



| ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY

Regional Officer: ENV
ICAO Secretariat



ICAO Resolution A41-21 on LTAG and the next steps on Sustainable Aviation Fuels (SAF)

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Offices



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Vision



Mission

Achieve the sustainable growth of the global civil aviation system.

To serve as the global forum of States for international civil aviation.

ICAO Strategic Objectives

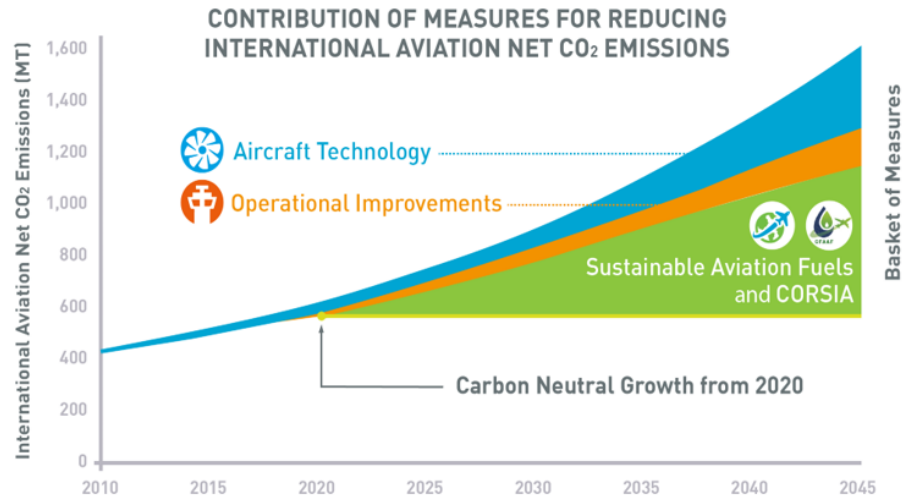




The 41st Session of the ICAO Assembly adopted:

- Resolution A41-20: Consolidated statement of continuing ICAO policies and practices related to environmental protection – **General provisions, noise and local air quality**
- Resolution A41-21: Consolidated statement of continuing ICAO policies and practices related to environmental protection – **Climate change**
- Resolution A41-22: Consolidated statement of continuing ICAO policies and practices related to environmental protection – **Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)**

ICAO Aspirational Goals



2019

ICAO Assembly requested the ICAO Council to:

- explore the feasibility of a long-term global aspirational goal (LTAG)

2010

ICAO adopted two Global Aspirational Goals

2% annual fuel efficiency improvement through 2050
Carbon neutral growth from 2020 (CNG2020)



2022

**LTAG High-Level Meeting (HLM)
41st ICAO General Assembly**

Adoption of collective long-term global aspirational goal (LTAG) of net-zero carbon emissions by 2050



ICAO LTAG Report and Supporting Material:

LTAG Report Appendixes (English only)

				
Appendix B1 Background (18 pages)	Appendix R1 Summary Sheets (61 pages)	Appendix R2 Comparison to Trends (8 pages)	Appendix R3 Results in the Climate Science Context (10 pages)	Appendix S1 Climate Science Context (24 pages)
				
Appendix M1 Overview of the Modelling Approaches (99 pages)	Appendix M2 COVID-19 Forecast Scenario Development (8 pages)	Appendix M3 Technology (181 pages)	Appendix M4 Operations (12 pages)	Appendix M5 Fuels (84 pages)




- ICAO Council briefing



Briefing on LTAG Feasibility Report by CAEP - Watch on ICAO.TV

- Videos on LTAG Report



ENGLISH
FRANÇAIS
ESPAÑOL
РУССКИЙ (coming soon)
عربية
中文

<https://www.icao.int/environmental-protection/Pages/LTAG.aspx>

Assembly Resolution A41-21 (climate change):



Level of Ambition: ICAO and its Member States are encouraged to work together to strive to achieve a **collective long-term global aspirational goal for international aviation (LTAG) of net-zero carbon emissions by 2050**, in support of the Paris Agreement's temperature goal, recognizing that each State's special circumstances and respective capabilities will inform the ability of **each States to contribute to the LTAG within its own national timeframe**

Net-zero carbon emissions by 2050:

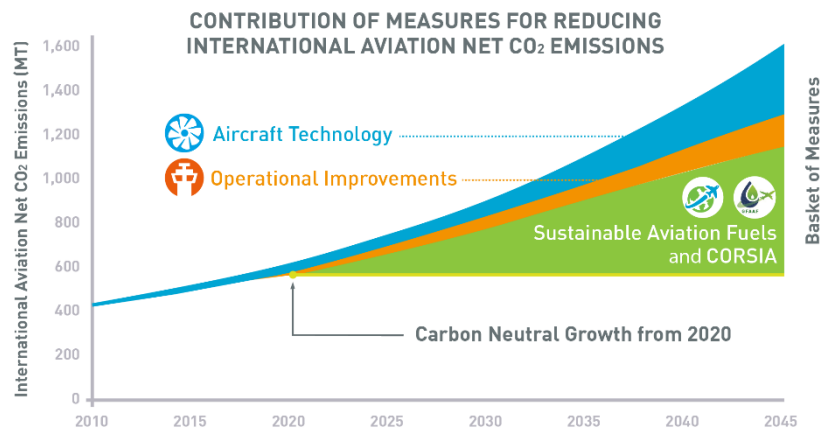
- in support of the UNFCCC Paris Agreement's temperature goal.
- Adopted as Resolution A41-21

The LTAG:

- Does not attribute specific obligations or commitments
 - e.g. in the form of emission reduction goals to individual States
- Recognises each State's special circumstances and respective capabilities

Assembly Resolution A41-21 (climate change):

Monitoring of Progress: The Assembly requested the Council to **regularly monitor the progress on the implementation of all elements of the basket of measures** towards the achievement of the LTAG, including through the ICAO stocktaking process, updates of the ICAO Vision for Sustainable Aviation Fuels (SAF), and monitoring of State Action Plans



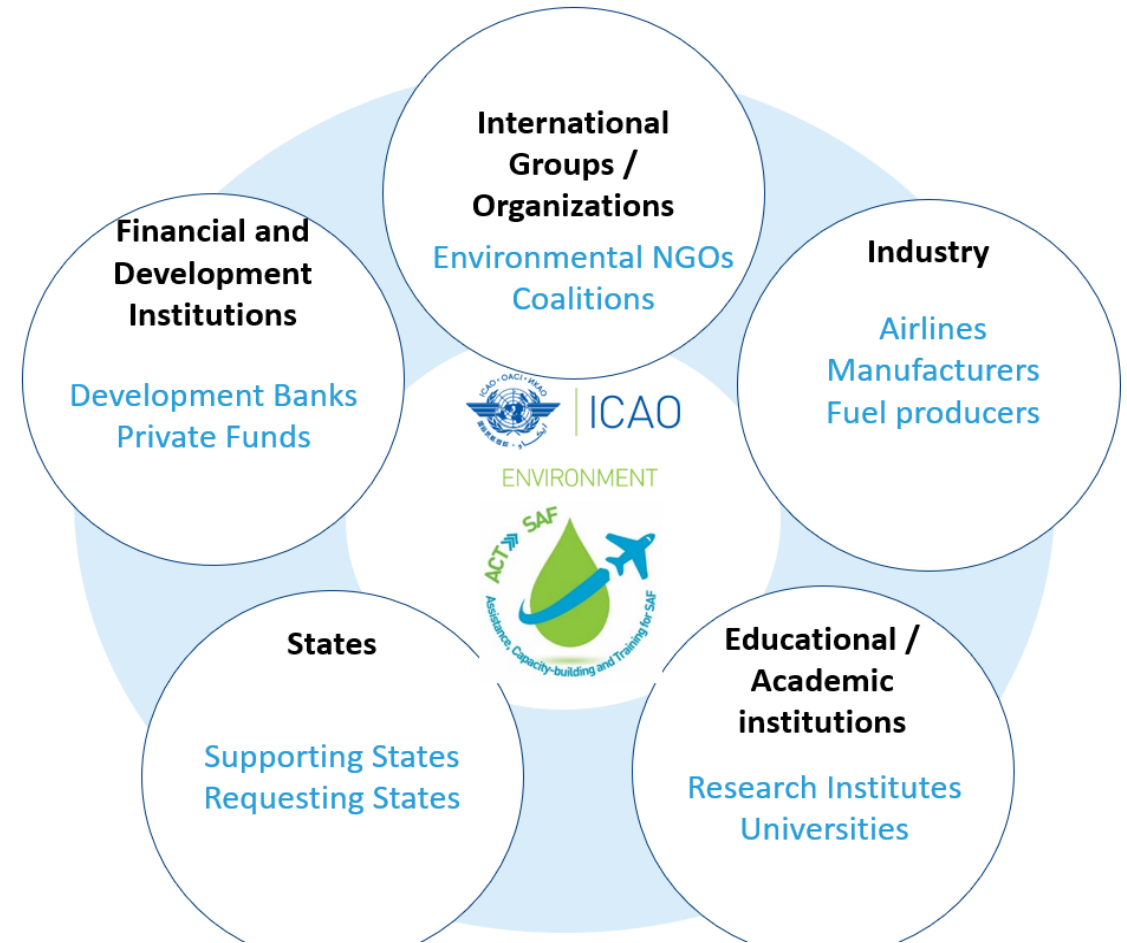
Assembly Resolution A41-21 (climate change):

Means of Implementation: The Assembly recognized that various possible modalities and/or funding mechanisms could be used by ICAO, and requested the Council to initiate specific measures or mechanisms for ICAO to facilitate **better access to financing** for developing countries and States having particular needs, and to consider the establishment of a **possible finance initiative or funding mechanism under ICAO**, for reporting at the 42nd Session of the Assembly.



Assembly Resolution A41-21 (climate change):

Complementary to a robust assistance and cooperation programme for LTAG, such as the ICAO Assistance, Capacity-building and Training for Sustainable Aviation Fuels (ACT-SAF) programme, which should be extended to an ACT-LTAG programme to add support to other CO2 reduction measures



What is the ICAO ACT-SAF programme?

- Launched on 1 June 2022
- An ICAO initiative to facilitate the development and deployment of sustainable fuels, while recognizing “not one approach fits all”
- Tailored support for States in various stages of SAF development and deployment
- Facilitate partnerships and cooperation on SAF initiatives under ICAO coordination
- Platform to facilitate knowledge sharing and recognition (progress monitoring) of all SAF initiatives



<https://www.icao.int/environmental-protection/Pages/act-saf.aspx>

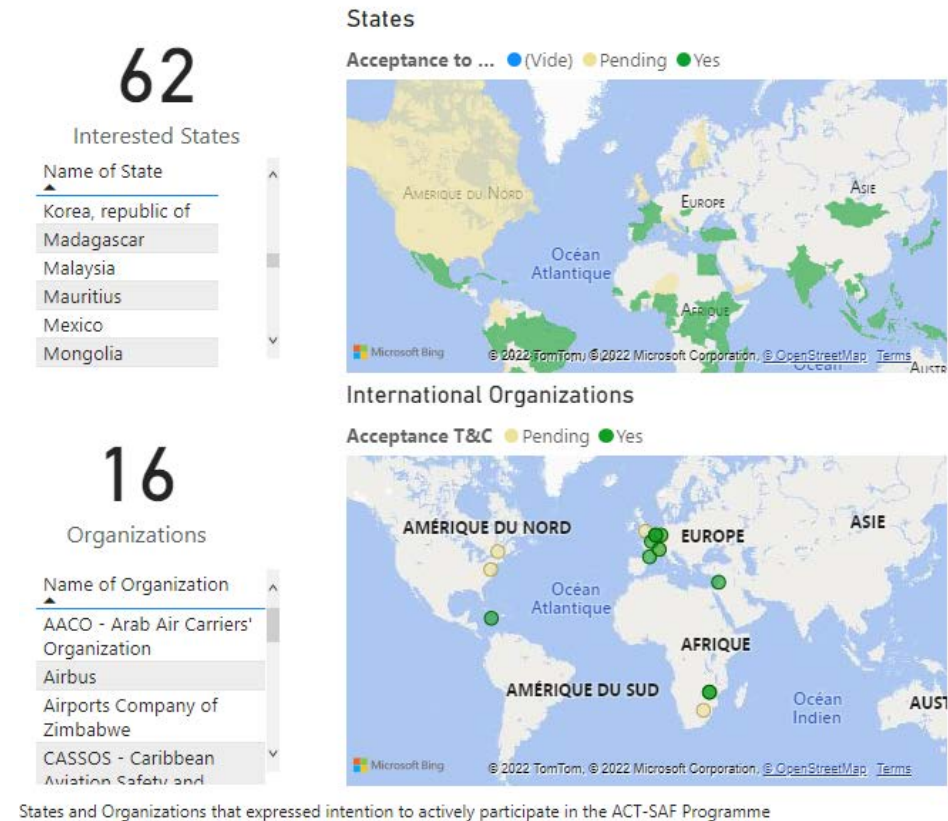
ACT SAF



- ACT SAF Series for ACT SAF Partners
- Interesting States and Organizations can join ACT SAF by agreeing to the ACT SAF Terms and Conditions

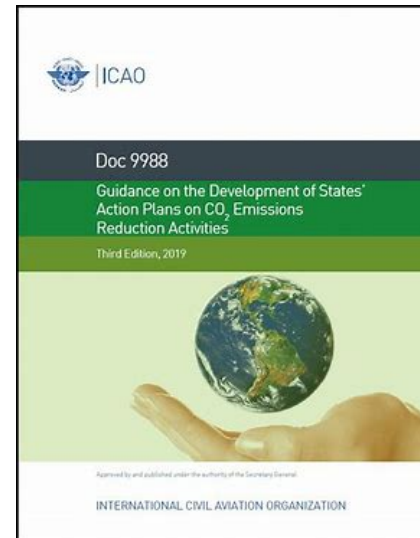
<https://www.icao.int/environmental-protection/Pages/act-saf.aspx>

- Possible projects under ACT SAF
 - Feasibility Studies
 - Training programmes
 - Support for SAF certification
 - Support for Policy implementation



Assembly Resolution A41-21 (climate change):

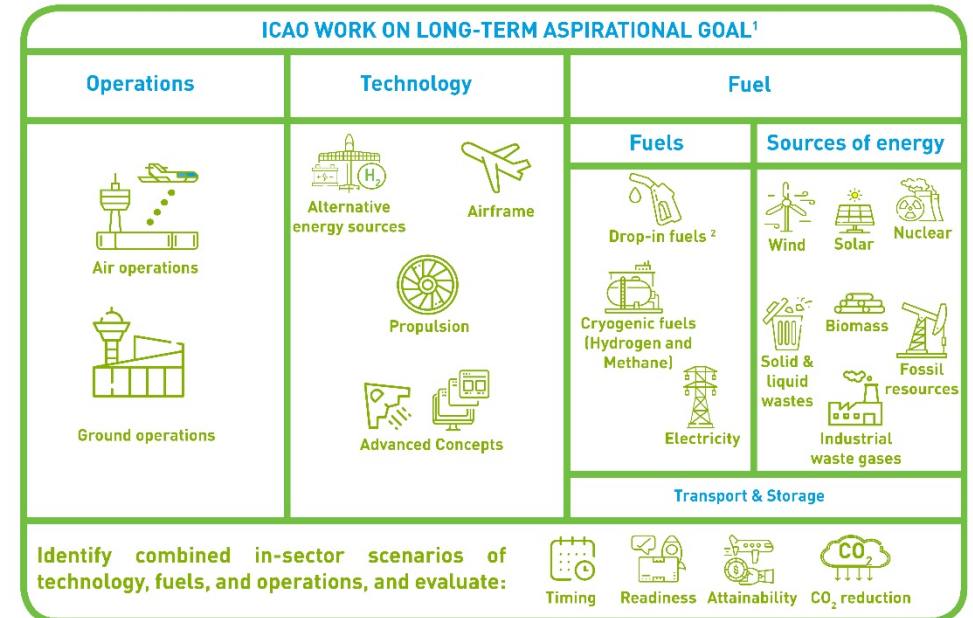
- **State Action Plans:** The Assembly reiterated the important role of State Action Plans, encouraging all States to submit and update action plans to reduce CO₂ emissions from international aviation, outlining policies, actions and roadmaps, including long-term projections, and requested the Council to provide guidance and assistance



135 States over 98% of global RTK have voluntarily submitted their State Action Plans

Assembly Resolution A41-21 (climate change):

Actions on Technology, Operations and Fuels: The Assembly requested specific actions for the Council and Member States in the areas of **technology, operations and fuels**, including the convening of the third ICAO Conference on Aviation and Alternative Fuels (CAAF/3) in 2023, with a view to updating the 2050 ICAO Vision for SAF, including Lower Carbon Aviation Fuels (LCAF) and other cleaner energy sources for aviation, in order to define a global framework



¹ This work should identify and evaluate existing, foreseen, and innovative in-sector measures in technology, fuels and operations, and their enablers, including information of probable costs. This will assist in identifying gaps, and information and expertise needed, in order to complete a thorough assessment of all in sector CO₂ reductions for international aviation. This should include timing, readiness, attainability and the quantity of CO₂ reduction possible, based on a feasible roll out into the aviation sector.
² Sustainable Aviation Fuels (SAF), Low Carbon Aviation Fuels (LCAF), E-Fuels. Icons made by Freepik from www.flaticon.com



Assembly Resolution A41-22 (CORSAIA):

CORSIA Implementation is On Track:

- 1 January 2021: start of CORSIA's pilot phase
- Reporting of 2019 and 2020 CO₂ emissions
- Finalizing MRV cycle of 202 CO₂ emissions
- Amendments to Annex 16, Volume IV and Doc 9501, Volume IV
- 2022 version of the ICAO CORSIA CERT
- Updates to various ICAO documents (CORSAIA eligible fuels / emissions units)

606
Mtonnes of 2019 CO₂
submitted

117
2019 CO₂ Reports in
CCR

118
States in
CORSIA



CORSIA Periodic Review

- **Periodic review of CORSIA** every three years - First periodic review was completed at A41
- Allows the Council to make informed decisions on whether it is necessary to make adjustments to the next phase(s) of the scheme
- Special review by end of 2032 on termination of the scheme, its extension or any other improvements of the scheme beyond 2035
- At the request of A41, the Council to develop a methodology and timeline for future reviews



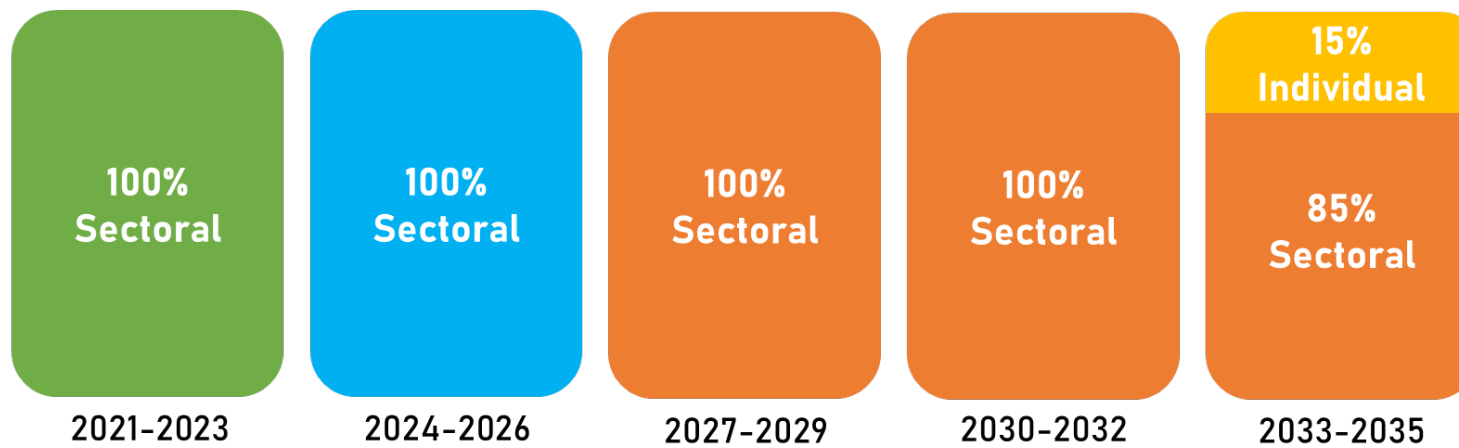
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Phases	Pilot Phase (voluntary, 3 years)		First Phase (voluntary, 3 years)			Second Phase (all non-exempted States, 9 years)									
Compliance cycles	Cycle 1 (3 years)		Cycle 2 (3 years)			Cycle 3 (3 years)			Cycle 4 (3 years)			Cycle 5 (3 years)			
Periodic reviews		Review 1			Review 2			Review 3			Review 4	Special			Review 5
Assemblies		A41			A42			A43			A44				A45

CORSIA Periodic Review

- Revised CORSIA baseline (paragraph 11 b)):
 - o For 2021 – 2023: 2019 CO2 emissions;
 - o For 2024 – 2035: 85% of 2019 CO2 emissions
- Revised percentage of the sectoral and individual operator’s growth factors for the calculation of offsetting requirements under CORSIA:

Operator's Annual Emissions × Growth Factor = CO₂ Offsetting Requirements

The Growth Factor changes every year taking into account both the sectoral and the individual operator's emissions growth. The Sector's Growth Factor is the percent increase in the amount of emissions from the baseline to a given future year, and is calculated by ICAO.



Based on outcome of A41 (Resolution A41-22)

Summary

ICAO continues to lead the global efforts to address international aviation and climate change, while the sector is building back better in a post pandemic environment.

ICAO Assembly reached a historic agreement on a global aspirational goal for international aviation of “net-zero carbon emissions by 2050”

Achieving net-zero carbon emissions by 2050 will require concrete means of implementation (e.g. ICAO ACT-SAF / ACT-LTAG)

CORSIA implementation continues to be on track, in accordance with its established timeline

ICAO Assembly adjusted the CORSIA baseline and other design elements to maintaining the balance among the design elements, as well as the scheme’s integrity and level of ambition

Close cooperation across all aviation stakeholders remains the key to take full advantage of innovations that are necessary for a green transition over the coming decades

Please contact ICAO Regional Offices for any question on ICAO LTAG and ACT SAF



Thank You!