

AVIATION CO₂ REDUCTIONS



STOCKTAKING SEMINAR
TECHNOLOGY · OPERATIONS · SUSTAINABLE AVIATION FUELS



Sustainable Aviation Fuels (SAF) – Introduction and Frequently Asked Questions

Bruno Silva
Environment Officer – ICAO



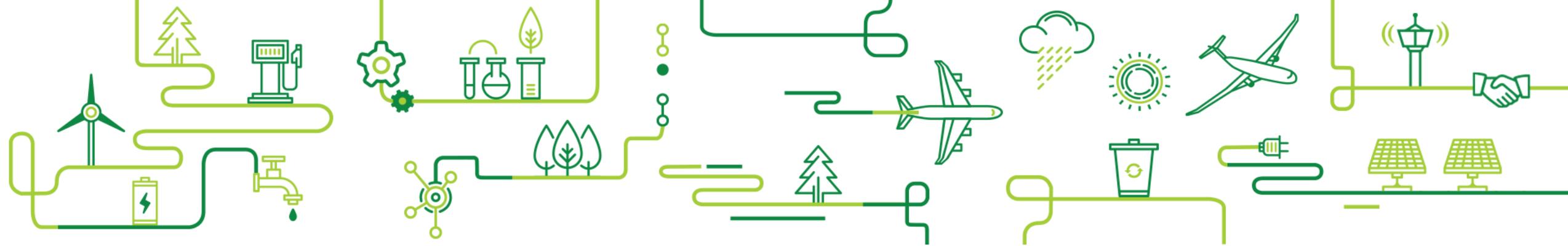
What is ICAO doing to foster SAF deployment?

ICAO Conference on Aviation Alternative Fuels in Mexico City (CAAF/2)

(11 to 13 October 2017) - <https://www.icao.int/Meetings/CAAF2/>



- Endorsement of the 2050 ICAO Vision for Sustainable Aviation Fuels
- A quantified long-term goal for SAF to be defined by 2025
- A **Stocktaking process** will support the definition of this goal



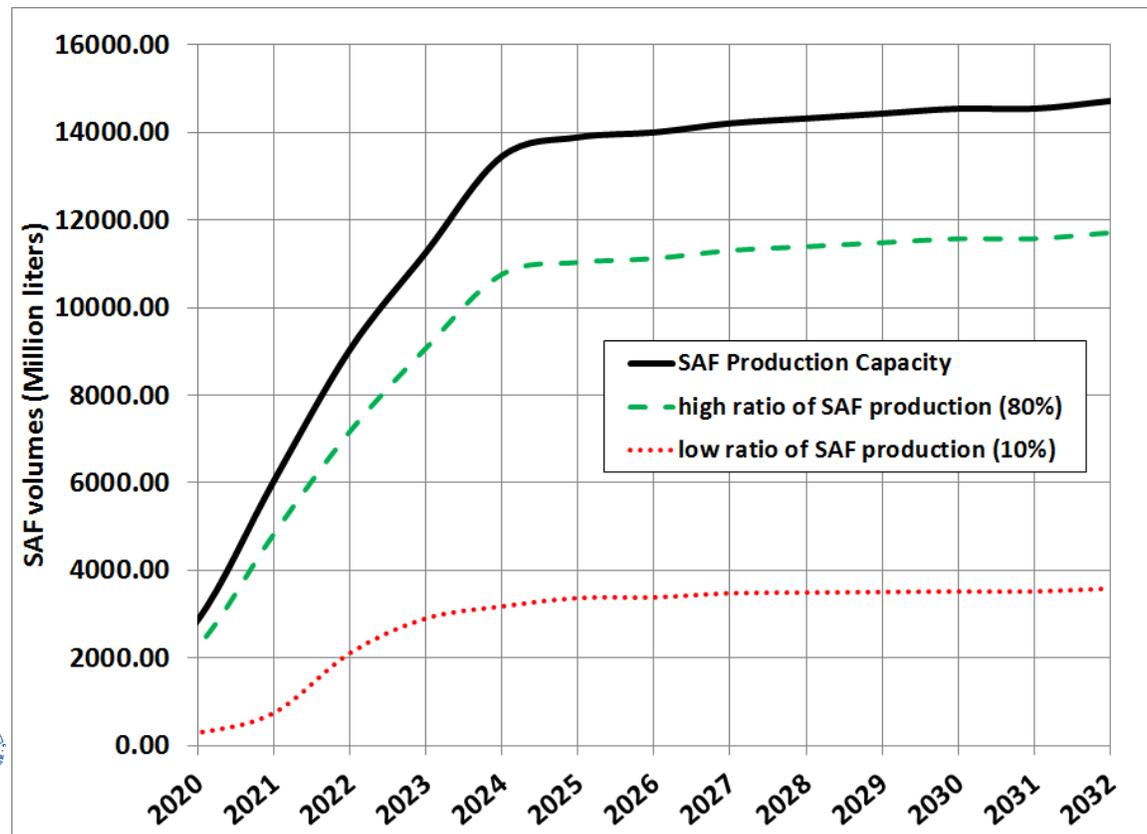
Current SAF Stocktaking Results

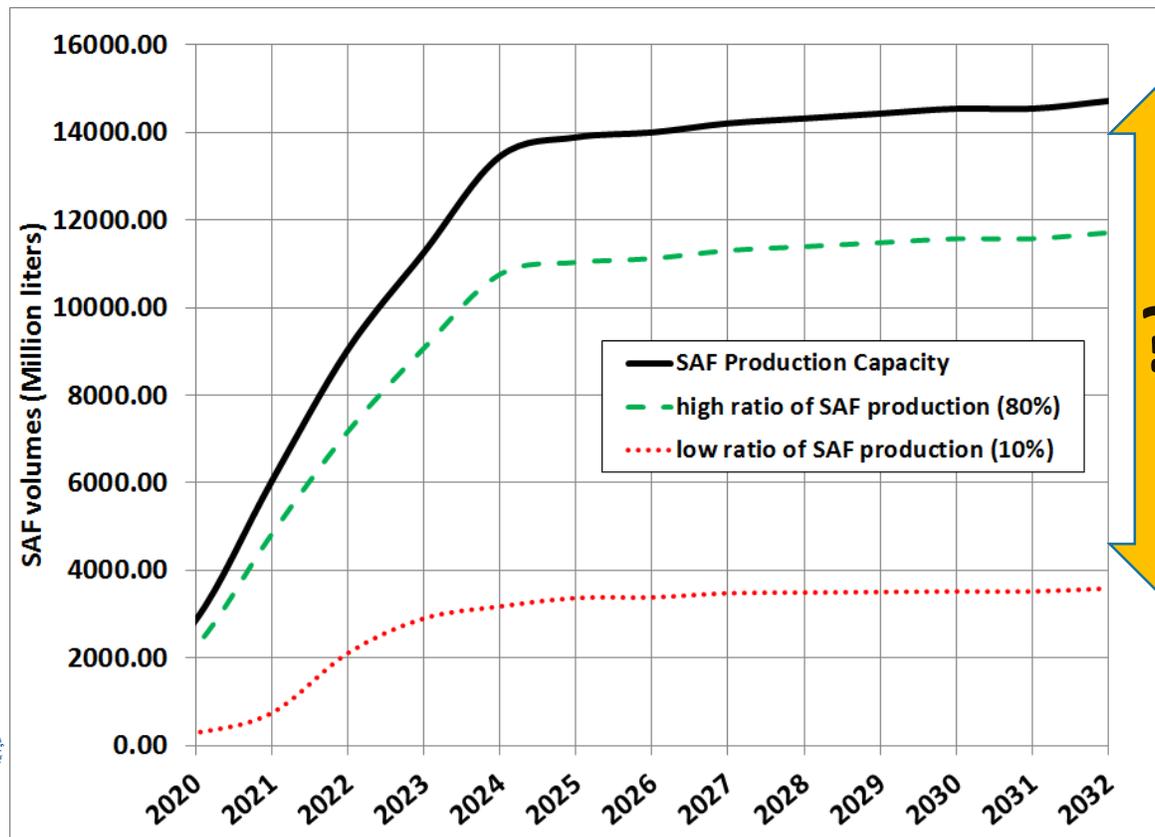
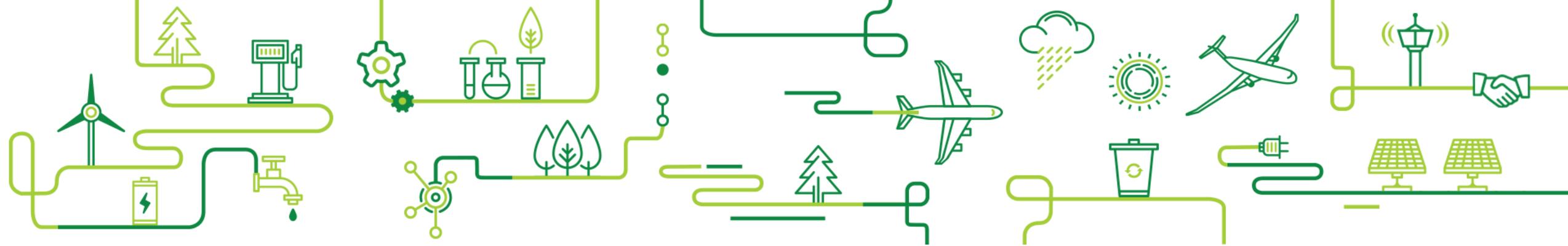
11.8 Billion litres (14.7 Million Tonnes) of SAF production capacity available by 2032

Results based on:

- Stocktaking information
- Publicly available announcements

Results will be continuously updated and published on the ICAO website.





ICAO Vision has a view to include a quantified proportion of SAF use by 2050.

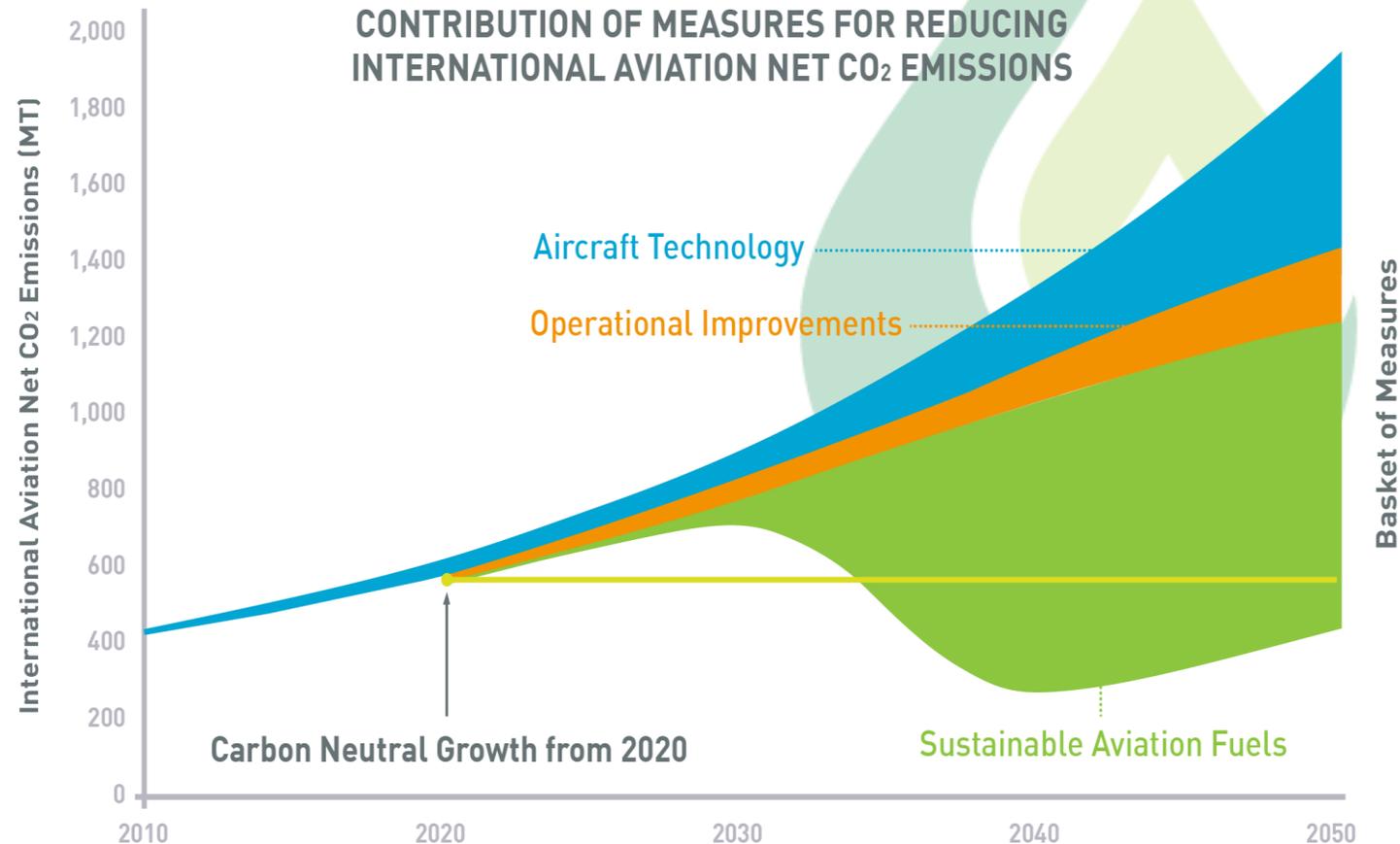
One major uncertainty exists :

What will be the share of SAF production compared to other fuels?

CAAF/2 encouraged States to develop **policies that promote the use of SAF**, or promote policies that strive to establish a **level playing field** between aviation and other transportation sectors on the use of sustainable fuels.

ICAO Environmental Trends

Includes the potential for SAF emission reductions, and associated costs



Emission reductions from SAF: up to 63% reduction*, under these assumptions:

- 100% replacement with SAF.
- substantial expansion of the agricultural sector.
- approximately 170 new large bio-refineries to be built every year from 2020 to 2050, at an approximate capital cost of US\$15 billion to US\$60 billion per year

*www.icao.int/Meetings/CAAF2/Documents/CAAF.2.WP.006.4.en.Revised.pdf



ICAO Capacity Building and Assistance Projects

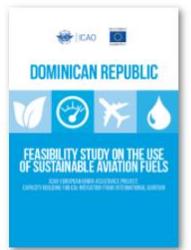
ICAO-EU project Capacity Building for CO₂ Mitigation from International Aviation

ICAO-UNDP-GEF project *Transforming the Global Aviation Sector: Emission Reduction from International Aviation*

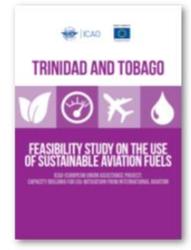


Four SAF Feasibility Studies:

- Burkina Faso
- Trinidad and Tobago
- Kenya
- Dominican Republic



Dominican Republic



Trinidad and Tobago



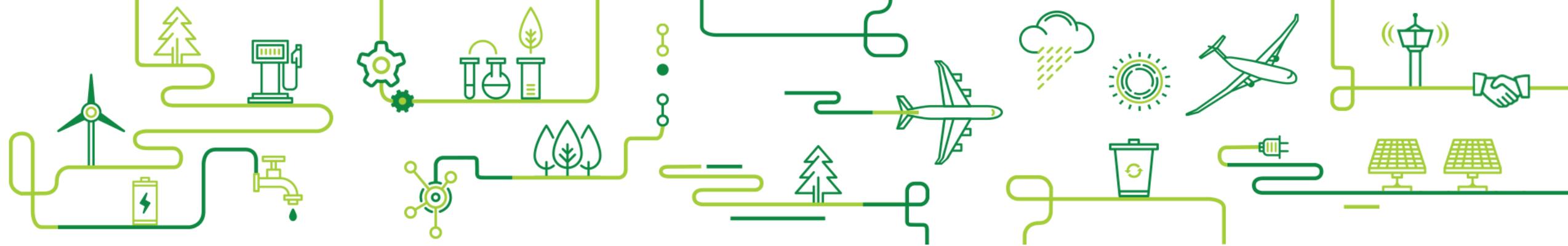
Kenya



Burkina Faso

- Development of guidance documents, including a Sustainable Aviation Fuels guide





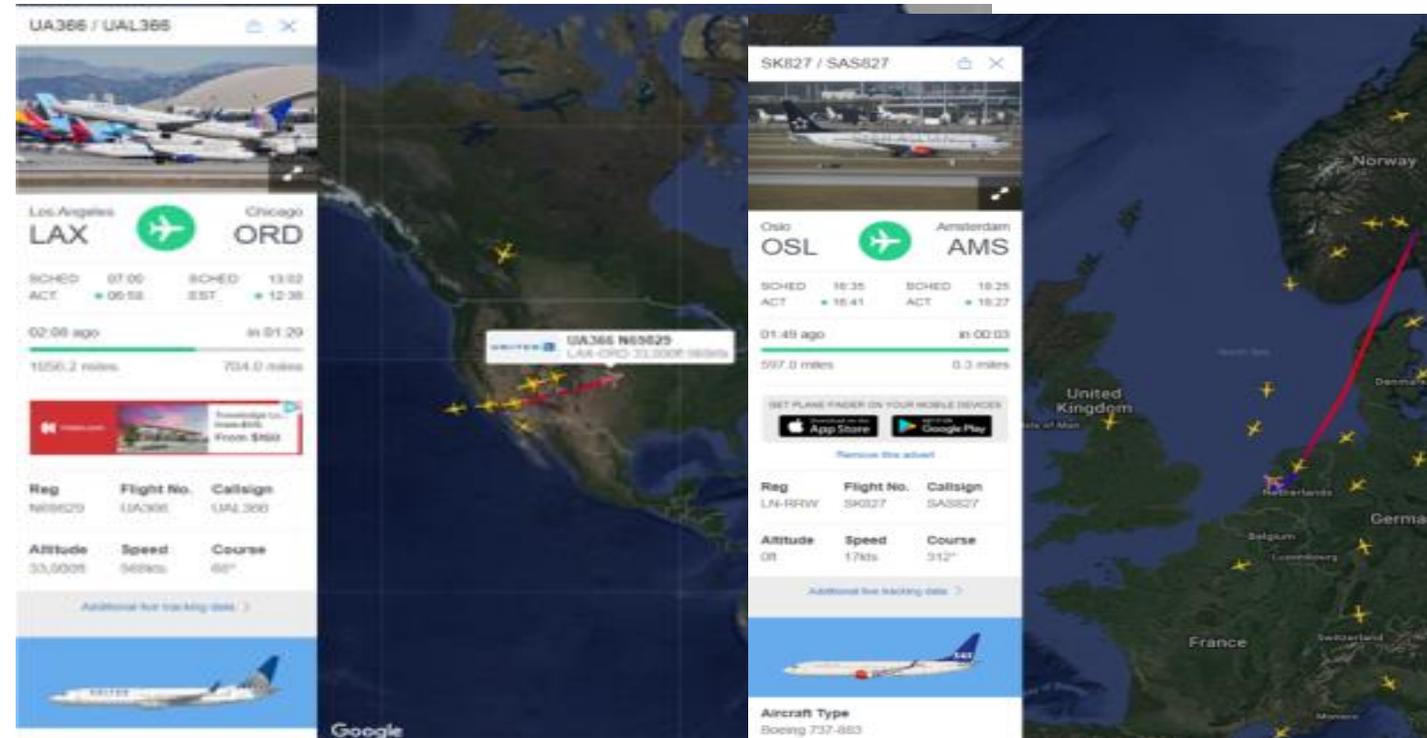
ICAO Global Framework for Aviation Alternative Fuels (GFAAF)

www.icao.int/environmental-protection/GFAAF/



Global Framework for Aviation Alternative Fuels

- Over 700 news announcements dating back to 2005
- Trackers of offtake agreements, mandates, projects
- **ICAO GFAAF Live-Feed of flights***



*Based on publically-available information from airports and airlines involved in on-going alternative fuel purchase agreements





ICAO is facilitating SAF development and deployment by:

- 1) Establishing **policies and measures**
- 2) Developing globally-accepted Standards (CORSA) **sustainability criteria and life cycle methodologies**
- 3) Organizing **events** for information-sharing and outreach
- 4) Sharing **information and best practices**

ICAO work on SAF will continue, in support of the ICAO 2050 Vision and the work on a Long term aspirational goal for international aviation

<https://www.icao.int/environmental-protection/pages/SAF.aspx>

Thank You



ICAO
Headquarters
Montréal

European and
North Atlantic
(EUR/NAT) Office
Paris

Asia and Pacific
(APAC) Sub-office
Beijing

Middle East
(MID) Office
Cairo

Asia and Pacific
(APAC) Office
Bangkok

Eastern and
Southern African
(ESAF) Office
Nairobi

Western and
Central African
(WACAF) Office
Dakar

North American
Central American
and Caribbean
(NACC) Office
Mexico City

South American
(SAM) Office
Lima