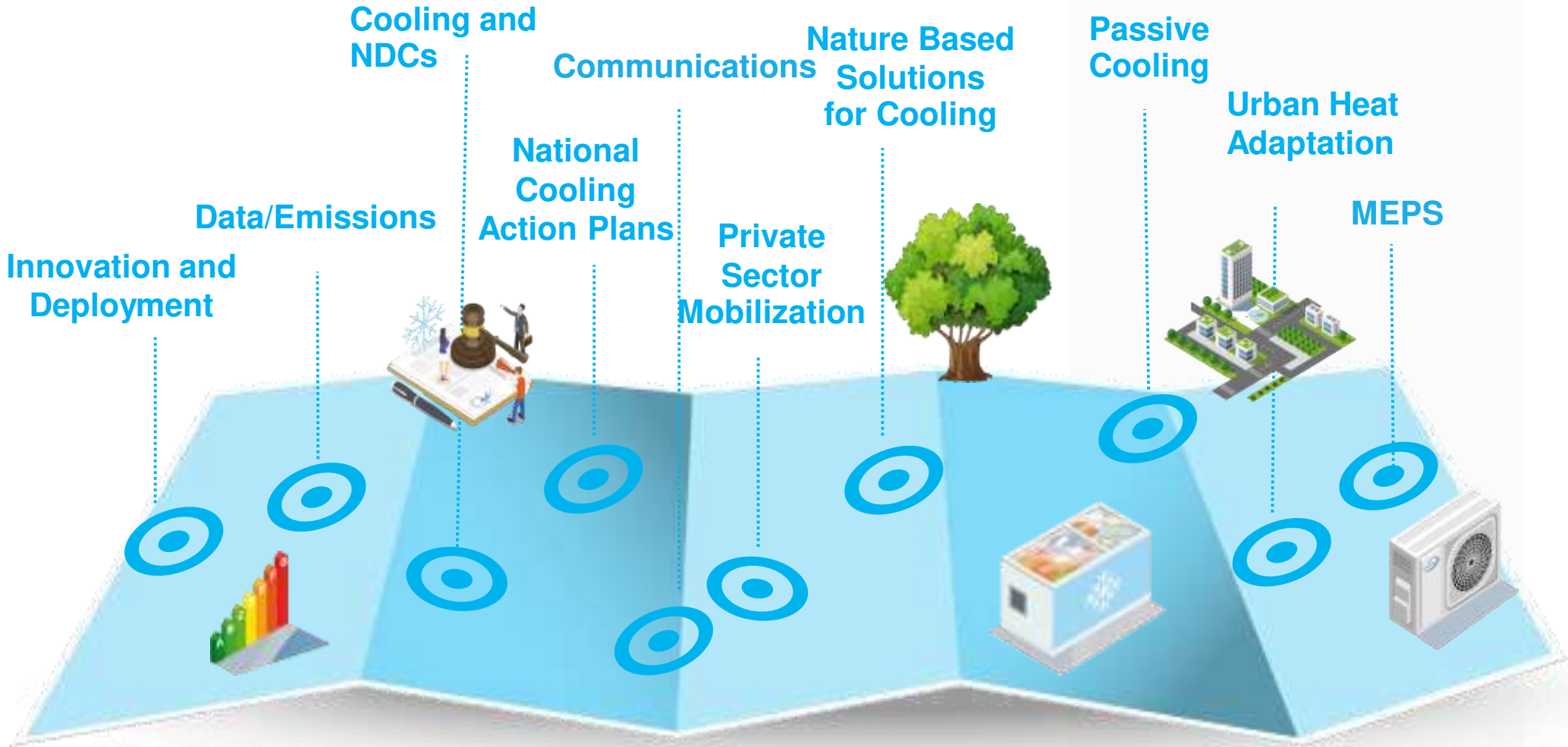


Commit to support collaborative research, innovation, and deployment activities such as renewable energy-based cooling solutions in rural, remote, off-grid locations [...]



Commit to energy efficiency of air conditioners sold to be at least 50% better than the current installed efficiency by 2030 in all markets

How We Deliver? Cool Coalition Working Groups



Keeping it chill

How to meet cooling demand,
while cutting emissions



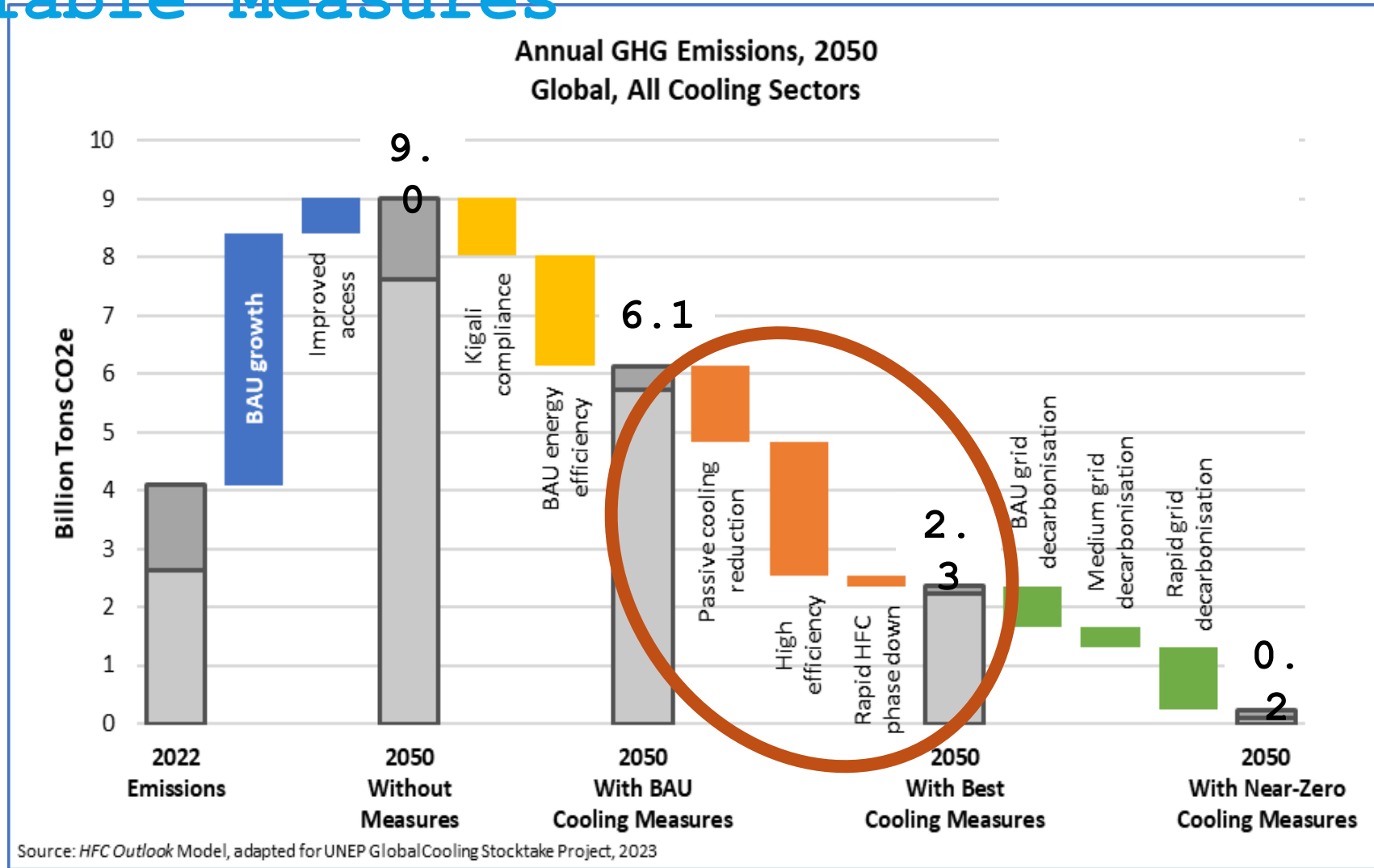
Global Cooling Watch 2023

First report to model the totality of emissions from cooling (direct and indirect) across all sectors, pathways to near zero emissions, benefits of comprehensive approach

Provided the science for the Global Cooling Pledge targets

Underpin the work of the Cool Coalition

Key Finding: Cut Emissions by 60%+ with Available Measures



Key Finding: Multiple Benefits of Cooling



Electricity savings of US\$ 1 trillion per year



Electricity load reduction of 1.5-2 TW



Avoided investment costs US\$4- 5 trillion



Improve cooling access for 3.5 billion people

NCAPs

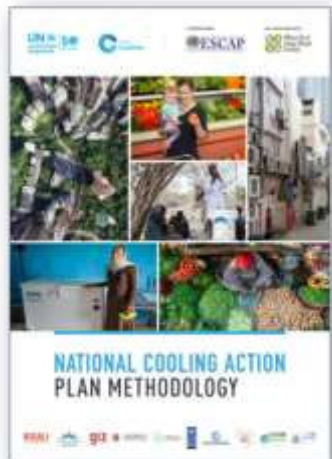


Global NCAP Methodology

- **Stage 1:** Contextual Assessment Planning: country context mapping, establishing broad priorities, key stakeholders & governance structure
- **Stage 2:** Data Driven Cooling Demand Assessment & Planning (current and future), sector-specific recommendations
- **Stage 3:** Synthesis & NCAP Creation: integration of cross-sectoral synergies and prioritization of NCAP recommendations
- NCAPs establish **sectoral baseline** and long-term policy scenarios with policy, finance and technology recommendations

Cambodia NCAP

- MoE, UNEP, ESCAP
- Collaboration with Ministries of: Mines and Energy, Land Urban Planning Construction, National Council for Sustainable Development, Published August 2022, launched March 2023
- NCAP leveraged for climate finance and NDCs



Indonesia NCAP

- MEMR, ESCAP, UNEP, SEforALL
- Collaboration with: Ministries of Environment, Public Works & Housing, Industry, Agriculture, Marine Affairs & Fisheries, Health

Vietnam NCAP Expansion

- Building on 1st NCAP developed by MoIT & WB
- MoNRE, UNEP, ESCAP & Energy Transition Partnership (ETP) expanding the scope to pilot NCAP methodology
- Cross Ministry collaboration
- Sectoral assessment completed

Passive Cooling in Cambodia



ESCAP
Economic and Social Commission
for Asia and the Pacific



Aim: Pursue impactful measures to reduce cooling demand in buildings through Passive Cooling Strategie

PCS guidelines to drive policy change

- Building block for ASEAN Guidelines on Passive Cooling

Demonstrate to build the evidence base

- Collaborating with UrbanLand on demonstration

Build local capacity and supply chains to facilitate replication and scale up

- **Community of Practice** chaired by Institute of Technology of Cambodia launched in May 2024.
- Compendium of PCS & material cost database developed.
- Information Hub on PCS on Cambodia website.



Urban Cooling in Vietnam through PCS



Global
Green Growth
Institute



Aim: Protect populations from extreme heat /achieve NDC mitigation targets

Enabling national policies to mainstream passive and urban cooling

- NDC 2022 and National Climate Change Strategy 2050
- NCAP with passive cooling as key intervention area

Urban Cooling Action Plans & Investment Pipeline

- Can Tho & Tam Ky cooling plans prepared
- Projects pipeline developed. In Can Tho city, a total of more than 10,000,000 Sqm area of projects identified with impact of 10-45% cooling energy saving.
- Build capacity and demonstrate business case

Design Financing Mechanism

- MoNRE's Envir. Protection Fund to integrate cooling under climate finance



Singapore Study Tour, May 2023



Week-long study tour and workshop series on passive cooling and district cooling - country governments and cities exchange policy approaches and build long-term collaborations for industry to exchange on best practices. Technical visits with dedicated workshops on policy, technology, business



National government, cities and private sector representatives from **13 countries**



Future Areas of Collaboration



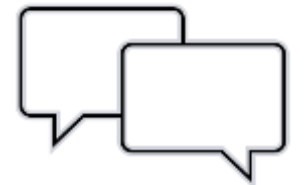
Passive Cooling Strategies can curb the growth in demand for cooling capacity in 2050 by 24%, result in capital cost savings in avoided new cooling equipment of up to US\$3 trillion, and reduce emissions by 1.3 billion tons of CO₂e.

ASEAN Passive Cooling Roadmap

ASEAN Passive Cooling Regional Guidelines for Buildings

Passive Cooling Working Group

- To develop model regional guidelines on PCS in ASEAN
- The guideline would introduce the global benefits of comprehensive PCS s in tropical regions (e.g. shading, ventilation, insulation, building orientation, vegetation, etc.) and how these could be specifically adopted in different regions/countries with unique case studies.
- Passive Cooling Campaign to raise awareness on regional solutions
- Welcome ACE as a WG member and seek your interest on how you want to engage in the WG (e.g. co-chairs, authors, voluntary participants)





Thank you!

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