

Commentary

Methane Action for people and planet from discovery to solution: The Angera Declaration, what are the Implications for Africa?

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The 250th anniversary of the discovery of Methane in 1776 by Alessandro Volta near Lago Maggiore (Italy) provided a unique opportunity to bring together worldwide leaders in science, policy, and innovation around methane at the conference “Methane Action for people & planet from discovery to solution.” Held in Ispra (Italy) by the European Commission's Joint Research Centre (JRC) and its partners, the conference took stock of scientific progress since methane's discovery and charted future pathways for action. By bringing together leading scientists and policy makers, the conference created a direct dialogue on methane emissions (which are currently responsible for about 30% of global warming), monitoring systems, and mitigation policies and technologies, with a focus on the rapid emission cuts needed at the global scale to help tackle climate change.

The event emphasized the need for coordinated technological and policy steps to reduce methane emissions, a major driver of near-term warming. Methane is a short-lived greenhouse gas (GHG), with an atmospheric lifetime of approximately 12 years, and rapid and sustained reductions in methane emissions from all sectors can reduce near-term warming while also improving air quality and public health (Shindell et al., 2024).

The main outcome of the Methane 250th anniversary was the [Angera Declaration](#), a ten-point statement signed by more than 150 scientists from around the world calling for faster and more coordinated methane actions globally. We present here the main outcome of the Angera Declaration under an African perspective, in relation to past and present/ongoing efforts and initiatives.

1. Rapidly Accelerate Deployment of Proven Solutions: Acknowledgment of existing tools and technologies allowing for an important and impactful reduction of methane across sectors such as energy, waste, and agriculture. The implementation of these technologies is often inhibited because the direct costs still exceed the direct economic benefits. In the African context, the

Integrated Assessment of Air Pollution and Climate Change for Sustainable Development in Africa (UNEP, 2023), underscored the necessity of implementing and accelerating these measures in sectors like Energy (4 measures), Waste (4 measures), and Agriculture (5 measures). Through these sectors at the regional scale of Africa, acceleration is possible under the appropriate investments and political incentives at various scales.

2. Strengthen Measurement, Monitoring, Reporting, and Verification (MMRV): As effective action requires accurate data, the Angera Declaration encourages and calls for the expansion of satellite, airborne, and ground-based monitoring to fill regional data gaps. Such efforts are required in Africa, as data is often scarce and suffers from continuity and sustainability issues over the long-term. These are important to overcome these trends if methane emissions and the effectiveness of policies put in place to mitigate them are to be evaluated. Moreover, the Declaration encourages integrating atmospheric data into national inventories to verify the transparency of emissions. In the African context, this can be extended to building meaningful linkages between the atmospheric research community, such as ANGA (African Group on Atmospheric Sciences), GEIA (Global Emissions Initiative), GAW (Global Atmospheric Watch), and national, sub-regional, and regional entities in charge of reporting on the national inventories.

3. Increase Ambition in Policy: The Angera Declaration urges governments to set clear, science-based standards while explicitly integrating quantified methane goals into their National Determined Contributions (NDCs) in accordance with the Paris Agreement. In Africa, this is already starting to happen, as countries that have signed the Global Methane Pledge are including methane emission reduction goals in their national planning and NDCs. Mitigation measures considered often include the methane-related measures from the 37 measures recommended by the “Integrated Assessment of Air Pollution and Climate Change for Sustainable Development in Africa” (UNEP, 2023) as part of the African Clean Air Program (ACAP).

4. Strengthen Financing and Economic Incentives: Mobilizing public and private capital to support mitigation remains one of the major challenges worldwide, and especially for Africa. The Angera Declaration recommends well-designed mechanisms to create financial incentives for reduction, provided that rigorous standards for measurement and verification are upheld. Sustainable financing initiatives linked to NDCs, Global Methane Pledge planning, and mitigation activities under ACAP will be essential if meaningful reductions of methane emissions in Africa are to be achieved.

5. Integrate Methane Within a Holistic Climate Strategy: To optimize the warming mitigation, it is essential that methane be considered as part of a comprehensive framework targeting both short-lived climate pollutants and long-lived greenhouse gases, that moves beyond simple metrics to consider the warming mitigation of individual gases. The Integrated Assessment of Air Pollution and Climate Change for Sustainable Development in Africa (UNEP, 2023) has already embedded this approach in the science-to-policy process on the continent (Kaudia et al., 2022; Hicks et al., 2024), which was used to develop the 37 recommended measures.

6. Advance Mitigation for Hard-to-Abate Sources: Research should be invested into difficult sectors, such as livestock and waste, where the methane abatement targets are difficult to reach because of a mix of technical, economic, social, and institutional barriers. Research should be targeted to understand the implications for affected stakeholders, for example, the link between enteric fermentation mitigation for livestock and productivity and profitability for farming communities.

7. Strengthen Understanding of Climate Feedbacks: Natural methane releases from wetlands and permafrost are being triggered by the rising temperature. The Angera Declaration calls for improving observation networks, allowing for a better understanding of changes in natural methane emissions and distinguishing them from anthropogenic sources. As the observation network in Africa remains much less developed than in many parts of the world, this opens pathways for a better network design and improving observation around these natural ecosystems across the continent.

8. Improve Understanding of the Natural Methane Cycle: A better understanding of the natural methane cycle as a whole may help improve climate models and future risk assessments. This is particularly important for Africa as the continent is very vulnerable to climate change, and there are uncertainties in climate modelling that need to be addressed (Monerie et al., 2020).

9. Advance the Scientific Frontier: The Angera Declaration encourages innovative technology research, including potential methods for direct removal of methane from the atmosphere. The continent is currently behind with such technological research due to a lack of resources, but such a pathway should be explored.

10. Ensure Sustained International Cooperation: Methane reduction at the global scale requires sustained collaboration between nations, regions, and worldwide to ensure that data, technologies, and strategies are shared across borders. This emphasizes the necessity for the African continent to work in synergy at national, sub-regional (Regional Economic Communities), and continental levels while keeping an open collaboration with the international community for putting in place and developing technologies that are scalable and meet its own needs.

As discussed above, the Angera Declaration is a good opportunity for Africa to build on and strengthen ongoing efforts for methane mitigation on the continent. It can be a primary catalyst for economic growth, energy, and sustainable infrastructure development across the continent. This Angera Declaration, in addition to the Integrated African Assessment (UNEP, 2023), aligns with efforts such as the African Methane Community of Practice (AMCoP), the African Clean Air Program (ACAP), and the African Clean Air Forum.

AMCoP and the African methane agenda

The African Methane Community of Practice (AMCoP) is an emerging Africa-led platform focused on strengthening knowledge exchange and collective action on methane across agriculture, waste, and energy. Its significance lies in providing a practical mechanism for connecting researchers, practitioners, policymakers, civil society, and investors around African methane priorities.

In the context of the Angera Declaration, AMCoP can serve as an implementation bridge. It can help translate scientific priorities into peer learning, capacity development, case-study exchange, collaboration on monitoring and inventories, and stronger regional dialogue on financing and policy design for methane mitigation. For Africa, platforms such as AMCoP matter because sustained methane action depends not only on national commitments, but also on communities of practice that can circulate knowledge and build implementation momentum across sectors and countries.

ACAP and integrated methane action

Led by the African Union Commission (AUC) and supported by partners including UNEP Regional Office for Africa (UNEP-ROA), the Climate and Clean Air Coalition (CCAC), and the Stockholm Environment Institute (SEI), the Africa Clean Air Programme (ACAP) is a continental initiative intended to align action on air pollution, climate change, and sustainable development. It builds on the integrated African Assessment (UNEP, 2023) and the mandate from African ministers to support continent-wide implementation of the 37 recommended measures through country-led and regionally coordinated action, through the Regional Economic Communities (Kaudia et al., 2022; Hicks et al., 2024).

For the methane policy, ACAP is important because it provides a broader institutional home for integrated action. It creates

a framework in which methane reduction can be linked to immediate policy priorities such as health, urban air quality, clean energy, waste management, and sustainable agriculture. This broadens the political case for methane mitigation and can make implementation more durable by embedding it within development agendas that already matter to governments and citizens.

The African Clean Air Forum is a convening space

The Africa Clean Air Forum, convened by the [Africa Clean Air Network](#), has become an annual platform for policymakers, academics, civil society, industry, and media to exchange knowledge and strengthen partnerships on air pollution in African cities. Its recent editions in Kampala (Uganda), Lagos (Nigeria), Nairobi (Kenya), and Pretoria (South Africa) illustrate the emergence of a recurring African space for technical and policy dialogue on clean air.

The Forum is relevant to methane because methane is a precursor for tropospheric ozone in the atmosphere, which damages human health and crop yields, as well as being a GHG in its own right, and it can strengthen the communities, relationships, and evidence networks needed for integrated action. As methane becomes more visible within clean air and climate agendas, the Forum can help connect methane science to urban policy, health evidence, investment discussions, and cross-border learning. In that sense, it complements both AMCoP and ACAP by providing a visible and recurring venue where methane can be situated within wider African clean air priorities.

Conclusion

In Africa, progress is being made around air pollution, methane, and other GHGs through various efforts. The Integrated African Assessment has helped investigate and propose existing actions that are scalable and can be implemented across the continent. With the ACAP implementation, a path and opportunity are being opened toward an effective implementation of the assessment measures across the continent. Initiatives such as ACAP, AMCoP, the African Clean Air Forum with its network, and the scientific community, such as ANGA, by working together and complementing each other, can make more progress, impact lives, and shape the environmental landscapes across the continent. The Angera Declaration, as the main output of the 250th anniversary of Methane discovery, may help strengthen the ongoing efforts and encourage/fuel their sustainability.

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