

AMCEN Science Policy Dialogue

THEME:

***Air Pollution and Early
Warning for Africa:
Integrating Air Quality and
Climate Information for
Urban Resilience in Africa***



DATE: 13rd July 2025 | **VENUE:** UN GIGIRI, Nairobi, Kenya |
DURATION: 9 am – 3 pm

Organized by: UNEP and Stockholm Environment Institute (SEI),

Participating Cities: Kampala Capital City Authority, Addis Ababa EPA, Nairobi City County Government, Kenya Meteorological Department (KMD)

Regional Institutions: IGAD, African Union Commission, WMO, WHO

1. *Background and Rationale*

This side event is convened under the margins of the African Ministerial Conference on the Environment (AMCEN), Africa's foremost ministerial-level platform for environmental governance. Established in 1985, AMCEN provides political leadership and regional coordination on key environmental and sustainable development issues affecting the continent. As the region intensifies its efforts toward the African Union's Agenda 2063 and the Sustainable Development Goals, air pollution remains one of the most pressing public health and environmental challenges facing African cities today.

In urban centres across Africa, rapidly increasing population, motorization, biomass fuel use, industrial growth, and poor waste management practices are driving severe air pollution episodes. These risks are compounded by the effects of climate variability, including heatwaves and extended droughts, which disproportionately affect vulnerable populations. Fine particulate matter (PM_{2.5} and PM₁₀) has been consistently recorded at levels far exceeding WHO guidelines, posing significant health threats.

Recognizing these risks, City Governments, in close collaboration with the United Nations Environment Programme (UNEP) and the Stockholm Environment Institute (SEI), have pioneered a localized approach to air quality management, underpinned by data from a network of low-cost air quality sensors deployed across major cities in Africa, enabling more evidence-based planning and public health responses.

In parallel, Kenya, Ethiopia, and partner countries have started implementing the Early Warnings for All (EW4All) initiative in partnership with the United Nations, which aims to ensure every person is protected by a multi-hazard early warning system by 2027. The initiative rests on four foundational pillars:

1. Disaster risk knowledge
2. Observation and forecasting
3. Preparedness and response capabilities
4. Communication and dissemination

The convergence of air quality and early warning systems opens a new frontier for urban resilience, offering cities the tools to issue timely alerts during pollution peaks, plan responsive health interventions, and design long-term strategies to mitigate emissions.

This dialogue, held as an official AMCEN side event, provides a unique platform to reflect on these innovations and chart a continent-wide path forward. With participation from city leaders, meteorological services, researchers, and regional institutions from Nairobi, Kampala, and Addis Ababa, Dar Es Salaam and Dakar, the session will spotlight best practices, expose operational challenges, and frame policy recommendations to inform both national action and regional frameworks like the Africa Clean Air Programme (ACAP).

Through the lens of science-policy collaboration, this event aims to accelerate the uptake of integrated environmental data services across Africa's urban governance systems—strengthening climate resilience, safeguarding public health, and driving equitable, clean development.

2. Objectives of the Dialogue

The Science-Policy Dialogue aims to:

- Reflect on the progress made by cities and share cross-country learnings between Kampala (KCCA, MET Uganda), Addis Ababa (EMI), Nairobi, Dar Es Salaam and Dakar
- Highlight the integration of air quality into early warning systems led by the Kenya Meteorological Department and aligned with the EW4All framework
- Identify barriers and opportunities for expanding air quality–climate data services across sectors (e.g., transport, health, waste)
- Catalyse a regional Community of Practice (CoP) on urban air quality and climate resilience under ACAP

3. Expected Participants

The event will bring together 50-60 experts and decision-makers from:

- Nairobi City County Government (Environment, Health, Transport, Planning)
- Kenya Meteorological Department (KMD)
- Ministry of Environment, Climate Change and Forestry
- Ministry of Health
- UNEP, SEI, WHO, WMO, IGAD and AUC
- Academia and research institutions (e.g., University of Nairobi, JKUAT)
- Civil society (e.g., youth-led air monitoring groups, health advocates)
- Private sector innovators in clean transport, energy, and urban planning
- Delegations from Kampala (KCCA, MET Uganda), Addis Ababa (EMI), and regional actors (IGAD, AUC)

AGENDA

Session I – Welcome and Introduction

8:30 – 9:00	Registration of Participants
9:00 – 9:15	Introduction of Participants Facilitator: Dr. Anderson Kehbila, SEI Africa
9:15 – 9:30	Welcome Remarks Dr. Philip Osano , Chief Operating Officer, CIFOR-ICRAF Official Opening Robert Wabunoha , Project Manager Officer, Clean Air for Enhanced Urban Climate Resilience in Africa Project Coordinator, UNEP
9:30 – 9:45	Introduction to the Policy Science Workshop Objectives and Outputs Facilitator: Haithum Wingrove, Technical Air Quality Expert, UNEP
9:45 – 10:00	Keynote Address: “Early Warnings for All” in Kenya Speaker: Dr. David Gikungu, Director of Kenya Meteorological Department and WMO (World Meteorological Organization) Permanent Representative of Kenya
10:00 – 10:30	Group Photo and Tea/Coffee Break

Session II- Presentations

10:30 – 13:00	Presentation on Air pollution and Early Warnings for Environment Speaker: Quanying Ren, Environmental Affairs Officer, UNEP
	Presentation of the African Clean Air Program Speaker: Caroline Tagwireyi, Senior Mitigation Officer, AUC-SEBE
	Presentation on the WMO Early Warnings for All Speaker: Kennedy Kimani Thiong’o, Deputy Director, Climate Services, KMD
	Presentation on the Africa Methane Community of Practice Speaker: Gerry Opondo, CEO, Environmental Compliance Institute

Presentation on Country Experiences on Air Quality Management

Speaker: Lawrence Mwangi, Deputy Director of Environment
Nairobi City County

Speaker: Tibebu Assefa, Technical Advisor - Air Quality, East Africa
at C40 Cities and Addis Ababa City Adviser for C40 Cities

Speaker: Dr. Alex Ndyabakira, Directorate of Public Health and
Environment, Kampala Capital City Authority (KCCA)

Speaker: Juma Haule, Air Quality Specialist, Dar es Salaam City

Speaker: Dr Simon Sambou, Regional Technical Advisor on Air
Quality - West Africa and Climate Action Planning (CAP), Dakar City
Advisor

This session will set the technical and policy foundation for the dialogue by presenting key initiatives and frameworks advancing air quality and early warning in Africa. UNEP will outline the link between air pollution and early warning for environmental management, followed by an overview of the **Africa Clean Air Programme (ACAP) by the Africa Union** and its alignment with regional priorities. The **World Meteorological Organization (WMO)** will present the **Early Warnings for All (EW4All)** initiative and how air pollution can be integrated within national climate and disaster risk systems. Additionally, the **Methane Community of Practice** and the Consortium for Better Air Quality will share experiences and lessons from country-level applications, highlighting the role of air quality data, institutional collaboration, and community engagement.

Facilitator: Ngongang Wandji, Research Fellow, Stockholm
Environment Institute, Africa Centre

13:00 – 14:00

Lunch

Session III - Panel Discussion

14:00 – 14:30 This panel will bring together the presenters from Session II for an interactive exchange on how science, policy, and practice can be better aligned. The discussion will explore cross-cutting themes such as data interoperability, institutional coordination, and investment needs for scaling integrated air quality and climate services across African cities.

Facilitator: Dr. Anderson Kehbila, Programme Leader, Energy and Climate Change, Stockholm Environment Institute, Africa Centre

Session IV - Opportunities

14:30 – 15:00 This closing session will focus on identifying concrete pathways for collaboration, investment, and capacity-building. Participants will be invited to reflect on key takeaways and propose opportunities for cities and countries to enhance their air quality monitoring systems while embedding them into early warning and public health frameworks.

Facilitator: Mr. Haithum Wingrove

15:00 – 15:15 Closing remarks

Speaker: Robert Wabunoha

15:15 – 16:00 Tea/Coffee and Departure