



RSB®

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SAF Certification Process

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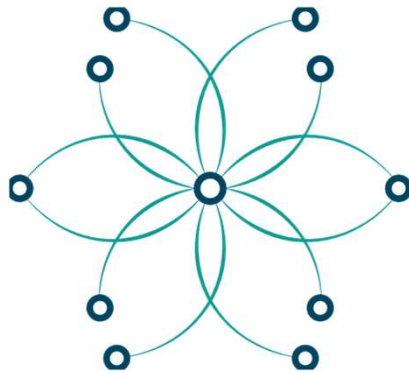




Introduction to RSB



Our mission



To advance the just and sustainable transition to a net-positive world, in collaboration with global partners from industry, civil society, policymakers and academia.

Our activities



Certification

Providing clarity on what good looks like



Programmes

Building capability to make change happen



Community

Enabling collaboration for greater impact



The world we are trying to create

A collaborative network
that accelerates
the just and sustainable
transformation
to a bio-based and circular
economy ...



... where climate change has
been mitigated,
biodiverse ecosystems
have been restored,
and livelihoods
have been enhanced.



Holistic approach to support creating a positive impact





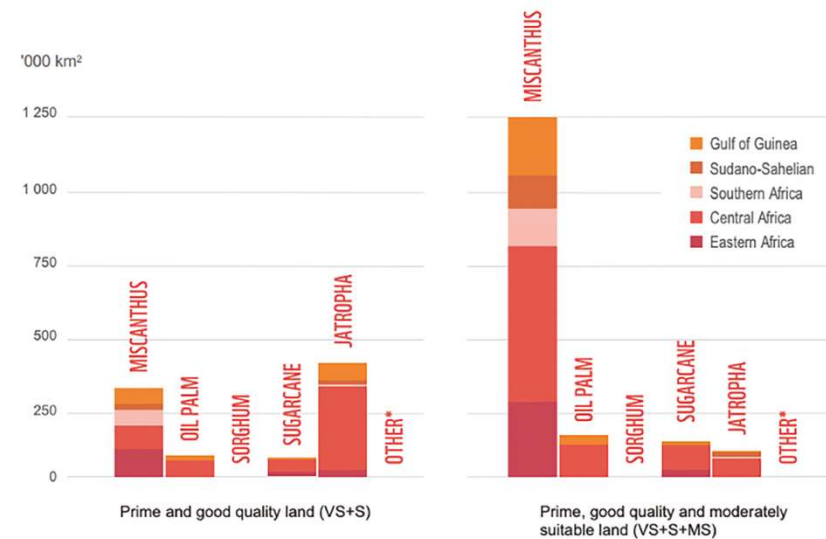
RSB & SAF in Africa



Report on sustainable Aviation Fuel Potential in Sub-Saharan Africa

- International Institute for Applied Systems Analysis (IIASA) assesses pathways towards large-scale sustainable biofuel development in Sub-Saharan Africa.
- The report “Taking off: Understanding Sustainable Aviation Biofuel Feedstock Potential in Sub-Saharan Africa”, is based on a spatially detailed resource assessment for different biofuel feedstocks.

Figure 8: Geographical distribution of best-performing RSB-compliant feedstocks on REMAIN land under current conditions



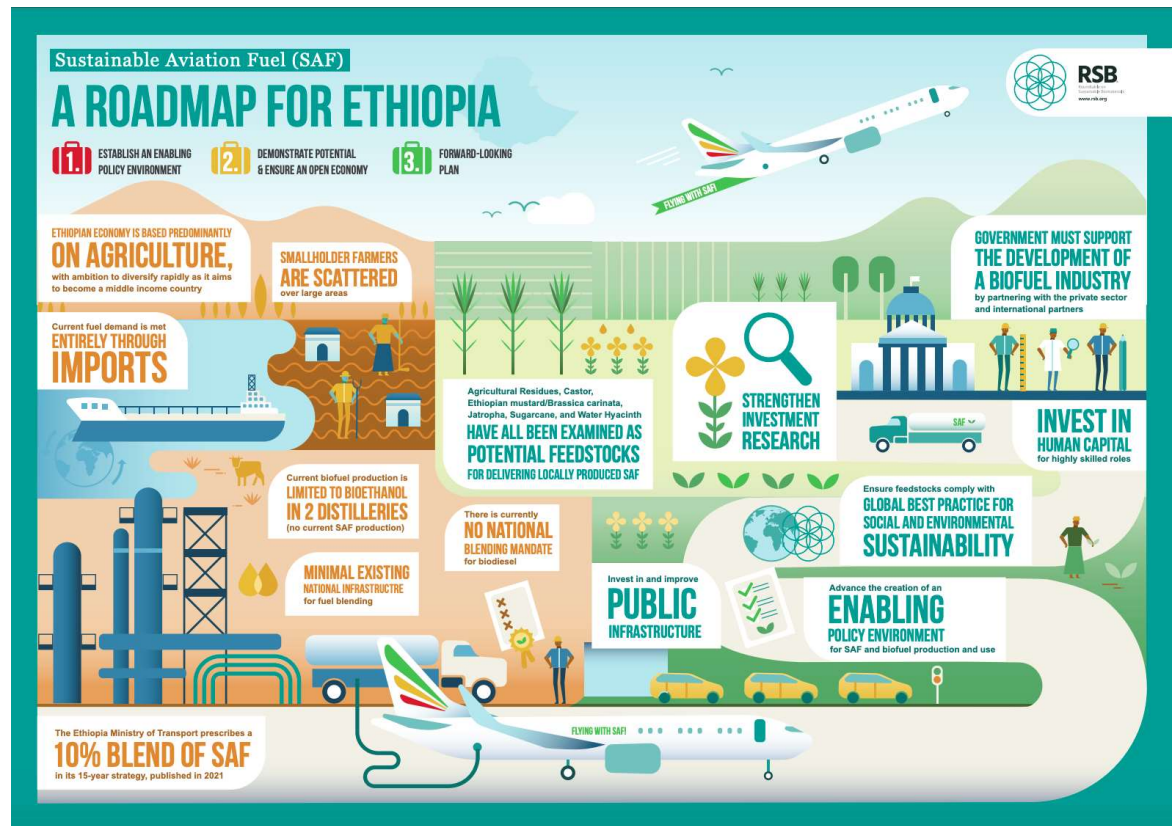
* These extents include small amounts of Solaris tobacco that meet the GHG savings criterion in southern Africa.
Source: Own calculations



Fuelling the Sustainable Bioeconomy: Africa project outputs

National SAF roadmap - Ethiopia

- To explore and advance Ethiopia's capacity to produce biofuels for use as Sustainable Aviation Fuel (SAF), RSB initiated the development of a 10-year SAF Roadmap for the country – with a report detailing a roadmap for SAF development in the country.



Fuelling the Sustainable Bioeconomy: Africa project outputs

Pre-feasibility study on Brassica Carinata as sustainable feedstock for SAF - Ethiopia

- The SAF roadmap has identified Brassica carinata as one of the potential feedstocks for SAF production in Ethiopia.
- Findings of the pre-feasibility study show the calculated cost of cultivation of seed production in Ethiopia is competitive with similar costs in other regions of the world

Pre-Feasibility Study for the Production and processing of the Brassica carinata (Ethiopian Mustard) crop for Biofuels in Ethiopia

ROUNDTABLE ON SUSTAINABLE BIOMATERIALS

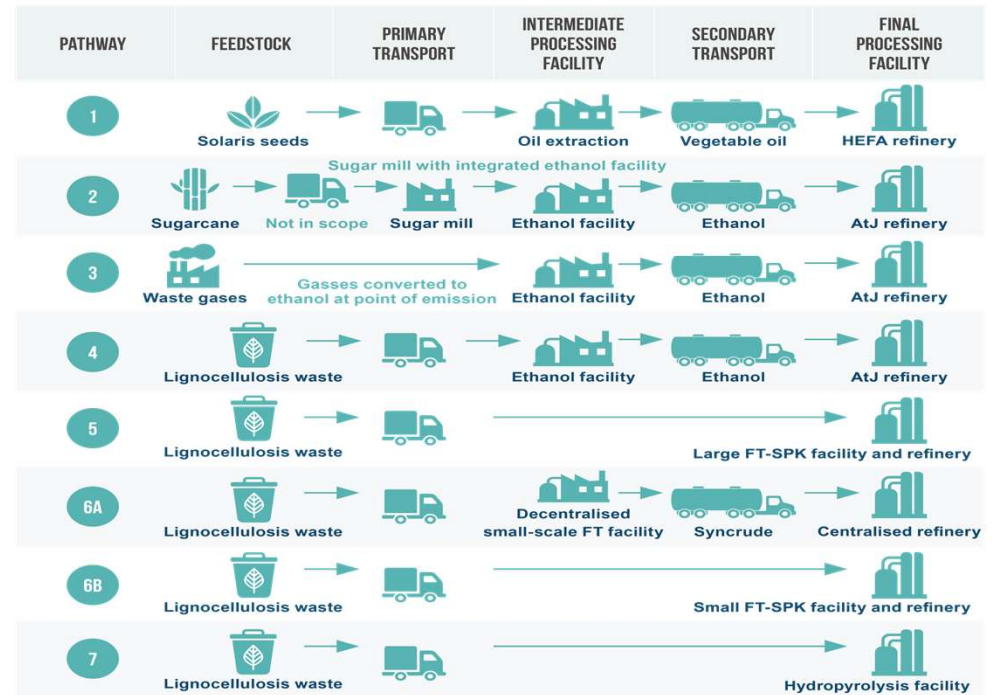


Fuelling the Sustainable Bioeconomy: Africa project outputs

Report on SAF production – South Africa

Feedstock source supply chain diagrams for SAF pathways in South Africa

- WWF South Africa supports RSB in developing a techno-economic model of potential SAF pathways in South Africa.
- The report: *"Fuel for the future: A blueprint for the production of sustainable aviation fuel in South Africa"* finds that development of a new domestic SAF industry could be a pillar of South Africa's low-carbon economy and play an important role in a just energy transition.



Fuelling the Sustainable Bioeconomy: Africa project outputs

Invasive Alien Plants as sustainable feedstock for SAF – South Africa

- More than 10% of South Africa's land mass is covered by IAPs to some degree and they use up to 6% of the country's fresh water, which can potentially increase up to 16% without eradication measures, with an increase rate of 5-10% every year in land coverage.
- RSB has developed guidance to unlock the significant potential of invasive alien biomass to feed the biofuel and bioenergy markets



Fuelling the Sustainable Bioeconomy:

SAF trainings

Ethiopia

- Developed and delivered SAF and carbon offset courses for the Ethiopian Airlines Aviation University
- RSB plans to offer SAF courses on online platform for a wider reach - RSB academy

South Africa

- Pilot of the Sustainability certification approach on Invasive Alien Plants (IAPs) and

Current

- SAF roadmap in Togo and Angola



ICARUS Project – SAF Development in Africa

International cooperation for sustainable aviation biofuels

- *ICARUS* is an EU-funded project dedicated to advancing sustainable aviation fuel (SAF) production
- There has been limited progress on SAF development in Africa compared to all other region
- As part of the project's outreach, Icarus will aim to liaise with key stakeholders in African countries and organise dedicated guidance for developing the sector in Africa.
- The project aims to organise stakeholder meetings/webinars on SAF policies and Technological aspects to define SAF in the region








RSB Certification approach



Certification schemes

	 RSB Global Fuels & Advanced Products	 RSB EU RED	 RSB CORSIA	Japan FIT
Sustainability requirements	RSB Principles and Criteria			
Type of claim	Voluntary	Regulatory; linked to EU RED targets	Regulatory; linked to ICAO CORSIA targets	Regulatory; linked to METI targets
Scope	Fuels and materials produced from biocircular feedstock	Renewable fuels and energy produced with bio-based feedstock and RCF/RFNBOs	SAF from bio-based feedstock and waste gases	Bio-based wastes and residues from agri industry for energy production
Renewable input allocation	Across all outputs, based on energy or economic value. Flexible attribution options.	Across all outputs, based on energy value (LHV).	Across all outputs, based on energy value (LHV).	Across all outputs, based on energy value (LHV).
GHG reduction threshold	Fuel: 50% (60% after 2015) Products: 10%	60% (65% after 2021) RCF/RFNBO: 70%	50% core LCA (10% LCA+ILUC)	50% (70% after 2030)
Fossil baseline	Fuel: 90g CO ₂ e/MJ Products: fossil comparator	94g CO₂e/MJ RCF/RFNBO:	89g CO ₂ e/MJ	180 g CO ₂ /MJ electricity
Book and claim allowed?	Yes	No	No	No



Pillars of Sustainability Certification

Management System

- **Clear responsibilities of staff pertaining to all relevant RSB requirements** (e.g., record keeping, GHG calculation, forwarding of sustainability documents)
- **Yearly internal audit** conducted and results kept for check by auditor
- **Management system fit for purpose**

Traceability and chain of custody system

- **Record of documentation** (e.g. Proofs of Sustainability documents, delivery documents, contracts, weighbridge tickets, etc.)
- Fit-for-purpose **traceability and mass balance system**

GHG emissions calculation

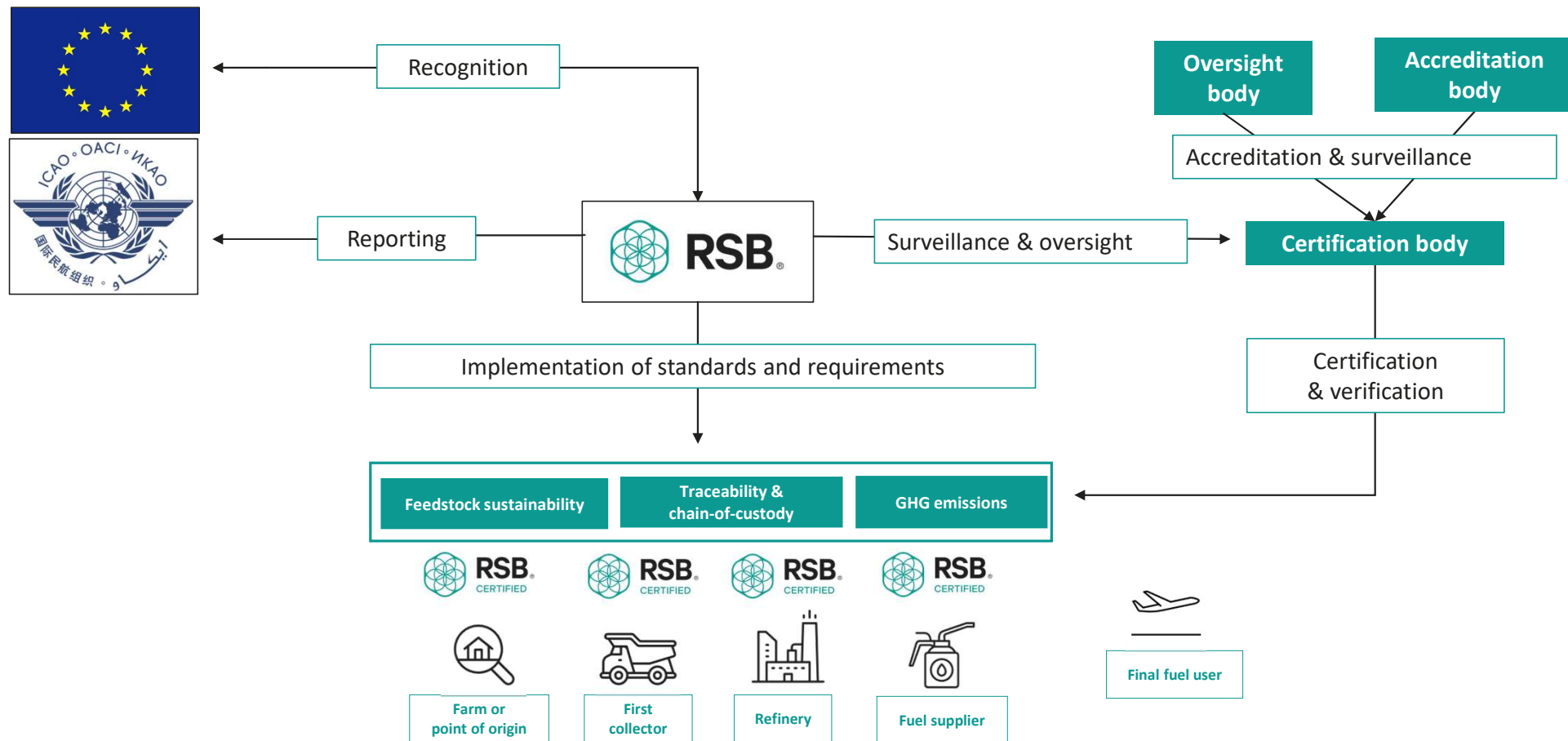
- **Availability, completeness and correctness of GHG calculation**
- Appropriate use of **emission factors**
- **Correct indication of GHG emission value on sustainability documents** (e.g., on Proof of Sustainability)

Sustainability

- **Meet the RSB 12 Principles and Criteria – Industrial and Agricultural sites**
- Meet social, legal & rights-based, environmental and management practices for sustainable production in a bio-based supply chain



The Certification Ecosystem: Fuels Example



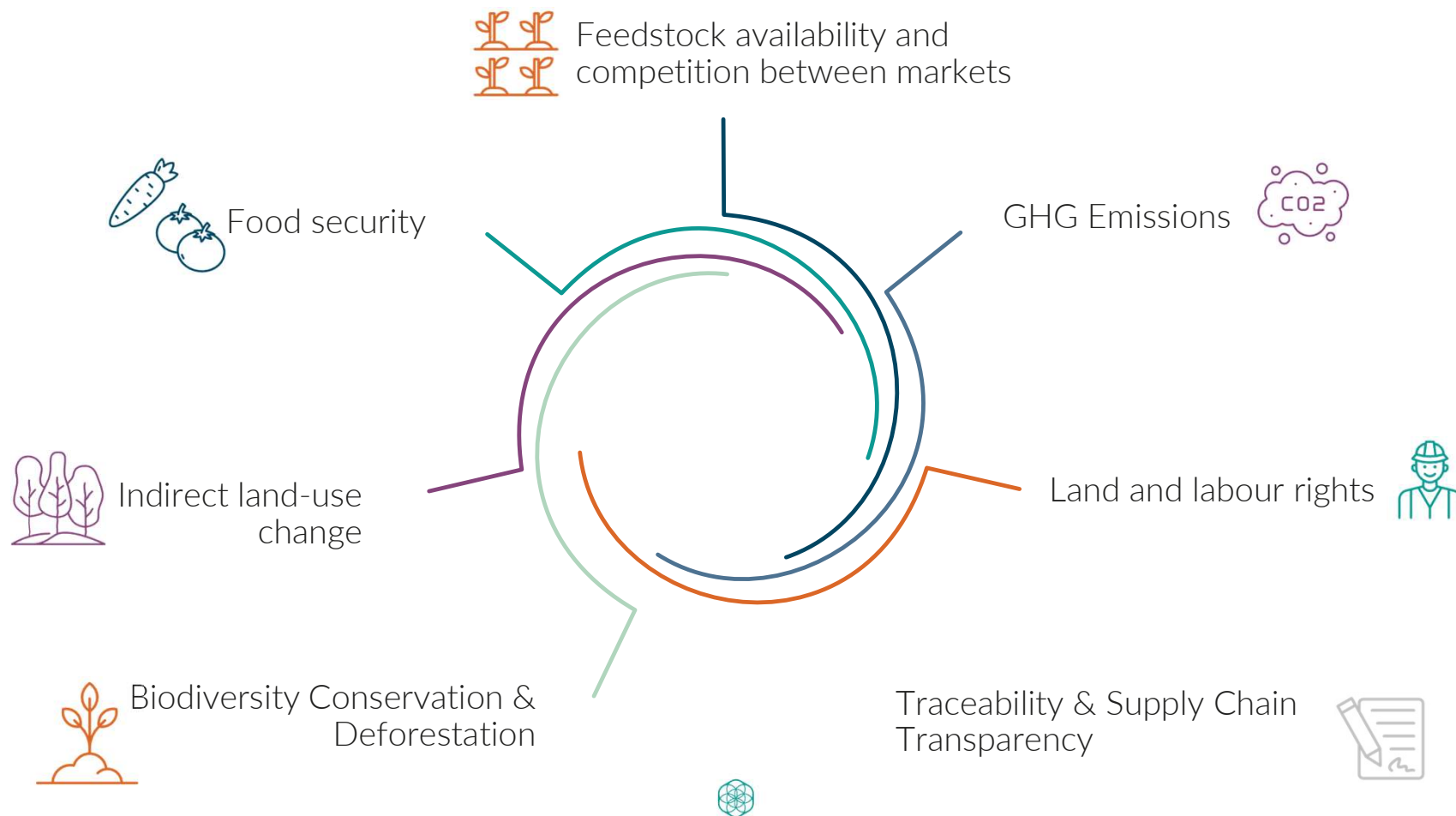
Participating Operators (POs)



- ❁ **Primary Biomass Producer:** Organisation that applies for certification for a specific activity that includes the production of crops or woody material, for example farm operators or plantation owners.
 - ❁ **Points of Origin:** The generator, such as companies, farms, forest areas, residences, industries and commercial facilities of end-of-life-products, production residues or other waste materials.
 - ❁ **First Collectors:** Operator that receives end-of-life-products, by-products or production residues from points of origin.
 - ❁ **Industrial Operators:** Organisation that applies for certification for a specific activity that includes feedstock processing and/or the production of intermediary products, fuels or advanced products.
-
- ❁ **Mechanical operator:** Subgroup of industrial operators only conducting mechanical or physical processing, (i.e. mixing, assembling, sorting, moulding, cutting, plastics extrusion).
 - ❁ **Trader:** Organisation that applies for certification for a specific activity that includes buying and selling of materials or products, including raw materials, intermediates and final products.



Key issues on SAF Sustainability



Overview of the certification process

2: APPLY FOR CERTIFICATION

- Online application
- Select an auditor (certification body) and agree on an audit date
- RSB only 2 weeks public comment period

4: THE AUDIT

- Desk-based preparation
- On-site evaluation
- Identification of non-conformities, if any
- Time to address non-conformities
- SCS certificate issued
- Public audit summary published on SCS website



1: DEFINE YOUR RSB CERTIFICATION SCOPE

- Define the certification scope
- Select the certification scheme/s applied (EU RED and/or CORSIA)

3: PREPARE FOR AN AUDIT

- Conduct a risk assessment
- Conduct a self-evaluation against applicable requirements
- Develop a sustainability approach
- Develop Chain of Custody procedure
- Perform GHG calculation

5: ONGOING

- Annual audits depending on your SCS











Sustainability Requirements









CORSIA themes are covered by the P&C

GHG	CORSIA SAF should generate lower carbon emissions on a life cycle basis = 10% reduction.	RSB Principle 3	
Carbon stock	CORSIA SAF should not be made from biomass obtained from land with high carbon stock.	RSB Principle 7	
Water	Production of CORSIA SAF should maintain or enhance water quality and availability	RSB Principle 9	
Soil	Production of CORSIA SAFs should maintain or enhance soil health.	RSB Principle 8	
Air	Production of CORSIA SAF should minimise negative effects on air quality	RSB Principle 10	
Conservation	Production of CORSIA SAF should maintain biodiversity, conservation value and ecosystem services.	RSB Principle 7	



CORSIA themes are covered by the P&C

Waste & chemicals	Production of CORSIA SAF should promote responsible management of waste and use of chemicals.	RSB Principle 11	
Human rights	Production of CORSIA SAF should respect human and labour rights.	RSB Principle 4	
Land-use rights	Production of CORSIA SAF should respect land rights and land use rights including indigenous and/or customary rights.	RSB Principle 12	
Water-use rights	Production of CORSIA SAF should respect prior formal or customary water use rights.	RSB Principle 9	
Local development	Production of CORSIA SAF should contribute to social and economic development.	RSB Principle 10	
Food security	Production of CORSIA SAF should promote food security in food insecure regions.	RSB Principle 6	





Traceability and Chain of Custody



What is a Chain of Custody system?

The RSB Chain of Custody requires:

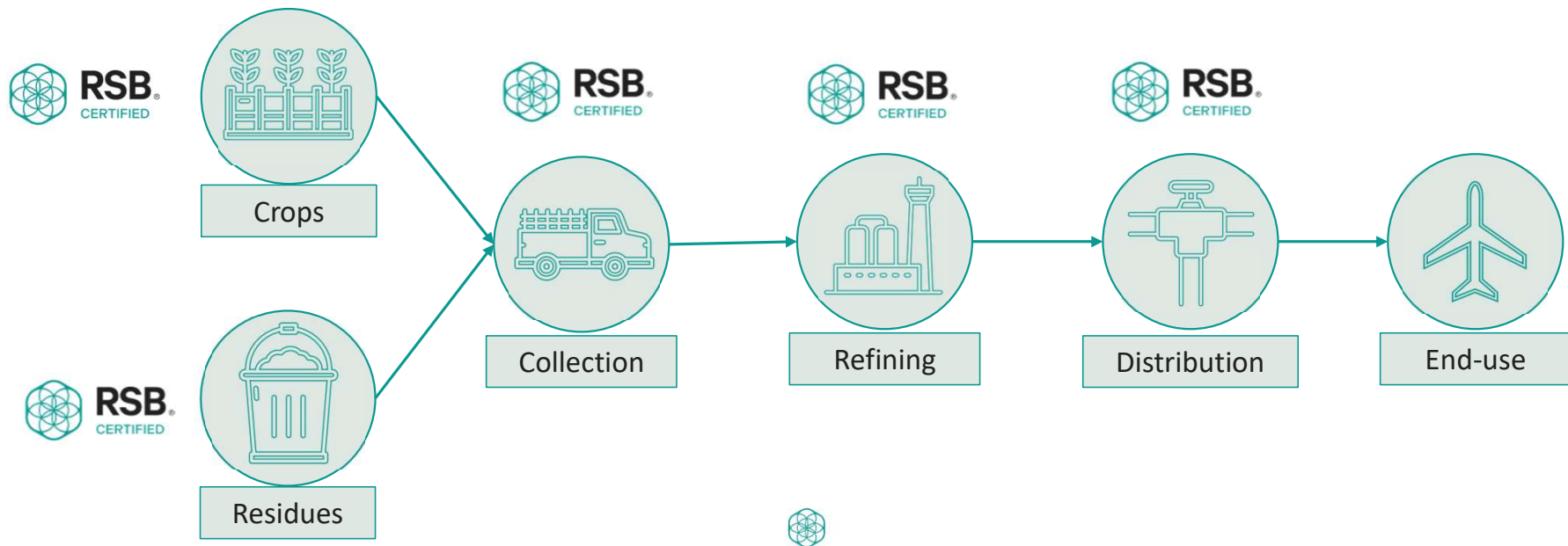
- a robust and transparent system that provides traceability for the RSB Certified Material (e.g. biomass, chemical intermediaries, biofuel etc.) sourced from and/or delivered to other operators in the supply chain;
- that only certified operators associated with the RSB can make compliance claims with products that are compliant with the RSB Standards; and
- continuous documentation along the supply chain, which allows for identification of RSB compliant product in acquiring, handling and forwarding of product.



Chain of Custody system

The entire supply chain must be certified for the final product to carry a claim.

Each movement of the product along the supply chain needs to be accounted for and tracked, this is called the Chain of Custody.



Chain of Custody system models

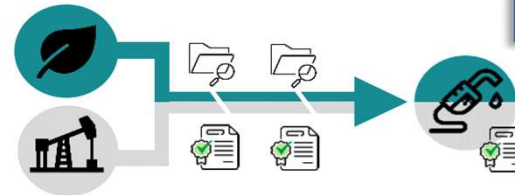
Identity preservation



Delivers consignments physically containing **100% certified products** from a **uniquely identifiable source**

PoS

Mass balancing

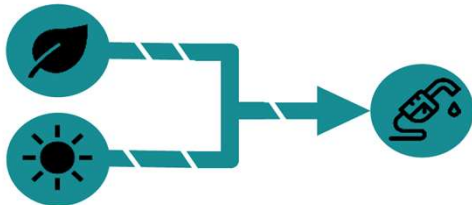


Physical product and **sustainability information** are **coupled** when they are traded between parties. Products with different sustainability characteristics **can be physically mixed**, but are kept **administratively segregated**.

PoS

EU RED +
CORSlA
eligible

Segregation



Delivers consignments physically **containing 100% certified products**; but the **exact origins** of the material in the consignment **can not be traced**.

PoS

Book & Claim*



Trade of **physical products** is **completely decoupled** from the trade of **sustainability certificates**.

GO or
GO/PoS

Voluntary
market only



Thank you!



Please get in touch with me at yitatek.yitbarek@rsb.org

