ICAO ENVIRONMENT

ICAO Environmental Symposium 2019

DESTINATION GREEN: THE NEXT CHAPTER

Focus on Sustainable Aviation Fuels (SAF)

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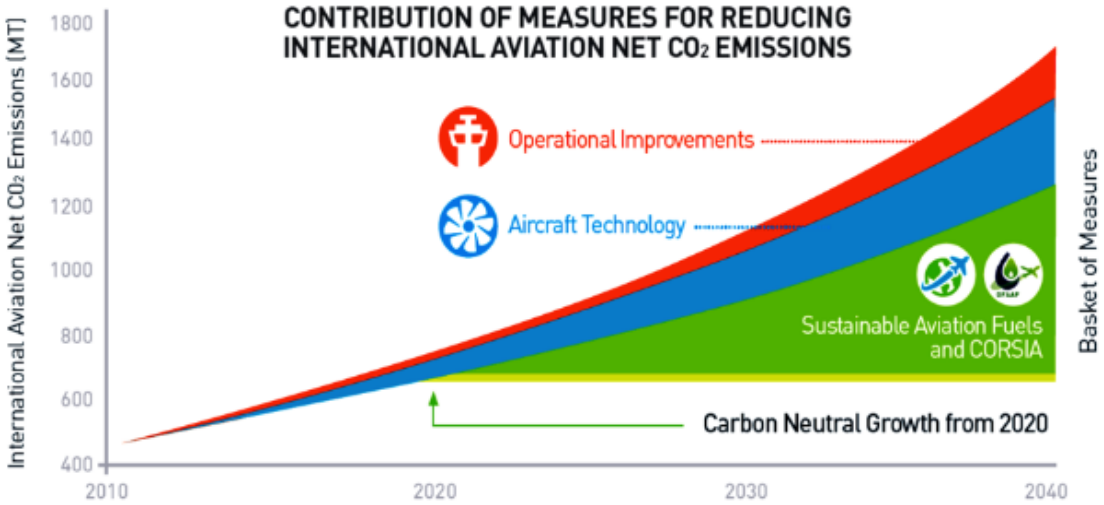
Why Focus on Sustainable Aviation Fuels (SAF)?



ICAO Aspirational Goals:

- Carbon neutral growth from 2020

ICAO Basket of Measures:

- Technology improvements
- Operational changes
- **Sustainable aviation fuels,**
- Market-based measures

ICAO Assembly (Resolution A39-2) recognizes the introduction of SAF as one of the key measures to achieve ICAO's climate goals and encourages States to accelerate its development.

Why Focus on Sustainable Aviation Fuels (SAF)?

The CAAF/2 Declaration was endorsed by the ICAO Council during the sixth meeting of its 213th Session.

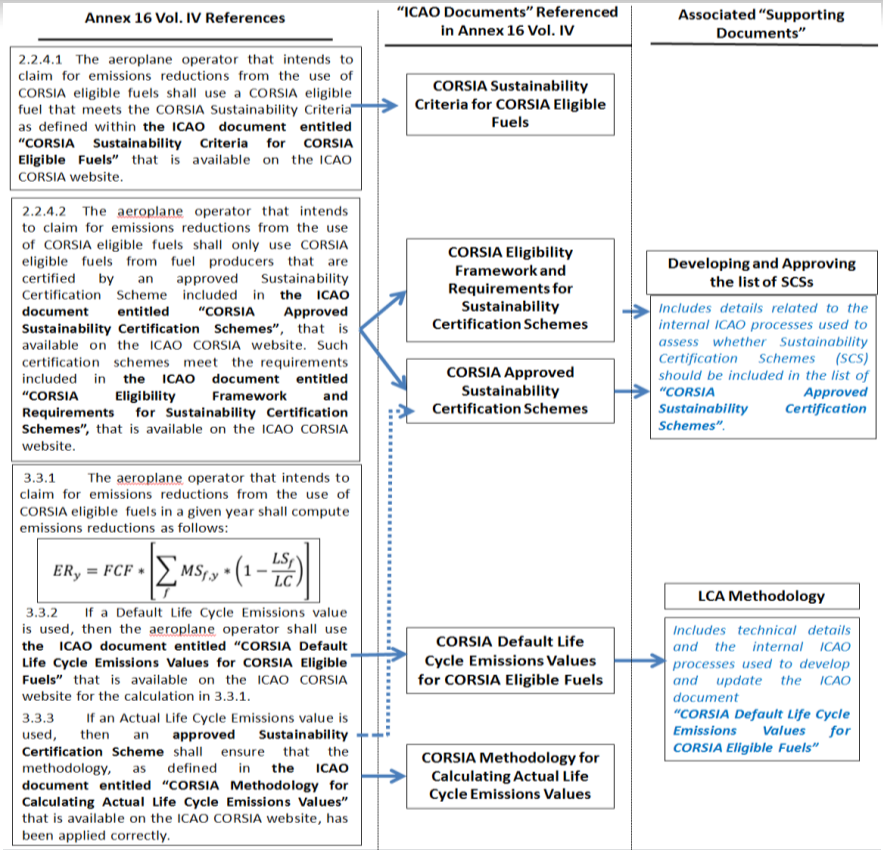
CAAF/2 (Mexico, 2017)

The Second ICAO Conference on Aviation and Alternative Fuels endorsed the ***2050 ICAO Vision for Sustainable Aviation Fuels***, and

called on States, industry and other stakeholders, **for a significant proportion of conventional aviation fuels to be substituted with SAF by 2050**.

Why Focus on Sustainable Aviation Fuels (SAF)?

- A39 requests the ICAO Council **to ensure that offsetting requirements under CORSIA could be reduced through the use of sustainable alternative fuels**.
- The ICAO CAEP established in 2013 the **Alternative Fuels Task Force (AFTF)**, to develop methodologies and processes to account SAF for it use in the ICAO Global Market Based Measure (CORSIA).



What the AFTF delivered?

- ✓ One of AFTF´s main outcomes were proposals to complete the ICAO CORSIA SARPs and all sections from its Implementation Elements related to CORSIA Eligible Fuels.
- ✓ AFTF delivered also work not directly related with CORSIA:
  - SAF short, mid and long terms production assessment.
  - Policy analysis for promotion of SAF

Accounting for SAF under CORSIA: Sustainability Criteria

- ICAO Document "*CORSIA sustainability criteria for CORSIA eligible fuels*" is the first global approach to Sustainability for any industry sector

Work on other Themes is ongoing under CAEP and will be subject to approval by the Council by the end of the CORSIA pilot phase (2023)

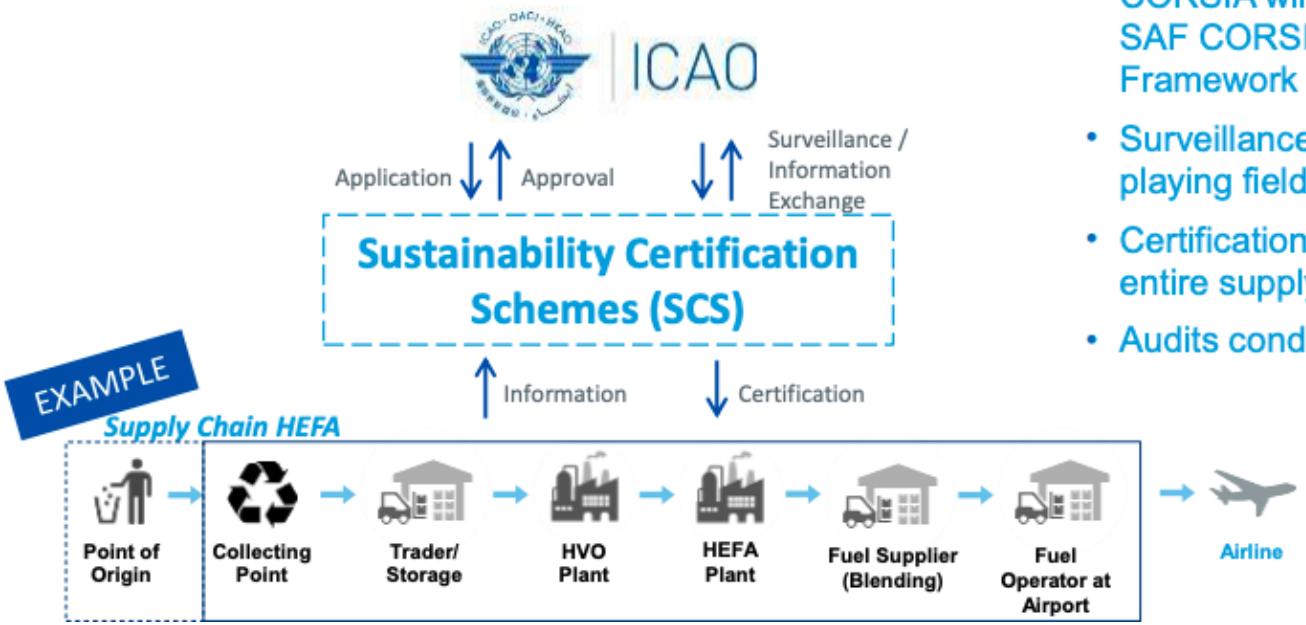
- Theme 1: Greenhouse Gases
  - Criteria: CORSIA eligible fuel shall achieve net greenhouse gas emissions reductions of at least 10% compared to the baseline life cycle emissions values for aviation fuel on a life cycle basis.
- Theme 2: Carbon stock
  - Criterion 1: CORSIA eligible fuel shall **not be made from biomass obtained from land** converted after 1 January 2008 that was primary forest, wetlands, or peat lands and/or contributes to degradation of the carbon stock in primary forests, wetlands, or peat lands as **these lands all have high carbon stocks.**
  - Criterion 2: In the event of land use conversion after 1 January 2008, as defined based on IPCC land categories, **direct land use change (DLUC) emissions shall be calculated**. If DLUC greenhouse gas emissions exceed the default induced land use change (ILUC) value, the DLUC value shall replace the default ILUC value.

Accounting for SAF under CORSIA: Requirements for SCS´s

To demonstrate compliance with Sustainability Criteria, feedstock producers, processing facilities, and traders of CORSIA Eligible Fuels **need to be certified by a Sustainability Certification Scheme (SCS)**.

- ✓ The proposed process (pending Council approval) is that SCS´s will be assessed by CAEP and approved by Council to be eligible to certify fuel producers.
- ✓ Once approved will be included in the ICAO document "*CORSIA Approved Sustainability Certification Schemes*".

Accounting for SAF under CORSIA: Requirements for SCS´s

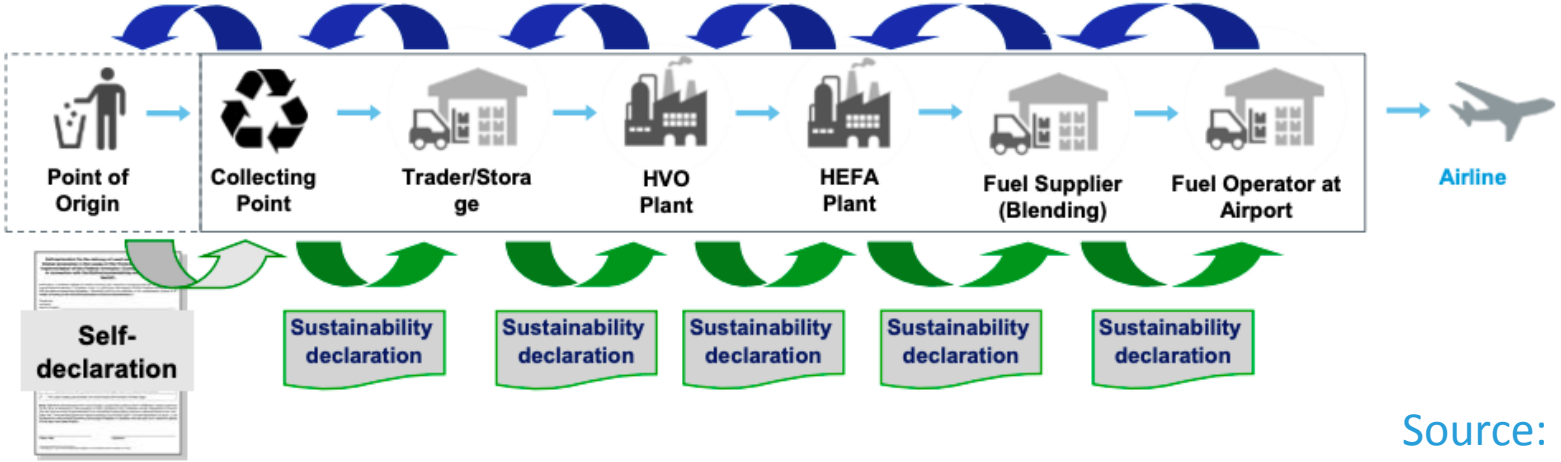


- CORSIA will approve SCS for certifying SAF CORSIA based on CORSIA Eligibility Framework and Requirements for SCS
- Surveillance required to ensure level playing field for all players in the market
- Certification of each entity along entire supply chains
- Audits conducted to verify information

Source: ISCC

Accounting for SAF under CORSIA: Requirements for SCS´s

How will the relevant information be forwarded in the supply chain? Step by step approach



Source: ISCC

Accounting for SAF under CORSIA: Default LCA Values

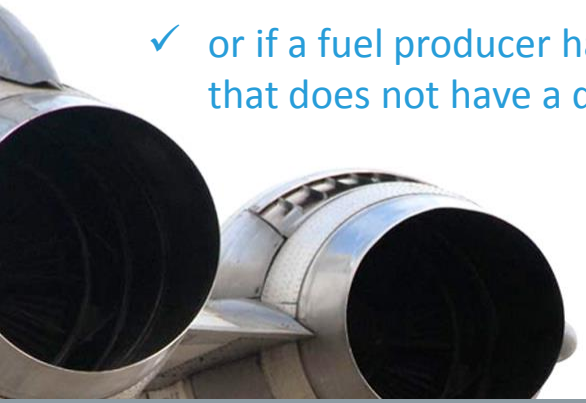
For an operator to claim emissions reductions from the use of SAF, those must be based on its emissions Life Cycle Assessment (LCA) value (in gCO2e/MJ) compared to a baseline of aviation fuel (89gCO2e/MJ for jet fuel and 95gCO2e/MJ for AvGas)

- ✓ The total LCA value (LSf) has two components: Core LCA value and ILUC LCA value.
- ✓ The ICAO document "***CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels***" that will be available on the ICAO CORSIA website, will contain a number of Core and ILUC LCA DEFAULT VALUES -pending of approval by the Council- WHICH can be used for such calculation;
- ✓ Additional values will be included in the future;

Accounting for SAF under CORSIA: Methodology for Calculating Actual Life Cycle Emissions Values

An aeroplane Operator **may use an actual core life cycle value** if

- ✓ a fuel producer can demonstrate a lower core LCA compared to the default core LCA values,
- ✓ or if a fuel producer has defined a new pathway that does not have a default core life cycle value.

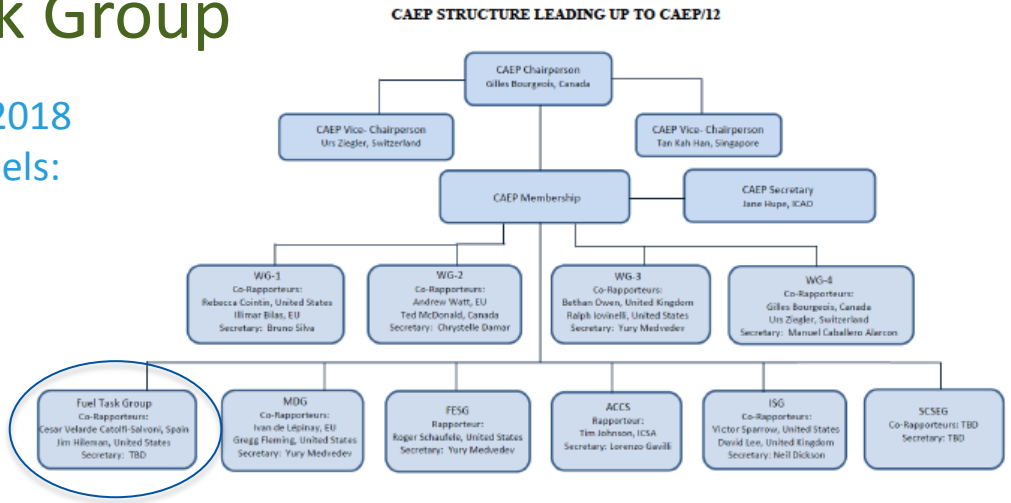


- ✓ If an Actual Life Cycle Emissions value is used, then **an approved Sustainability Certification Scheme** shall ensure that the methodology, as defined in the ICAO document entitled "***CORSIA Methodology for Calculating Actual Life Cycle Emissions Values***" that is available on the ICAO CORSIA website, has been applied correctly.

The ICAO CAEP Fuels Task Group

- The ICAO Council's adoption of CORSIA in 2018 established two types of CORSIA eligible fuels:
  - ✓ Sustainable aviation fuels (SAF) and
  - ✓ Lower carbon aviation fuels (LCAF)

- CAEP/11 meeting (Feb 2019) created a permanent **Fuels Task Group (FTG)**



- ✓ AFTF work only addressed SAF
- ✓ FTG will analyze the applicability of the work on SAF to Lower Carbon Aviation Fuels, and identify possible required adjustments to enable eligibility under CORSIA.

Other ICAO CAEP Fuels Task Group: Policy Assessment

- FTG will analyze policy options available to foster the deployment of Sustainable Aviation Fuels (SAF), and produce guidance material that identifies policies, or combination of policies, that are particularly interesting as result of the analysis.
- The material developed could be made available as a “toolbox” to support Member States activities on SAF and LCAF.
  - ✓ Spain and France proposed in CAEP to study the concept of “***Balanced Compromise***” as a mean between regulators and industry to establish national SAF supply targets.
  - ✓ It proposes a dialogue to establish such targets in which fair competitiveness shall be ensured and extra cost should not drive to markets distortions.

WE HAVE CELEBRATED TWO DECADES OF POLICY SUCCESS OF THE *BALANCE APPROACH* FOR NOISE MANAGEMENT

HOPE THE *BALANCED COMPROMISE* FOR SAF USE, HELPS ACHIEVING THE **ICAO 2050 SAF VISION** IN THREE DECADES!!!

THANK YOU

ICAO

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