

Addressing Short Lived Climate Pollutants and non-CO2 emissions in Africa

Waste sector highlights from the integrated Assessment of Air Pollution and Climate Change for Sustainable Development in Africa

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Objectives and process of the Africa Assessment

- The Africa Assessment examined the challenges, implications and trade-offs of a range of alternative development paths that might plausibly be taken to achieve the goals set out in Agenda 2063.

More specifically the assessment aims to:

- ✓ examine how an ambitious **development** agenda for Africa can proceed at the same time as ***reducing air pollution, improving health and well being, limiting impacts on local ecosystems, and helping to avoid climate change impacts***
- ✓ provide appropriate and timely responses to inform planning by governments and other stakeholders
- ✓ explore using modeling various options for enhanced synergies and avoided tradeoffs

The modeling does not determine which path is best, but helps to inform and facilitate discussions of this topic

Assessment process overview



Creating a community through networks
Over 100 applications for authors/reviewers/modelers



Linkage made to **policy** global/regional/national policy framework (SDGs, Paris Agreement, UNEA, Agenda 2063, AMCEN, Regional AQ agreements, NDCs, NAQM)



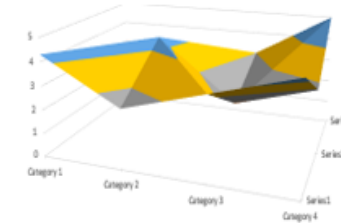
100 **authors** from 17 African countries in the 1st author meeting including Early Career Professionals



Commitment from **International Advisory Group** including RECs, AUC, UNEP ROA, FAO, WHO, IEA, IHME, US EPA, IIASA, WASCAL, IMO



AUC, AMCEN and RECS participation- >20 Countries confirmed **focal points** from the Ministry of Environment



Robust **modelling** group developing framework & scenarios, modelling seminars- iterative **consultative** process

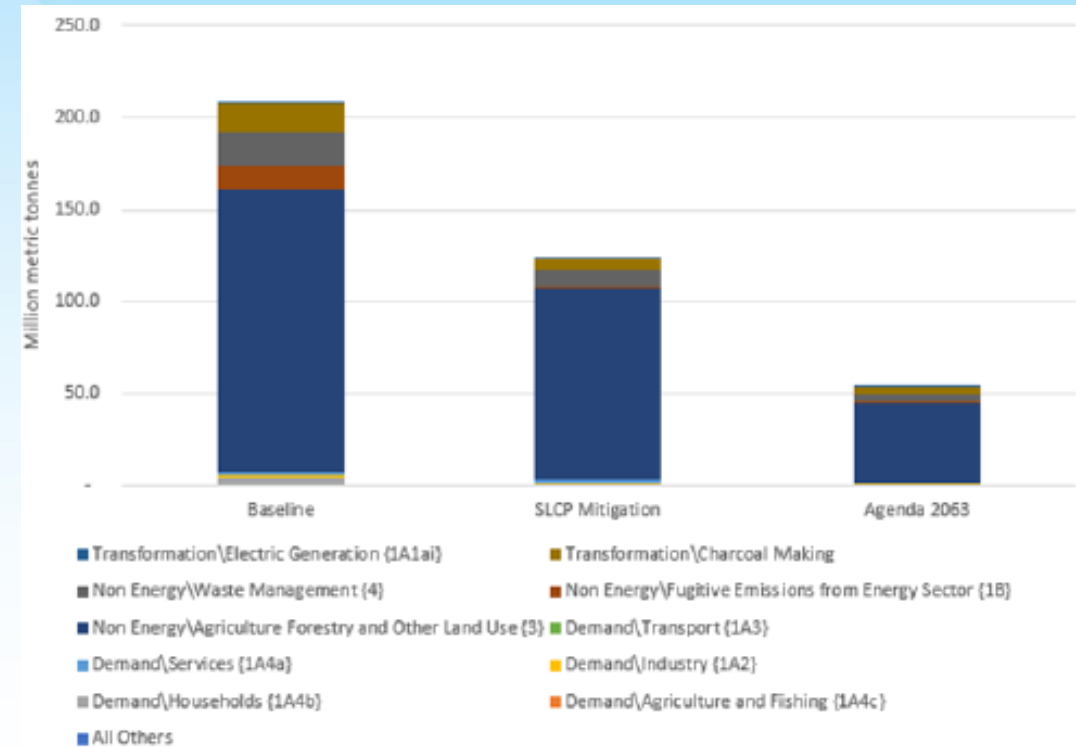
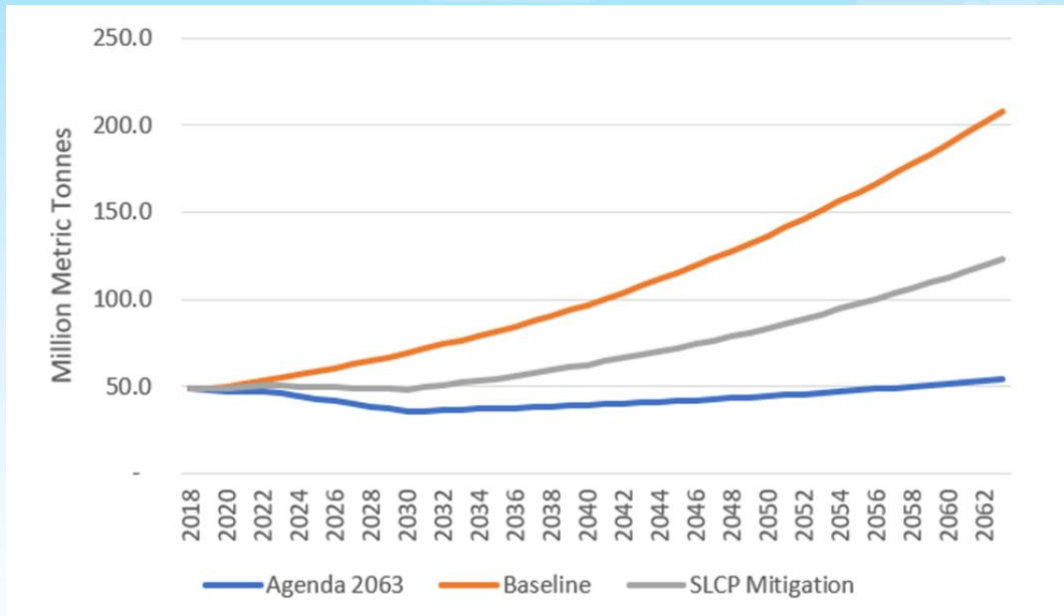
Activity and emission Modelling overview

- **Africa-wide** model developed in LEAP with data for all African nations.
- **Time Period:** Historical Period: 2000 – 2018, Projections: 2019-2063. Annual results but with particular focus on 2030 (SDG target year), 2050, and 2063.
- **Geography:** Whole continent with national-scale resolution of key variables. Results can be shown for Africa as a whole, for individual countries or for various country groupings.
- **Sectors:** Modeling of all energy consuming and producing sectors and key non-energy sectors
 - Energy: Including Industrial, households, transport
 - Non-energy: Including waste and agriculture
- **Pollutants:** All long-lived GHGs and short-lived climate pollutants (SLCPs), and all major local air pollutants.

The model is freely available for use by countries for national planning

<https://leap.sei.org/>

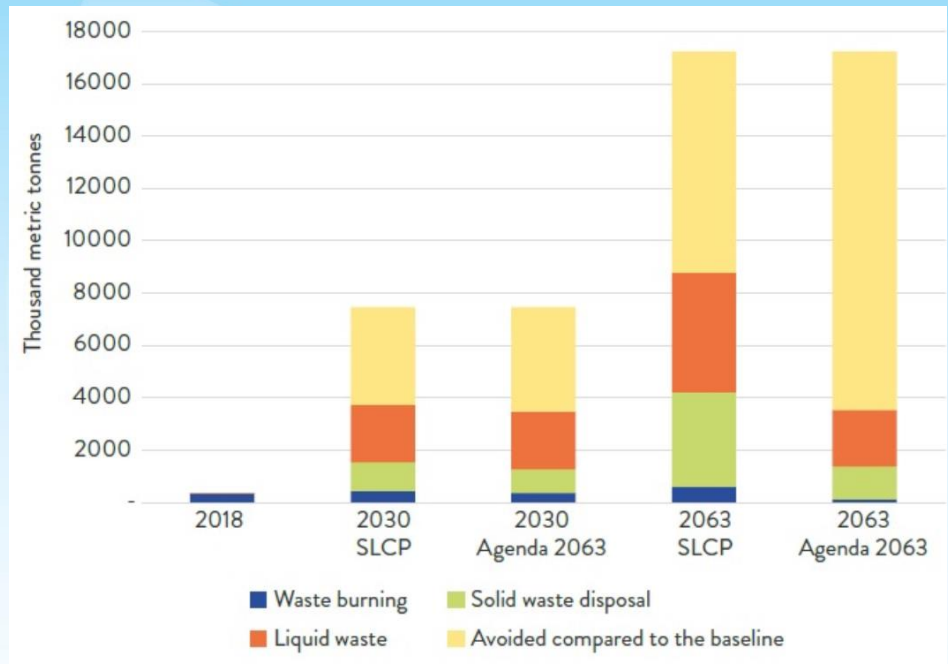
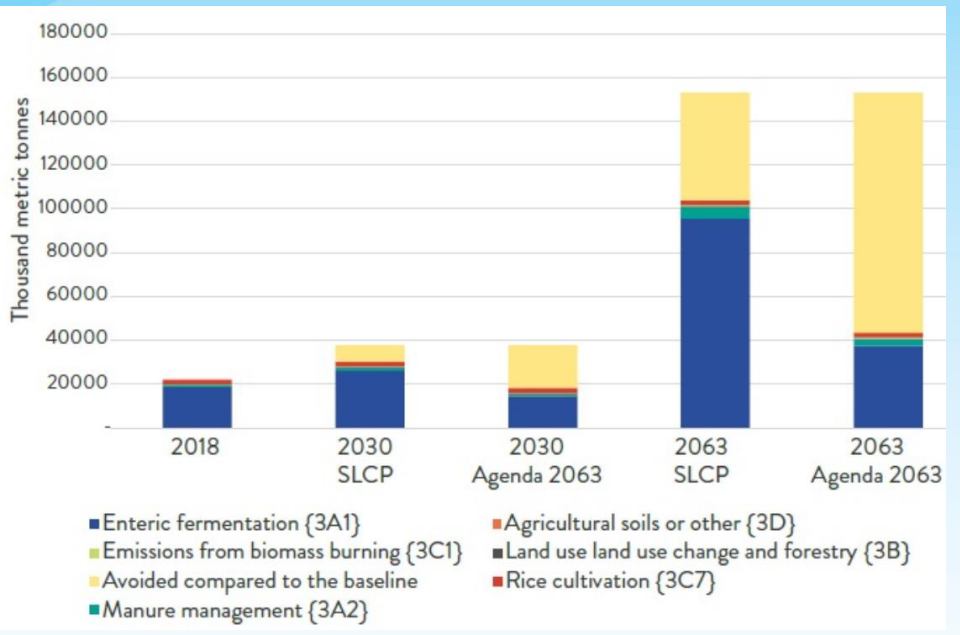
What does the Africa Assessment say about methane in the region?



Could avoid 50% methane emissions compared to the baseline scenario by 2030 and 70% by 2063, SLCP measures achieving half the reduction

Agriculture (blue) is the largest methane emission source in all scenarios, followed by waste (grey), charcoal production (yellow), fugitive emissions from energy sector (brown)

How can the Africa Assessment underpin action on methane and other short-lived climate pollutants



Reduction of methane emissions from oil and gas operations: Measure assumes 50% reduction in fugitive methane emissions by 2030 and 90% by 2063

Agriculture: livestock enteric fermentation (blue) main reduction via productivity increases linked to increased feed digestibility, animal weights, fertility rates and reductions in age at calving

Waste Management: A target of methane capture on 60% existing wastewater treatment plants by 2030 and all by 2063; 75% decrease in the amount of waste burned in formal landfill sites in 2030 and 2063, and a 60% methane capture by 2030 and 75% by 2063

Charcoal Making: the measure foresees that 45% of charcoal-making is carried out with efficient kilns by 2030 and 95% by 2063

Measures mentioned in African country NDCs

Sector		% African countries pre 2020 NDCs	% African countries post 2020 NDCs
Agriculture	Increase livestock productivity	19	34
	Increase feed digestibility to reduce enteric fermentation	19	34
Waste	Implementation of best practice landfill management to reduce open burning of waste, and methane capture at landfills	52	79
Waste	Methane capture at wastewater treatment plants	29	43
Oil and Gas Industry	Reduces methane emissions from oil and gas operations	8	13
Energy	Making charcoal as efficiently as possible	21	17

Way forward for methane reductions

- Important to link to Agenda 2063's Comprehensive African Agricultural Development Programme (CAADP) and the National Agricultural Investment Plans (NAIPS) aligned to Malabo Declaration Targets
- Support the development and implementation of continent-wide practical programmes for sustainable waste management such as the 50 by 2050 initiative and the multi-stakeholder partnership to phase out open burning of waste in Africa
- One of the most cost-effective ways to reduce methane emissions is by targeting the fossil fuel sector - African countries have pledged to significantly reduce methane emissions in the oil and gas sector by 2030

Measures give benefits for health, crops and climate



Integrated Assessment of Air Pollution and Climate Change for Sustainable Development in Africa

Thursday 1 September 2022 - 9.00 AM to 10.00 AM (GMT+1)