



Funded by the European Union



SAF is still a nascent market but we expect an increase in production capacity and airlines have committed to significant off-takes



Get involved
For more information or to get involved fill in an expression of interest form online at:
http://bit.ly/Waste2Wing_Survey
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We aim to revolutionise the aviation industry with a sustainable fuel that is more efficient and burns cleaner.



Biomass Supply Route

- The mapping of all suitable biomass waste streams in South Africa proved that local biomass availability is not a constraint.
- A sustainability risk assessment identified that municipal organic waste in the form of garden waste has the lowest sustainability risk, followed by managed removal of IAPs and forestry waste from sustainable forestry operations.
- Pre-treatment options for biomass transportation and co-gasification i.e. simple chipping was identified as the most cost-effective.
- Transport options and waste biomass supply curves with optimally located densification centres.

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Waste to Wing - Greening African Aviation

The Waste to Wing project aims to prove the feasibility of a waste-based Sustainable Aviation Fuel (SAF) industry in South Africa. The project will enable 25 SMMEs within a new Sustainable Aviation Fuel supply chain to adhere to global aviation industry sustainability standards.

This ensures that biofuel is used in a manner that sustains food security, biodiversity, water, land, and labour rights.

SWITCH Africa Green Phase II is an EU funded programme jointly implemented by UN Environmental Programme and EU in 7 countries in Africa. The overall objective of SWITCH Africa Green is to support countries in Africa to achieve sustainable development by engaging in transition towards an inclusive green economy which has the potential to generate growth, create jobs and reduce poverty.

SAF is a drop-in fuel for aviation that can be used in existing infrastructure and engines

Sustainable Aviation Fuel

The project assumption is that information on the availability of sustainable waste biomass will motivate commercial fuel producers to enter the SAF market. The evaluation of sustainable supply of waste biomass sources was undertaken by appointed specialists in 2018. The studies confirmed the availability of biomass waste for production of meaningful amounts of SAF in South Africa, illustrating achievable supply curves to a central processing facility at Sasol Secunda.

The Supply Chain

A biomass based SAF supply chain represents a significant opportunity for SMMEs (Small Medium and Micro Enterprises). To this end, Fetola will be launching a new biomass economy incubator in 2019 for 25 SMMEs who will participate in the supply and beneficiation of waste feedstock aligned to this future SAF industry.

Feedstock Supply and Sustainability

The first phase of Waste to Wing analysed the availability and cost of waste biomass needed to feed an industrial scale SAF processing plant. This included an overview of available biomass waste streams in South Africa:

- Agricultural and plantation forestry residues;
- Municipal garden waste; and
- Invasive alien species

The most efficient and cost-effective transportation options were identified, as well as the minimum cost of logistics and maximum greenhouse gas (GHG) savings. Opportunities for SMMEs along the optimised supply routes include harvest, collection, pre-treatment, and transportation to a central processing facility.

