

**KEYNOTE ADDRESS BY ALICE A. KAUDIA, SENIOR AFRICA ADVISER,
CLIMATE AND CLEAN AIR COALITION ON AIR POLLUTION, ENERGY AND
DEVELOPMENT DURING THE WORKSHOP ON AIR POLLUTION AND
HEALTH IN EAST AFRICA, 30TH MARCH 2023, NARIOBI**

Distinguished Workshop participants, Ladies and gentlemen,

Good morning.

We are gathered here this week because of a global concern over the need for deep understanding of the association between air pollution and human health and to interrogate ourselves on whether we have adequate quality data to support development of policy to guide action; action that is required quickly and at a large scale to forestall a situation that could get out of hand.

We know that air pollution is a biggest risk to human health, a driver of climate change and an impediment to sustainable development linked to all sectors of economic, social and environmental development. It therefore means that we have to prevent air pollution from key sectors such as the energy sector, including from energy generation and use in industry, residential energy use, and a huge problem for Sub-Saharan Africa where over 70% of households still depend on wood fuel as the primary source of energy for cooking and heating. Burning waste and crop residues is also an important source of air pollution in Africa so is energy use in the transport sector. The Big Five air pollution sources in Africa as it were are therefore: Energy generation and use, Transport, Residential energy use, Agriculture and Waste management.

Tackling these sources as a priority will promote better air quality and a healthier population that can spur development but can also bring climate and agriculture benefits as I will mention in a moment..

I am delighted for the opportunity to join you for this important conversation on the inter-linkage between air quality and health, and the associated research, policy and collaborative strategies that can support strengthening capacity development in East Africa. My brief focusses on air pollution, energy and development. I will first tell you a short story which will inform some of the suggestions that I will make regarding action for our forward movement.

This story is in the context of indoor air pollution which is a major concern because it affects the most vulnerable segment of our population: women, children, and the elderly.

When I received the invitation to deliver a Keynote address on energy, health and development, it took me back on a long reflection of my childhood, early career development and my current professional situation; a journey spanning over 35 years.

As a child in my rural village in Saia, western Kenya, at a tender age of 10 -14 years, I fetched firewood in nearby bushes. I lit the three stone-stove, blew in air to make the fire light , and inhaled the pre-ignition smoke; often choking, passively shedding tears and running out of the kitchen to breath in fresh air. I was not aware of air pollution and that this age every day task could impact on my health. I was cooking. This was in the early 1960s. Then some development came along and my mother bought a paraffin stove. To set it off, I blew the blue lit cotton wicks, inhaled the smoke, ran out to breath fresh air and sighed relief.

Later, I bought a Two burner gas cooker for my late mother. She refused to use it because she heard that gas can explode and burn houses. Lesson: The need for thorough training of potential users of clean cooking stoves for them to appreciate, understand and accept all aspects of benefits: Economic, health, convenience and safety.

Close to two decades later, I was privileged to be employed by the Kenya Renewable Energy Development Project in 1984. As a young graduate, I was one of the six managers in Kenya responsible for promoting renewable energy technologies and practices in response to the energy crisis of the 1970s and early 1980s. We: (i) trained artisans to fabricate the Kenya Ceramic Jiko (Wood fuel cook stoves) considered efficient in conserving energy and saving households cost so that they could cook more with less wood energy (ii) promoted household size anaerobic biogas digesters to produce clean energy for cooking and lighting, (iii) solar lighting, (iv) wood energy crops through agroforestry and peri-urban wood energy plantations. In all these, air pollution was not in focus in the energy sector.

Over two decades later and more so since 2008, I found myself working at the interphase between air pollution, energy and development as aspects of action to tame climate change and protect all types of health on the planet; particularly human health.

We are now in a different development space. Technology advancements and innovations are enabling transition to clean renewable energy and energy efficiency and less polluting appliances like induction cookers. The new development is backed by global and regional commitments on research, policy and action. Call to action has been intensified and accelerated in light of the acute and urgent need to prevent and manage air pollution to safe-guard human life; the life without which there is no development.

Allow me at this juncture to share with you findings from a recent assessment which I was privileged to be one of the thought leaders and coordinating co-chair of during 2019-2022. It is the Integrated Assessment of Air Pollution and Climate Change for Sustainable Development in Africa, which was produced by a partnership between the African Union Commission, UNEP –Regional Office for Africa, Climate and Clean Air Coalition and Stockholm Environment Institute. It is the first assessment in Africa that has integrated concerns on air pollution, climate change and development. It focused on the big five -namely; Energy, Agriculture, Waste, Transport, Residential /indoor air pollution. These sectors are aligned with priority sectors in most Nationally Determined Contribution (NDC) commitments of African countries under the Paris Agreement on Climate Change, Agenda 2063 of the African Union and the Sustainable Development Goals and global calls to action in resolutions at World Health Assembly, the United Nations Environment Assembly and the African Ministerial Conference on the Environment. In the five sectors, energy and human health are a common thread.

So, what do the findings from this assessment tell us? Overall, it informs us that if no action is taken in the five sectors the situation will worsen. (i) Annually, some 930 , 000 and 1.6 million lives could be lost prematurely in 2030 and 2063 respectively ; these being attributed to outdoor air pollution, (ii) inaction on household air pollution is of great concern because of the health impact on women, children and the elderly; the Assessment estimates that household air pollution would result in annual loss of 170, 000 and 150, 000 lives every year in 2030 and 2063 respectively, (iii) Greenhouse gas emissions could triple by 2063 if no impactful and transformative policy measures are taken to prevent all types of pollutants including Short-lived climate pollutants especially Black Carbon, Methane, PM _{2.5} and other pollutants

The Assessment concludes that:

- (i) Urgent action is required to transition to renewable energy, phase out Hydroflouorocarbons, improve energy efficiency and drastically reduce emission of Methane;
- (ii) Many African countries are already taking action to reduce air pollution by adopting low emission, climate resilient development. But, scaling up for extensive impact calls for pooling resources and coordinated partnerships.
- (iii) A continental country-led Clean Air Program steered by the African Union Commission is needed. The AU commission has firmed up its commitment to pursue this idea.
- (iv) Access to quality data on air pollution in Africa is very limited and this constrains scientific research. Therefore action should be taken to build systems and infrastructure for knowledge management on air pollution, climate change and the development nexus in order to enable build-up of accessible data that can support science based policy for sustainable development.
- (v) Most important is: structured public education and awareness on the danger to health associated with air pollution at all levels including to school children should be pursued. Without change in attitude and behavior on energy consumption and production by all, progress will be curtailed.

Overall, the Assessment has shown that an integrated approach across the big five sources of air pollution can help Africa achieve:

- Substantial health benefits, preventing 200,000 premature deaths from indoor and outdoor air pollution per year by 2030 and 880,000 deaths per year by 2063;
- Cutting carbon dioxide emissions by 55%, methane emissions by 74%, and nitrous oxide emissions 40% by 2063;
- Significantly contributing to global efforts to keep warming below 1.5°C and limiting the negative effects of regional climate change;
- Improving food security by reducing desertification and increasing crop yields for rice, maize, soy, and wheat.

So, we have a real opportunity in Africa to move more quickly to achieving ‘the Africa we want’ - together we can!!

As I conclude, let me thank the organizers of this important workshop and all of you who are here to contribute to this important conversation on air pollution and health in East Africa.

I look forward to recommendations on the types of scientific, policy, private sector and all stakeholder collaborative –partnerships that can aid action and assure us of clean air for all across generations.

Thank you.