

2024 ICAO REGIONAL SEMINAR ON ENVIRONMENT

In collaboration with



NACC & SAM Regions

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Asunción, Paraguay



ICAO

ENVIRONMENT



ACT SAF

CORSIA



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Needs and opportunities in financing aviation decarbonization projects

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Global Enterprise Sustainability | The Boeing Company



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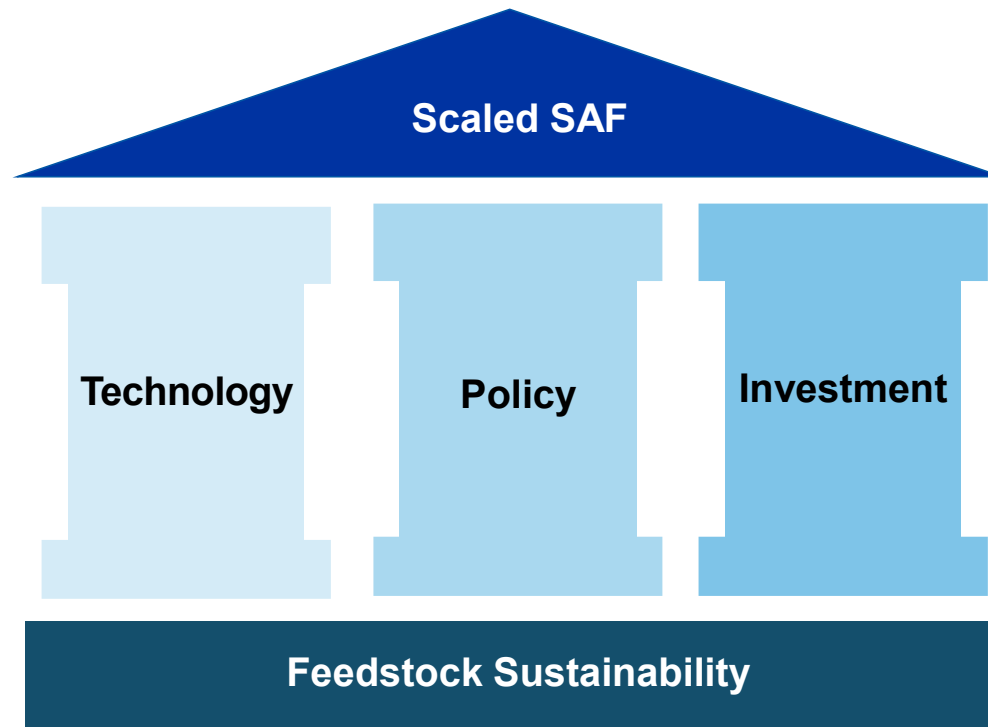
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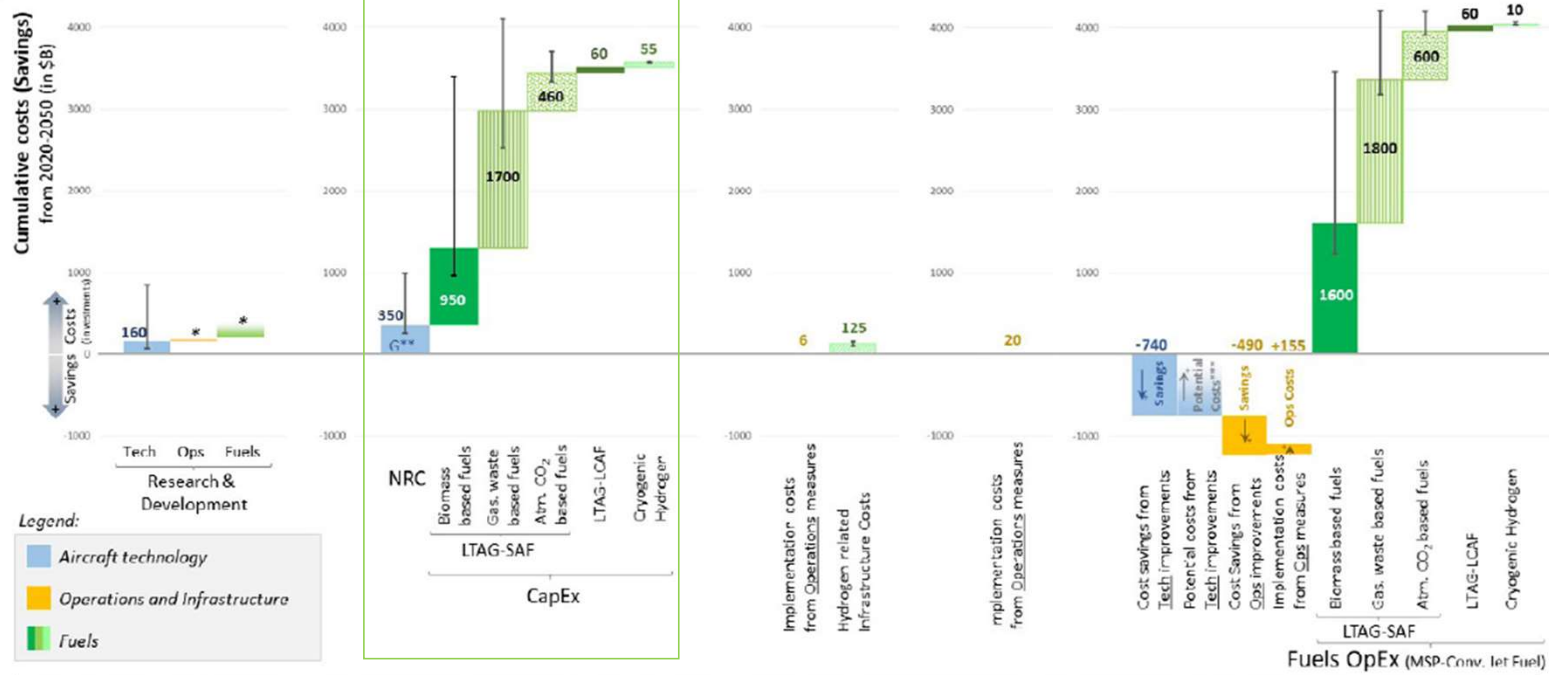
SAF SCALE UNLOCKS

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Costs of LTAG

IS3 LTAG Integrated Scenario 3



United Sustainability Fund

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- Boeing have invested in **this United Airlines Ventures Sustainable Flight Fund (SFF)**
- The initial round of funding, estimated to be between \$100 and \$150 million, will include contributions from inaugural corporate partners United, Boeing, Air Canada, Honeywell, JPMorgan Chase and GE.
- Through this collaboration with United and its partners, Boeing is investing in **SAF research, production and technology.**
- This is a first-of-its-kind investment fund designed to support start-ups and companies focused on decarbonizing air travel.



Clear Sky / Firefly

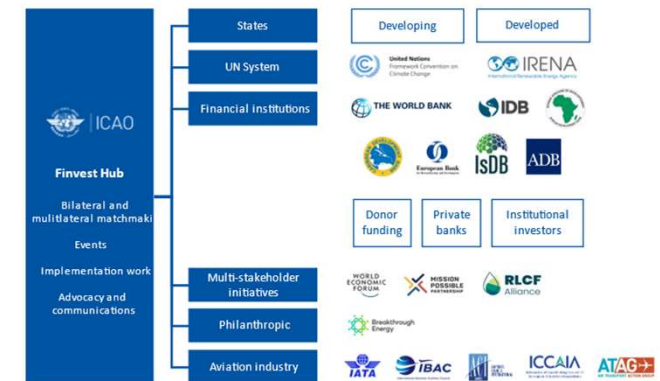
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- Boeing announced a partnership with **Clear Sky**, an investment company dedicated to aviation sustainability, to accelerate sustainability solutions for aviation.
- As an initial project, the companies will help in testing and advancing **Firefly Green Fuels'** cutting-edge technology to increase SAF production in the UK.
- **Boeing and Clear Sky** are embarking on an **international investment partnership** focused on sustainability solutions that span aviation and adjacent industries such as chemicals and materials.
- Areas of focus include SAF, alternative propulsion, carbon removal and advanced materials and recycling.



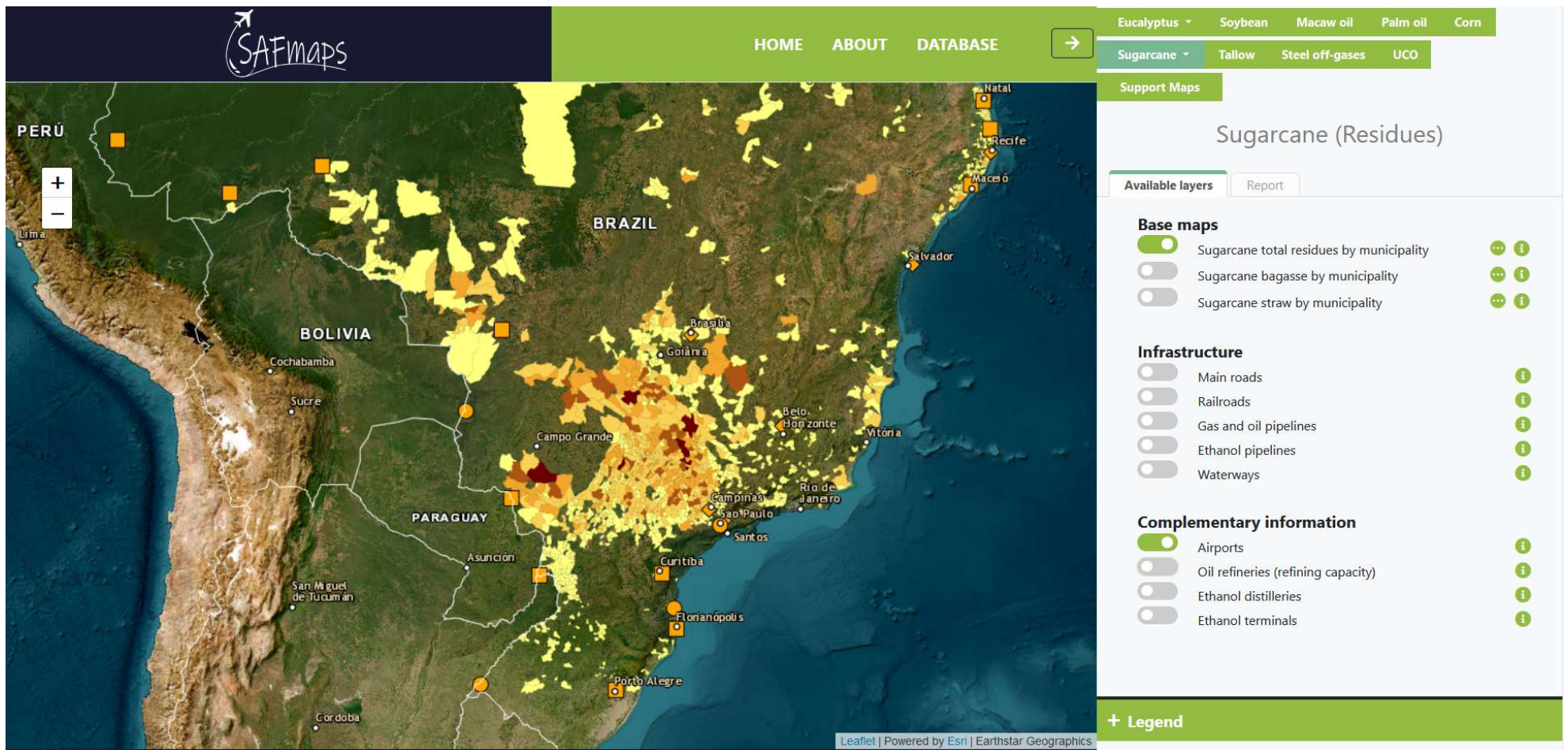
FinVest Hub

- The ICAO **Finvest Hub**’ aims to facilitate access to public and private investment capacities and funding from financial institutions, with a **focus on developing countries and States** with particular needs, for projects that contribute to the decarbonization of international aviation.
- Special attention on least developed countries.
- Boeing is supportive of the concept of FinVest as it potentially can help unlock SAF project funding that would otherwise get stuck.
- For example we have supported **SAF roadmaps** around the world to identify potentials in feedstock supply and projects. These will need the finance to help implement (FinVest as an example).



SAF Maps project

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2030 – 5% CO₂ reduction from SAF and LCAF

What do the numbers mean?

Assume:
~360Mt jet fuel demand in 2030

24.0 Mt
SAF/LCAF delivered in 2030
(WAERF~75%)

~6.7%
of projected global jet fuel

ICAO forecast for production:

- **16.9 Mt in 2030 (high+)**
Additional 91 announcements since January 2023. Aggregate totaling 12Mt without a success probability applied.

Total facilities required (using ICAO rule of thumb assumptions)

- **36 @ ~800,000 tonne output per annum by 2030**

Demand for production from policy measures*:

- **~ 20 Mt in 2030**
**US Grand Challenge, ReFuel EU, UK, China, Turkey, etc
Implementation risk exists with some policies.*

Demand from voluntary initiatives

- **4.0(?) Mt in 2030**
**FMC, Scope 3 initiatives and other?*

Estimated cost:

- **~\$20 bn** capital for plant construction

SAF mix assumption:

- HEFA: 84%
- AtJ: 7%
- FT: 7%
- PtL: 2%
- **\$276m / month**

Reasonableness / pathway to NZE 2050

- Some airlines and States have committed to 5%-10%, while several others are starting from 0%
- **Is it the right mix of realism and ambition?**

Common views on SAF financing

- We will need a huge amount of financial resources .
- Many innovation funds and venture capital firms are looking to invest in breakthrough technologies related to sustainable energy and aviation.
- Lack of financial resources isn't the main issue for SAF deployment.
- Producing SAF needs to make sense from the investment side. Price certainty and duration of offtakes is a key factor. Need a stronger signal from demand (regulation?)
- Larger uncertainty in the feedstock cost. Will it be considered sustainable by regulations now and in the future?
- Financing institutions need better understanding of technology and appetite for this type of risk, specially if you compare with risks in other industries.
- We will need more predictable, replicable, and scalable projects.
- Risk sharing mechanisms among the value chain.

Thank You

