28th session of the Conference of Parties to the UNFCCC
(COP 28)

Side Event – Passive Cooling and Nature-Based Solutions for Building Comfort

5 December 2023

Organized by: United Nations Environment Programme, UNEP-led Cool Coalition/GlobalABC
Location: COP28 UNEP pavilion, Dubai, United Arab Emirates
Time: 15:45-16:30 (GMT: +04:00) **Duration:** 45 minutes

Description

Ensuring comfortable, cooled indoor temperatures in buildings is indispensable to our healthy dwelling. However, higher energy consumption for space cooling leads to higher GHG emissions. Since 2000, energy demand for space cooling has risen at an average of about 4% per year, and the number of residential units in the cooling operation has tripled, reaching more than 1.5 billion in 2022. To address this, passive cooling - a practice of using non-mechanical technology, design elements, and nature-based solutions to keep a space cool without using energy - is a fundamental solution. Passive cooling measures can curb the growth in demand for cooling capacity in 2050 by 24 per cent, result in capital cost savings in avoided new cooling equipment of around US$1.5 trillion to US$3 trillion (US$ 2020 value) and reduce emissions by 1.3 billion tons of CO2e.

Being convened by the United Nations Environment Programme, UNEP-led Cool Coalition and Global Alliance for Buildings and Construction (GlobalABC), this side event aims to bring together key stakeholders to discuss current challenges and solutions of adopting passive cooling solutions for public/private building projects from the political, financial and technological perspectives with some best practices. Participants will have the opportunity to share perspectives on how we could address sustainable cooling and thermal comfort in buildings in an energy-efficient and resilient way with affordable costs.

The side event will contribute to raising awareness and create a strong momentum of collective action towards sustainable cooling for buildings by bringing together like-minded stakeholders interested in accelerating passive cooling solutions.

Objectives

- **Goal 1: Uncover the challenges and solutions of accelerating building passive cooling solutions.**
  Recognise the baseline of the penetration rate of passive cooling solutions in countries with a hot climate, and barriers (policy, finance, technology, etc) and solutions for promoting this practice.

- **Goal 2: Create the momentum of collective actions towards sustainable cooling in buildings.**
  Recognise the benefits of passive cooling solutions, and bring together interested partners in the building sector to shift from heavy-dependent mechanical cooling to climate-friendly passive cooling.

Agenda: (all speakers are in-person attendance)

#	Item	Topic/link	Duration
1	Welcome (**Lily Riahi**, Global Coordinator, UNEP/Cool Coalition)	Opening Remarks	3 min
2	Presentation deck - Setting the scene (**Omar Abdelaziz**: Assistant Professor at the American University in Cairo)	Introductory Presentation	10 min
3	Presentation deck - keynote (**Patricia Barandun,** Head of Section Migration and Forced Displacement, Swiss Agency for Development and Cooperation (SDC)):	Keynote speech	5 min
4	Moderator: (**Shikha Bhasin,** Senior Advisor, UNEP/Cool Coalition) Panellists: (**Dr. Hak Mao**: Director of the Department of Climate Change, Ministry of Environment, Government of Cambodia) (**Hongpeng Liu**: Director, Energy Division, UN Economic and Social Commission for Asia and the Pacific (UN ESCAP)) (**Dr. Sunita Purushottam**: Head of Sustainability at Mahindra Lifespace Developers Ltd.) (**Michelle Farrell**: Senior Operations Officer, International Finance Corporation, IFC)	Panel Discussion Discussion theme: "Current challenges and solutions of accelerating passive cooling practices in buildings in hot countries"	20 min
5	Q&A	-	5 min
6	Closing (**Jonathan Duwyn**, Programme Officer, UNEP/Global Alliance for Buildings and Construction)	Wrap-up & Closing Remarks	2min