



Reducing Energy Demand and HFC Dependence Through Next-Generation Technologies

Date: 14 July 2026

Time: 18:00 – 20:00 (UTC+7)

Venue: Theatre, United Nations Conference Centre (Rajadamnern Nok Avenue, Bangkok, Thailand)

Background

The session examines how passive cooling and next-generation technologies can accelerate Kigali Amendment compliance by reducing the demand that drives HFC consumption at source.

It brings together national ozone authorities, regional policy institutions, technology innovators and gender and equity expertise to identify the policy, market and financing conditions required to scale demand-side solutions in high-growth cooling markets.

As the Montreal Protocol community marks the tenth anniversary of the Kigali Amendment, the session connects the passive cooling and refrigerant agendas under a shared implementation framework. It supports delivery of the [Global Cooling Pledge](#), the world's first collective commitment to cut cooling-related emissions by 68% by 2050 while rapidly expanding access to sustainable cooling, including its goal to establish building energy codes that incorporate passive cooling by 2030.

Event Objectives

- Position passive cooling and low-energy technologies as demand-side accelerators of the Kigali Amendment, reducing the need for HFC-dependent mechanical cooling at source.
 - Showcase next-generation cooling technologies that cut both energy consumption and refrigerant dependence.
 - Identify the policy, regulatory and market conditions needed to scale these technologies in high-growth cooling markets.
 - Connect the passive cooling and refrigerant agendas under a shared implementation framework for Montreal Protocol stakeholders.
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Agenda

Time	Item	Speaker
(5 min)	Opening Remarks	Mr Amr Seleem , Country Engagement and Climate Policy Lead, UNEP Cool Coalition
(10 min)	Keynote: Regional pathways for passive and low-energy cooling	Mr Rio Jon Piter Silitonga , Senior Officer, Energy Efficiency and Conservation, ASEAN Centre for Energy
(30 min)	Panel discussion: From innovation to deployment	<u>Moderator:</u> Mr Rio Jon Piter Silitonga, Senior Officer, Energy Efficiency and Conservation, ASEAN Centre for Energy • Dr Jihad Alsawair, Advisor for the Minister of Environment of Jordan • Ms Nguyen Dang Thu Cuc, National Ozone Coordinator, Ministry of Agriculture and Environment, Viet Nam • Mr Elie Mansour, Project Manager, National Ozone Unit, Ministry of Environment, Lebanon • Mr Masahiro Suemitsu, CEO, SPACECOOL • Ms Alexandra Mutungi, Gender and Climate Change Expert, UNEP Regional Office for Asia Pacific
(15 min)	Q&A session	<u>Moderator:</u> Mr Amr Seleem , Country Engagement and Climate Policy Lead, UNEP Cool Coalition
(5 min)	Closing remarks	Ms Niroopa Kowlessar , Cooling Policy Specialist, UNEP Cool Coalition

Speaker details

Photo	Name and title	Bio
	Dr Jihad Alsawair Advisor for the Minister of Environment of Jordan	Dr. Alsawair is currently the Advisor for the Minister of Environment of Jordan on Technical and International affairs. He previously held many positions at the Ministry including Acting Secretary General, Director of Green Economy Unit, Director of Waste Management Directorate, and Director of Environmental Monitoring and Assessment Directorate. He worked at Aqaba authority as a Director of Environment Department and Director of Ben Hayyan International Laboratories, and at Royal Scientific Society as a senior environmental researcher. Dr. Alsawair holds a PhD in Environmental Science from the University of Nevada, USA. He has a long experience in climate action, green growth, and environment protection.
	Ms Niroopa Kowlessar Cooling Policy Specialist, UNEP Cool Coalition	An urban designer and architect specializing in passive cooling and climate-responsive urban development. Her work bridges design, policy, and climate adaptation, with a focus on supporting the integration of passive cooling and energy-efficient strategies into national and local housing frameworks. At Cool Coalition, Niroopa provides technical and strategic support to advance global efforts on sustainable cooling and urban heat adaptation. She contributes to the development of National Cooling Action Plans (NCAPs), National Adaptation Plans (NAPs), and policy guidance that help countries embed cooling within their broader climate and development agendas. Her work includes contributing to guidance notes, toolkits, and knowledge products that promote passive cooling, and supporting country and partner engagement under the Global Cooling Pledge.
	Mr Elie Mansour, Project Manager, National Ozone Unit, Ministry of Environment, Lebanon	Elie Mansour is a Project Manager at Lebanon's National Ozone Unit, supporting the implementation of the Montreal Protocol and the Kigali Amendment through projects focused on sustainable cooling, refrigerant transition, energy efficiency, and climate-friendly technologies. He works closely with national and international stakeholders and contributes Lebanon's experience to regional and international discussions on cooling policy, market transformation, and technology deployment. Earlier in his career, he was engaged on urban development and climate adaptation initiatives, including sustainable city

		planning, people centered public spaces, and climate proof heritage buildings restoration.
	Ms Alexandra Mutungi Gender and Climate Change Expert, UNEP Regional Office for Asia Pacific	Alexandra currently works for the joint UNEP and UN Women Programme – EmPower Women for Climate Resilient Societies as the South and Southeast Asia regional focal point. Her global experience includes gender, environmental and social safeguard risk management for UNEP’s portfolio of projects and supporting civil society engagement in UNEP’s environmental policy development. Notably, she specializes in bridging technical and social priorities having integrated gender into key climate and energy initiatives, including ASEAN’s passive cooling strategy and National Cooling Action Plan Methodology for the Middle East and North Africa Region.
	Ms Nguyen Dang Thu Cuc National Ozone Coordinator, Ministry of Agriculture and Environment, Viet Nam	Ms Nguyen Dang Thu Cuc is the National Ozone Coordinator of Viet Nam at the Department of Climate Change, Ministry of Agriculture and Environment, serving as the country’s focal point for the implementation of the Montreal Protocol. She has successfully led the completion of Vietnam’s HPMP Phase II and is spearheading the next phase, advancing the country’s efforts on ozone protection, the management of controlled greenhouse gases, and the promotion of sustainable cooling solutions. She drives policy development, legal frameworks, and multi-stakeholder collaboration to support Vietnam’s transition toward a climate-friendly and ozone-safe future.
	Mr Amr Seleem Country Engagement and Climate Policy Lead, UNEP Cool Coalition	Amr Seleem is the Lead for Country Engagement and Climate Policy Support at UNEP Cool Coalition. With over 14 years of experience, he has worked with several international organizations including various roles at the UNFCCC Regional Collaboration Centre for MENA and South Asia, the UN High-level Climate Champions Team, IRENA, Aldi Süd, the German Embassy in Cairo, and the American University in Cairo. He has developed expertise in a wide range of areas, including climate and energy policies, climate mitigation and adaptation, climate technologies, decarbonization, and digitalization. He holds an M.Sc. in Sustainable Resource and Environmental Policy from the Technical University of Munich (TUM); an M.Sc. in Energy Engineering from the American University in Cairo (AUC); and a B.Sc. in Mechanical Engineering from Ain Shams University in Egypt.

	Mr Rio Jon Piter Silitonga Senior Officer, Energy Efficiency and Conservation (EE&C) Department, ASEAN Centre for Energy (ACE)	Mr. Rio Jon Piter Silitonga is a Senior Officer in the Energy Efficiency and Conservation (EE&C) Department at the ASEAN Centre for Energy (ACE), where he leads regional work on energy efficiency policy and sustainable cooling — including the development of the ASEAN Roadmap for Extreme Heat Protection through Passive Cooling. He brings extensive experience in technical and analytical roles, including as Manager of the Japan–ASEAN Energy Efficiency Finance Mechanism Programme from 2017 to 2019. In alignment with the strategic objectives of the ASEAN Plan of Action for Energy Cooperation (APAEC), Mr. Silitonga focuses his efforts on key demand sectors — buildings, transport, and industry — supporting the region's target of a 40% reduction in energy intensity by 2030 against 2005 levels. To advance these goals, he has initiated strategic collaborations with development partners and international organisations — including the Green Climate Fund (GCF), JAIF, IKI, AFD, KEA, and the IEA — and represents ACE in international cooling and climate governance fora, engaging with UNEP, the Cool Coalition, the Global Cooling Pledge, and the Montreal Protocol process, where he serves as a keynote speaker and panel moderator. Mr. Silitonga has authored numerous publications on energy efficiency, covering green buildings, energy management, ESCO policy and market development, EE finance mechanisms, demand-side management, harmonisation of standards and labelling, efficient data centres, passive cooling, and ASEAN energy efficiency best practices.
	Mr Masahiro Suemitsu CEO, SPACECOOL	Masahiro Suemitsu is the CEO of SPACECOOL INC. He holds a Ph.D. in Engineering from Kyoto University and is the inventor of SPACECOOL's proprietary radiative cooling technology. His research on photonic crystals and thermophotovoltaics achieved world-leading performance and was featured in Nature Photonics. He has received numerous awards, including the SPIE Green Photonics Award, the Japan Venture Awards, Minister of Economy, Trade and Industry Award, and the Energy Conservation Grand Prize.