

# BEYOND THE REFINERY:

*Could Sustainable Aviation Fuel Become Africa's Next Industrial Ecosystem?*

**TSAVO** | STRATEGIC ADVISORY & CONSULTANCY

BEYOND THE REFINERY: —

## COULD SUSTAINABLE AVIATION FUEL BECOME AFRICA'S NEXT INDUSTRIAL ECOSYSTEM?

From feedstock to flight, the real opportunity is not just producing fuel—but building the ecosystem that creates lasting value.

**Eng. Elizabeth Rogo**  
CEO, TSAVO Oilfield Services  
Dangote, Lekki, Nigeria  
in February 2023.

- FEEDSTOCK SOURCING**  
Local resources, global impact
- RESEARCH & INNOVATION**  
Universities, R&D and pilot plants
- INDUSTRY & INVESTMENT**  
Building capacity, attracting capital
- REFINING & TECHNOLOGY**  
Fuel production with purpose
- AVIATION & MARKET ACCESS**  
Cleaner skies, stronger markets
- ECOSYSTEM & VALUE CAPTURE**  
Jobs. Skills. Prosperity.

“A project creates an asset.  
**An ecosystem creates an industry.**”

INNOVATE | COLLABORATE | INDUSTRIALIZE | PROSPER

**ENERGY. EXPERTISE. IMPACT.**  
DELIVERING VALUE. DRIVING FUTURES.

TSAVO STRATEGIC ADVISORY & CONSULTANCY | STRATEGIC INSIGHT SERIES No. 2 | INSIGHT. STRATEGY. IMPACT. | DELIVERING VALUE. DRIVING FUTURES.

A recent article on South Africa's Natref Refinery sent me down an unexpected path. Initially, I found myself asking a simple question.

If Kenya Airways, “The Pride of Africa”, made history by becoming the first African airline to operate a long-haul flight using SAF, why was the Sustainable Aviation Fuel (SAF) produced elsewhere?

It seemed like a reasonable question since:

- Kenya has the leading agricultural feedstocks for SAF.
- Kenya has strong universities.
- Kenya has world-class engineers.

- Kenya has innovative entrepreneurs.
- Kenya has a vibrant aviation infrastructure.
- Kenya has a regional fuel infrastructure.

And yet, much of the value chain remains outside Africa.

**The more I researched the topic, the more I realized I was asking the wrong question.**

Let's look at the first SAF flight in May 2023 from Africa to Europe using an African airline.

Kenya Airways (KQ), "The Pride of Africa", made the historic and first long-haul flight from Nairobi to Amsterdam in May 2023. ENI provided the fuel that was blended in Italy using Kenyan feedstock.

Kenya Airways has since operated 19 verified SAF flights serving Paris, Amsterdam, London and Cape Town. These flights were notable for featuring locally blended SAF.

The current status of SAF in Africa is that:

- Kenya is advancing plans for local SAF production.
- South Africa is exploring SAF opportunities through existing refining infrastructure.

All that being said, the real question now is far more important.

The issue is no longer whether Africa can participate in SAF. The issue is whether Africa can capture enough of the value.

**Will Africa build an ecosystem around that participation?**

Because there is a significant difference between building a project and **building an ecosystem**.

Africa has never suffered from a shortage of projects. **What we often lack are ecosystems.**

- A project creates an asset.
- An ecosystem creates an industry.
- A project creates jobs during construction.
- An ecosystem creates generations of expertise.
- A project generates economic activity.
- An ecosystem generates economic resilience.

Africa often makes mistakes by discussing projects, while **successful countries discuss ecosystems**.

**Consider Brazil, this biofuels provider became a biofuels leader because it built an ecosystem around biofuels.**

- Farmers.
- Universities.
- Research institutions.
- Technology developers.
- Equipment manufacturers.
- Engineers.
- Financial institutions.
- Government policy.

The result was not merely fuel production. The result was **industrial capability**.

Let's take a concise view because distinction matters:

- Brazil did not build ethanol plants.
- Brazil built an ethanol ecosystem.
- Norway did not build offshore fields.
- Norway built an offshore ecosystem.
- The UAE did not build ports.
- The UAE built a logistics ecosystem.

So, the question then becomes:

### **Can SAF become the anchor for an East African industrial ecosystem?**

Today, no country has established itself as the undisputed leader of commercial-scale SAF production in Africa.

- The industry is still emerging.
- The market is still developing.
- The ecosystem is still being built.
- That creates an opportunity that many mature industries no longer offer.
- An opportunity to shape the industry from the beginning.

The conversation therefore should not stop at refineries. It should include universities.

- Why aren't African universities leading SAF research programmes?
- Why aren't engineering faculties developing pilot projects?
- Why aren't local patents emerging from this opportunity?

**The conversation should also include SMEs (Small & Medium Enterprises).**

*Why shouldn't local entrepreneurs participate in feedstock collection, logistics, testing, certification, digital solutions, carbon accounting, and sustainability services?*

**The conversation should include investors.**

*Why should African capital only participate at the margins of industries that rely on African resources?*

**And perhaps most importantly, the conversation should include industrial policy.**

*How do we ensure that technology transfer, skills development, research collaboration, and local participation become part of the industry's DNA from the very beginning?*

**These are not aviation questions, they are development questions. The same discussion:**

- Applies to critical minerals.
- Applies to renewable energy.
- Applies to oil and gas.
- Applies to artificial intelligence.

Across all these sectors, Africa faces a similar challenge.

- Participation alone is not enough.
- **Participation creates activity.**
- **Value capture creates wealth.**

That is why the SAF discussion matters. Not because of the fuel itself, but because it forces us to reflect on a bigger possibility that excites me - that SAF becomes the catalyst for something bigger.

Imagine:

- Kenyan universities running SAF research programs.
- SMEs collecting and processing feedstocks.
- Airlines committing offtake agreements.
- Engineers developing localized solutions.
- African investors funding pilot projects.
- African patents emerging.
- African certification expertise developing.
- African operators running facilities.

Now, that becomes **an African industrialization story**. Not an aviation story.

This is where the **Dangote Group's Refinery** becomes interesting because it provides a glimpse of what would an African SAF ecosystem could actually look like.

Having visited the Dangote Refinery in Lekki, Nigeria in February 2023, I left with an important realization. Most people see a refinery. What I saw was an ecosystem.

A refinery is simply the anchor asset. Around it sits:

- Engineering.

- Construction.
- Logistics.
- Storage.
- Training.
- Universities.
- Manufacturing.
- Service companies.
- Transport.
- Ports.
- Finance.
- Technology.

That is why a refinery matters - not because it produces fuel, but because it creates an industrial cluster. The new way might be:

- Conventional fuels
- **SAF**
- Renewable diesel
- Sustainable marine fuels
- Petrochemicals
- Hydrogen
- Carbon capture
- Aviation logistics

In other words: **an energy transition refinery** rather than simply a petroleum refinery. Many refiners are asking: How do we remain relevant in a lower-carbon world?

SAF is one answer.

This also raises an important question regarding research and development in Kenyan universities. Why aren't we seeing:

- University of Nairobi
- Jomo Kenyatta University of Agriculture and Technology
- Kenyatta University

announcing:

- SAF research centers?
- Pilot-scale biofuel plants?
- Joint patents?
- Industry-funded SAF laboratories?

That is where Brazil becomes relevant. Brazil did not win because it had sugarcane.

Brazil won because it connected:

**farms → universities → research institutes → industry → government policy.**

That ecosystem is what Kenya should be studying.

If Kenya can supply the feedstocks, finance a refinery, and provide the market through Kenya Airways, why shouldn't Kenyan universities, SMEs, and engineers become part of developing the next generation of SAF technologies as well?

**So, as Africa enters the industries of the future, do we intend merely to participate or do we intend to build ecosystems capable of creating technology, expertise, jobs, intellectual property, and long-term prosperity?**

The answer may determine whether Africa becomes a customer of future industries.

Or one of their architects.

---



*Eng. Elizabeth A. Rogo*  
Founder & CEO, TSAVO Oilfield Services Ltd.

### **Author's Note**

Aviation has fascinated me since childhood. Researching new technology, particularly Sustainable Aviation Fuel as a case study to explore a broader question facing Africa's emerging industries is important. **How do we move beyond individual projects and begin building the ecosystems that create lasting economic value? Let's engage!**

#SustainableAviationFuel #SAF #EnergyTransition #Industrialization #ValueCapture  
#AfricaRising #FutureOfEnergy #Aviation

## Appendix

### Additional Reading & Industry Developments

I would be remiss not to mention during researching on SAF on the continent that Africa is on the verge of its first local production breakthroughs, led by major projects in Kenya and South Africa. Kenya is positioned to become East Africa's primary SAF supplier through **The KQ, Rubis & Dragonfly Consortium** where in May 2026, Kenya Airways (KQ), Rubis Energy Kenya, and technology partner Dragonfly formalized a \$70.5M–\$82.2M joint venture to build Africa's first dedicated, commercial-scale SAF bio-refinery. **Bleriot Group**, a Kenyan startup, announced in early 2026 that it is deploying small-scale, modular SAF plants directly at regional airports, targeting its first commercial quantities of manufactured fuel by 2027.

South Africa is leveraging its massive existing fossil-fuel infrastructure to pivot toward green alternatives. The South African energy giant **Sasol** is pioneering the transition toward local SAF using its proprietary Fischer-Tropsch chemical synthesis. Sasol is engineering a transition at its Natref refinery to co-process and market certified SAF and renewable diesel. Sasol is specifically earmarking global airlines refueling at O.R. Tambo International Airport in Johannesburg.

#### The Role of ENI in SAF Production (Kenya)

Eni is involved in the Kenyan aviation ecosystem through its energy arm, Enilive. The initial flights used ENI's refined Italian "Eni Biojet" fuel to Nairobi. Eni has moved its focus to being a major agricultural and industrial collector in the region.

- Kenya is leading Africa in producing vegetable oil for Eni's biorefineries.
- The locally collected raw material is shipped to Eni's specialized biorefineries in Gela and Venice, Italy, and converted to SAF. Eni is firmly embedded in the global supply chain that international airlines rely on.

#### Managing the Import Cost Hurdle

A major reason Kenya Airways is investing in its startup is the high cost of logistics. Importing refined SAF from European suppliers can cost African carriers up to five times more than standard jet fuel.

Sources:

- The Frontrunners Developing African SAF Production1. Kenya (The Bio-Refinery Path)
- South Africa (The Synthetic & Co-Processing Path)
- Sasol (Natref Refinery)
- Eni.com
- corporate.kenya-Airways.com
- Business Insider Africa