WORKSHOP READOUT

An Overview of Discussions at the Sustainable Aviation Fuels Workshop

Exploring market opportunities for African production and the implications for national decarbonisation policy

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1. Executive Summary

Sustainable Aviation Fuels (SAF) are widely regarded as the single most important lever for reducing carbon emissions from the aviation sector in the coming decades. The International Civil Aviation Organisation (ICAO) envisages a 5% reduction in aviation emissions by 2030 through the deployment of SAF, equivalent to approximately 23 million tonnes (Mt) of clean energy demand. Against current global SAF production of just 1 Mt, the supply gap is substantial and growing.

The University College London (UCL) and the University of Nairobi (UoN) held a SAF workshop on 30 June 2026. Supported by the UCL Grand Challenges scheme, this workshop brought together policymakers, regulators, airlines and technical experts to examine the conditions under which African countries can become a major production hub for SAF — and what this implies for national decarbonisation policy. It was a frank discussion of the realities and possibilities of harnessing renewable energy on the Continent for specific use by the aviation industry. Five thematic presentations were followed by a structured discussion with participants representing Kenya, the wider African region and international partners.

Three core messages emerged from the day. First, Africa holds a comparative advantage in SAF production thanks to the abundance of geothermal, solar, wind and water for green hydrogen, as well as agricultural and municipal waste streams for feedstock and CO2 capture — a combination that is unlikely to be replicable in heavily populated industrialised economies, such as Europe. Second, this advantage can only be realised through coordinated action across policy (political buy-in), finance (investment), industry (the airlines) and research (R&D). Third, a just and equitable transition must be designed from the outset, with international frameworks (ICAO) aligned to national economic and industrial circumstances.

2. Context

The 41st ICAO Assembly adopted long-term aspirational goals (LTAG) of net-zero carbon emissions from international aviation by 2050, aligning the sector with the Paris Agreement. The framework offers a global architecture in which individual countries can embed aviation within their national emissions and industrial policies, with the flexibility to choose their own pathway. This was key, as transition will look very different depending on each country's economy, the structure of its aviation sector and its capacity to decarbonise, including access to green fuels.

Africa is uniquely positioned. The continent has some of the world's largest renewable energy endowments, including unmatched solar potential across the Sahara, massive wind corridors, geothermal networks in the East African Rift, major hydropower rivers, as well as large tracts of arable land with significant agricultural and municipal waste streams. These have the potential to provide the inputs for SAF production at a scale and cost base that could make the continent competitive with traditional jet fuel. Existing refining capacity in several African countries can be upgraded to biorefinery operations, shortening the path to first commercial output. The workshop examined the practical implications of these conditions for policy and investment decisions in the near term - with a mid- and long-term view in line with ICAO's 2050 goals.

3. Workshop Overview

3.1 Objectives

- Examine the market opportunity for African SAF production, with a focus on Kenya and the wider African region.
- Map the regional and national policy and governance landscape for SAF in Africa
- Identify the conditions required to attract foreign and domestic investment into African SAF projects.
- Understand the airline perspective on supply, cost and scaling of SAF purchases.
- Discuss international cooperation mechanisms, including ICAO frameworks and principles of a just and equitable transition for countries.
- Next steps for policymakers, industry and partners in the African SAF ecosystem.

3.2 Format

The workshop was convened as a half-day, in-person event. It was opened by Professor Collins Odote. It then comprised of five thematic presentations. A moderated discussion session by Dr Simon Chin-Yee followed, before the conference was closed by Professor Richard Mulwa. Participants represented government ministries, fuel developers, national airlines, development partners and research institutions.

3.3 Presentations

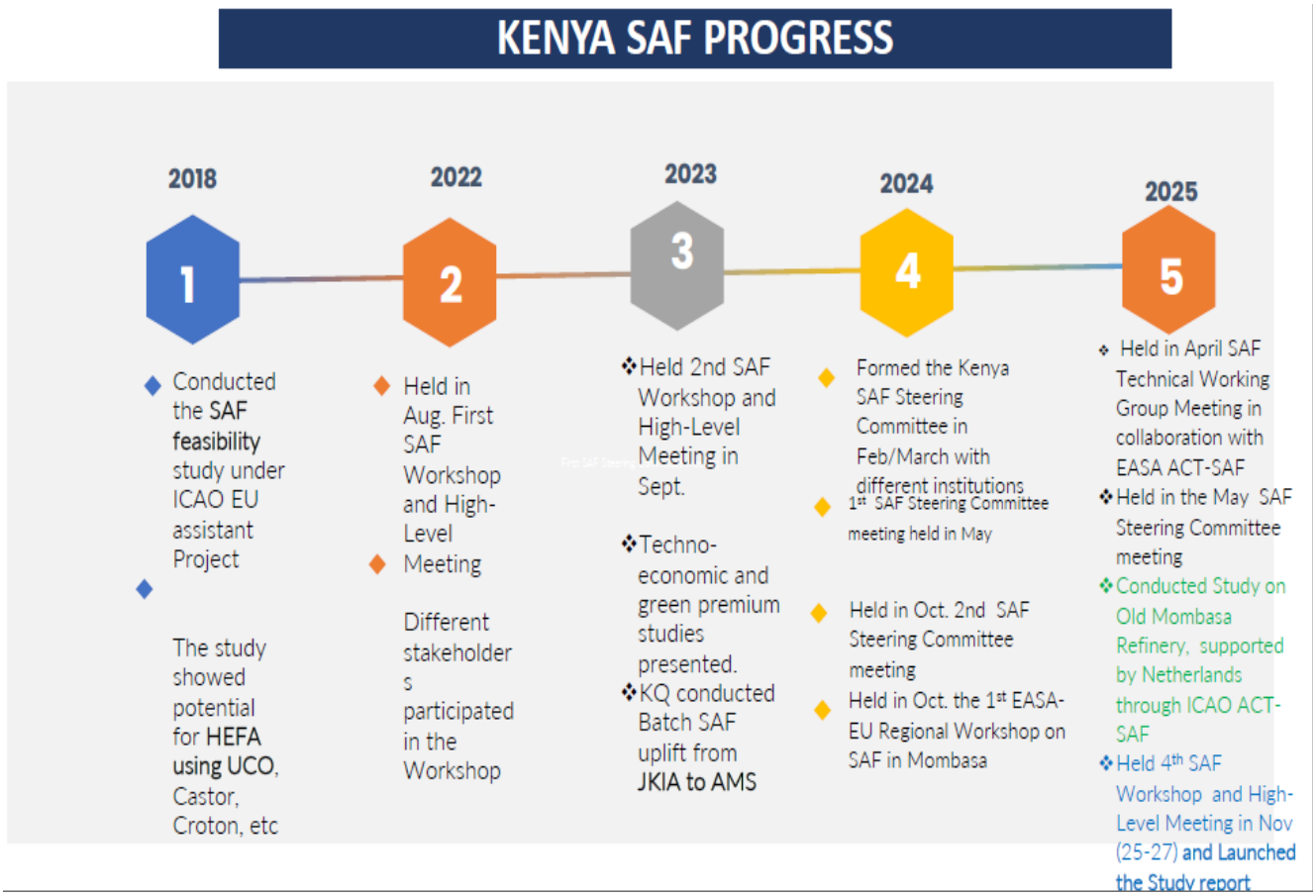
Session	Topic	Lead
1	ICAO's Emerging SAF Architecture and Africa/Kenya's Strategic Window of Opportunity	Mr. Francis Mwangi
2	From Feedstock to Flight: The Policy/Governance Ecosystem of SAF in Kenya	Ms. Irene Maithya
3	Building Africa's SAF Industry: Investment Opportunities, Market Signals and Commercial Realities	Mr. Duncan Otieno
4	Powering Africa's Next Clean Take-Off: The Airline Perspective on Scaling Sustainable Aviation Fuel Markets	Ms. Wakina Mutembei
5	Egypt's Biofuel and SAF Production: Exploring Existing Industry and Potential for Scale-Up	Dr Roberto Cardinale

4. Summary of Presentations

4.1 ICAO's Emerging SAF Architecture and Africa/Kenya's Strategic Window of Opportunity

Presenter: Francis Mwangi

The session opened with a framing of the international policy architecture emerging around SAF and the importance of these fuels to replace fossil jet kerosene in this hard-to-abate sector. The presentation set out the gap between current global SAF output (~1 Mt) and the volume required to deliver the ICAO 2030 emissions objective (~23 Mt), and explained the mechanisms through which ICAO is supporting member states — including the CORSIA carbon credit procurement for secure and cost-effective compliance, the Long-Term Aspirational Goal and associated reporting and accounting frameworks (ACT-SAF studies). Against this backdrop, the presentation argued that Africa, and Kenya in particular, faces a strategic window of opportunity in the near future. The combination of high solar irradiance, abundant land and existing refining capacity is a *once-in-a-generation* opening to anchor significant SAF investment. Kenya has already submitted several action plans – the latest round submitted in 2022 – with Kenya’s SAF steering committee already meeting to discuss policy and the business model for this sector in the country. The presentation closed with a call for cooperation among all stakeholders, including governments, ICAO, airlines and the private sector, as well as the need for a data-driven approach to map SAF progress to include policy with quantitative targets and time-bound milestones.



4.2 From Feedstock to Flight: The Policy/Governance Ecosystem of SAF in Kenya

Presenter: Irene Maithya

This presentation provided a detailed outline of Kenya's domestic policy and governance landscape relevant to SAF, including the Climate Change Act, the National Climate Change Action Plan, the Kenya Energy Transition and Investment Plan, and the regulatory remit of the Kenya Civil Aviation Authority (KCAA). It highlighted that Kenya has the foundational building blocks for a SAF industry — a national NDC that includes transport decarbonisation, an active renewable energy programme and an established refining sector — but that the governance structures around SAF are what is holding back action today. Key gaps identified included the absence of a dedicated SAF blending mandate, limited price-support or offtake mechanisms, and unclear coordination between the respective ministries (Ministry of Roads and Transport, the

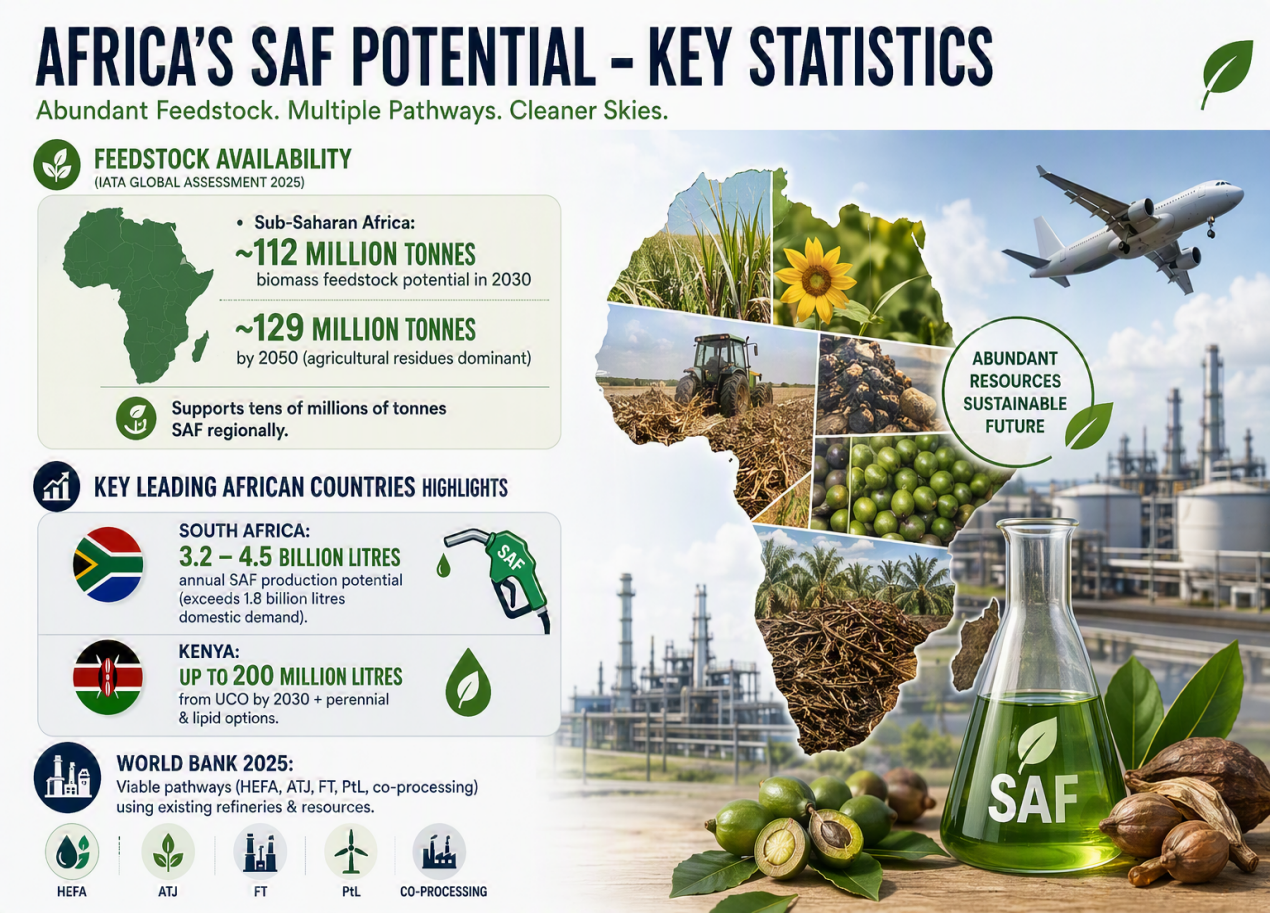
Ministry of Environment, the Treasury) on SAF-relevant incentives. It concluded that the future of Sustainable Aviation Fuel will not be determined by the abundance of biomass, but by the quality of governance connecting constitutional values, institutions, investors, innovators, farmers, industry and markets into one coordinated ecosystem. A SAF-specific national roadmap could be the next instrument to align stakeholders and signal intent to investors.

4.3 Building Africa's SAF Industry: Investment Opportunities, Market Signals and Commercial Realities

Presenter: Duncan Otieno

The third presentation shifted the lens to capital and commercial viability of SAF, and the potential investment in Africa, noting Kenya, Ethiopia, Nigeria and South Africa. Drawing on emerging deal flows across the continent, it mapped the principal investor archetypes engaging with African SAF — strategic off-takers (international airlines), multilateral and bilateral financiers, climate-focused private equity, and corporate buyers under ESG commitments. The session was candid about the commercial realities: SAF remains more expensive (2-4 times) than conventional jet fuel on a like-for-like basis, offtake risk is concentrated in a small number of buyers, and project finance structures must contend with feedstock variability and currency exposure. The presenter argued that the binding constraint in Africa is not capital availability but bankable project pipelines — i.e.,

a sufficient volume of projects at advanced readiness to absorb available capital. While there is feedstock innovation and a just transition focus, dedicated project facilities and finance for SAF need to be implemented.



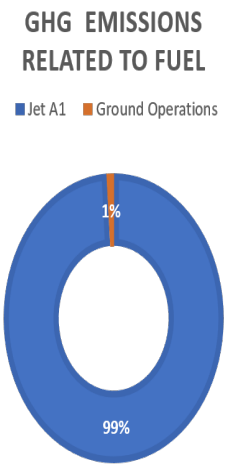
4.4 Powering Africa's Next Clean Take-Off: The Airline Perspective on Scaling Sustainable Aviation Fuel Markets

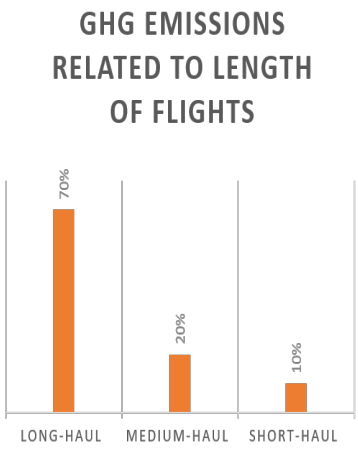
Presenter: Wakina Mutembei

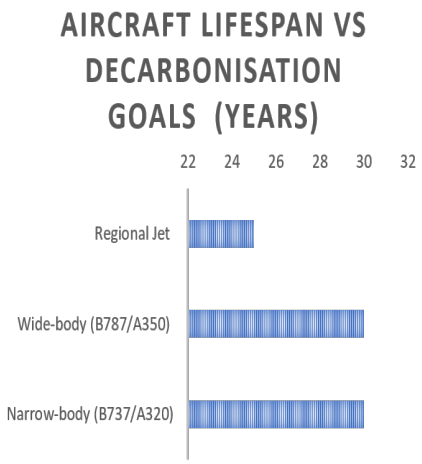
This presentation grounded the discussion in the operational realities faced by African carriers – specifically Kenya Airways (KQ). While major international airlines have begun procuring SAF at scale and committing to long-dated offtake agreements, African airlines face a structural challenge: the absence of a regional SAF supply chain means any SAF uplift requires costly and carbon-intensive intercontinental fuel logistics, eroding both the cost and emissions benefits.

Why Aviation Must Decarbonise Through SAF

Fuel dominance, long-haul exposure, and 30-year aircraft lifespans make SAF the only scalable decarbonisation lever.

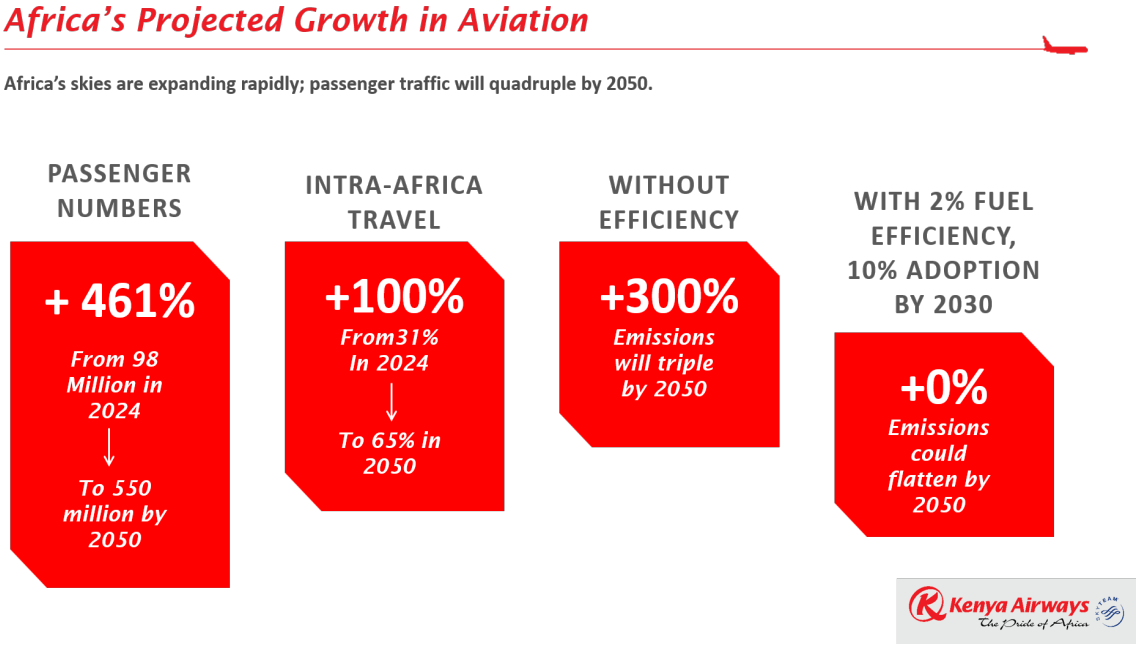






Kenya Airways The Pride of Africa

It emphasised that airlines are willing buyers where supply is reliable and competitively priced, and that procurement commitments can act as the anchor demand that unlocks project finance. She proposed a coordinated African airline offtake consortium as a mechanism to aggregate demand and signal volumes to prospective producers and called on regulators to align SAF certification frameworks with international standards to enable cross-border fungibility.



4.5 Egypt's Biofuel and SAF Production: Exploring Existing Industry and Potential for Scale-Up

Presenter: Roberto Cardinale

The final presentation offered a concrete case study of an African country that has already begun to operationalise biofuel and SAF production at scale. Egypt's experience — combining agricultural waste feedstocks, established refining infrastructure and government support — was examined for transferable lessons. Key takeaways included the importance of feedstock supply chains anchored on long-term contracts with the agricultural sector, the value of public–private co-investment in refining upgrades, and the role of port infrastructure in enabling export-oriented SAF production. It stressed that scale-up in Egypt has been enabled by a deliberate policy of integrating SAF within a broader bioeconomy strategy, rather than treating it as a standalone fuel programme. Several elements of the Egyptian approach were identified as directly transferable to Kenya and other African producers with comparable resource endowments. It also highlighted current limitations, namely high SAF production costs, high costs of imported technology, challenges in collecting feedstock and its high cost, and regulations that encourage SAF vis-à-vis established aviation fuel production.

5. Discussion: Cross-Cutting Themes

Across the five presentations and the subsequent discussion, seven **cross-cutting themes** emerged.

5.1 Green power potential for SAF production

Africa's access to green energy sources is among the best in the world, and the cost of new renewable generation continues to fall. Countries outside Africa (Europe, Asia) are looking to Africa. Participants agreed that the availability of low-cost, dedicated green power is a foundational pathway for SAF, and a strong differentiator versus industrialised economies with constrained land and grid capacity.

5.2 Existing refining capacity for upgrade to biorefining

Several African countries — including Kenya and Egypt — already operate conventional fuel refineries that are candidates for partial conversion or co-processing to SAF. A continental mapping of refining assets to identify priority candidates for upgrade could be a move forward.

5.3 Foreign investment and the build-up of capital flows

All presenters acknowledged that significant international capital is available for credible African SAF projects, but that it is currently not being accessed. Project preparation facilities, blended finance instruments and standard form offtake contracts could convert available capital into deployed capital.

5.4 Political buy-in across sector and transport ministries

SAF cuts across energy, transport, environment, finance and trade portfolios. Participants stressed that sustained political leadership — including buy-in at the level of Heads of State and Finance Ministers — is necessary to align these constituencies and unlock the binding constraints. National SAF roadmaps, championed at the highest level of government, were identified as a critical instrument.

5.5 International regulation and national GHG strategies

ICAO's architecture (CORSIA, LTAG, reporting frameworks) provides the global rules and incentives, but participants emphasised that domestic implementation is decisive. Embedding aviation within updated NDCs, long-term low-emission development strategies and sectoral decarbonisation plans was identified as the most actionable lever for governments.

5.6 Just and equitable transition

The workshop devoted deliberate attention to the social dimension of the transition. Participants recognised that the workforce and communities dependent on conventional refining and aviation operations require predictable plans for re-skilling, redeployment and, where appropriate, managed transition. International cooperation was identified as a key enabler of just transition outcomes, particularly in supporting countries with limited fiscal space.

5.7 Balancing Sustainable Aviation Fuel Market Opportunities with Food and Energy Security

Participants recognised that Africa's emerging Sustainable Aviation Fuel (SAF) market presents significant opportunities for investment, industrial growth, job creation and participation in the global low-carbon aviation economy. However, the workshop underscored that these opportunities must be pursued through a balanced policy approach that safeguards national food and energy security. Participants emphasised the importance of prioritising sustainable feedstocks, integrated land-use planning and coherent governance frameworks that prevent competition with food production while strengthening energy resilience. It was agreed that a decarbonisation policy should position market growth and food security as complementary objectives, ensuring that the development of a competitive SAF industry delivers environmental, economic and social benefits simultaneously.

6. Discussion: Outcomes

Key to understanding next steps following this workshop is to recognise the individuals, the industry and the expertise in the room. As first movers on SAF in Africa, momentum needs to be built on the ground that will then spread to countries across the continent, and the aviation industry as a whole. Several outcomes were drawn from the moderated discussion session and the presentations. The following points were raised and endorsed by participants:

- A national SAF roadmap is an important policy instrument to attract investment and align stakeholders.
- An African airline offtake consortium — coordinated at the regional level — could materially improve the bankability of African SAF projects.
- A continental mapping of refining assets and feedstock supply chains is needed to identify priority investment opportunities.
- Project preparation facilities and blended finance vehicles are the most effective near-term interventions to convert capital potential into deployed capital.
- Just transition regulatory principles should be embedded in SAF policy from inception and cover the entire SAF value chain, including provisions for workforce reskilling and community engagement.

- Harmonisation of SAF certification and sustainability standards across the continent is essential to enable regional supply chains and export to international markets.
- Airports and airlines should be supported with technical assistance to measure, report and reduce their direct greenhouse gas footprint, complementing SAF deployment.
- Airline off-takers should publish long-term SAF demand signals, including volumes, delivery windows and price expectations.
- There is a need to provide technical assistance to governments for the design of national SAF roadmaps and just transition frameworks.
- There is also the need to support country alignment of ICAO and other international frameworks within African national circumstances.
- A decarbonisation policy should position market growth and food security as complementary objectives, ensuring that the development of a competitive SAF industry delivers environmental, economic and social benefits simultaneously.

7. Conclusion

The workshop confirmed that the gap between current global SAF supply and the volumes required to meet ICAO's 2030 objective represents a significant commercial and industrial opportunity for Africa. The continent's natural endowments, existing refining capacity and emerging policy frameworks together create the conditions for a globally competitive SAF industry — conditions that are difficult to replicate elsewhere.

Realising this opportunity requires coordinated action across policy, investment and industry. National SAF roadmaps, regional coordination of demand, project preparation facilities and a deliberate focus on just transition are the most important near-term interventions. With sustained political leadership, the workshop concluded that African SAF can meaningfully contribute to closing the global supply gap, decarbonising aviation and supporting industrial upgrade in low-income economies — reconciling fuel security with environmental sustainability. Most importantly, this group of stakeholders need to build on the expertise and momentum to quickly move action on SAF in Africa forward.

LIST OF PARTICIPANTS

No.	Name	Organization
1.	Prof. Collins Odote	University of Nairobi, Kenya
2.	Prof. Richard Mulwa	University of Nairobi, Kenya
3.	Prof. Simon Chin-Yee	University College London, U.K.
4.	Dr. Roberto Cardinale	University College London, U. K
5.	Ms. Linda Aduda	University of Nairobi, Kenya
6.	Ms. Irene Maithya	Strathmore University, Kenya
7.	Dr. Elizabeth Gachenga	Strathmore University, Kenya
8.	Ms. Amal Amin	University College London, U.K.
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12.	Mr. Duncan Otieno	Duncano Consulting Group
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