

ENVIRONMENT



November 2025

The "ICAO Assistance, Capacity-building and Training for Sustainable Aviation Fuels (ACT-SAF) programme" is supporting States to develop their full potential in SAF, through specific training activities, development of feasibility studies, and other implementation support initiatives, with a view to accelerate the deployment of aviation cleaner energies.

For more details on ACT-SAF click here

ICAO ACT-SAF Projects

Delivery of ACT-SAF Feasibility Studies

The ACT-SAF programme continues advancing with the delivery of feasibility and business implementation studies. Four new feasibility studies have been published in 2025, for Chile, Ethiopia, India, and Jordan. These studies provide concise, evidence-based insights into each country's potential for sustainable aviation fuel (SAF) production and deployment, supporting national strategies and contributing to global decarbonization efforts.



India's ACT-SAF feasibility study identifies high SAF potential from agricultural residues, the alcohol-to-jet pathway as the preferred technology, and opportunities to meet domestic demand, support exports, and create jobs while reducing pollution. Read more here.



Jordan's ACT-SAF feasibility study highlights key feedstocks like MSW and olive pits, identifies gasification-FT and future PtL as preferred technologies, and notes strong policy support for domestic and regional SAF deployment. Read more here.



Chile's ACT-SAF feasibility study identifies biomass feedstocks, multiple SAF production pathways including co-processing, gasification-FT, AtJ, and PtL, and highlights the national hydrogen strategy as a key enabler for large-scale SAF deployment. Read more here.



Ethiopia's ACT-SAF feasibility study highlights strong SAF potential from Brassica carinata via the HEFA pathway and sugarcane molasses via AtJ, noting its strategic aviation hub position. Next steps include a France-funded business implementation study. Read more here.

Status of ACT-SAF Studies

- Beyond SAF feasibility studies and business implementation studies, additional scope for support (support for regulatory development, translation of ICAO Documents, etc.) is being explored.
- o In Viet Nam an in-person two-day training was held in July 2025 with funding and support from Austria.
- o The status of all projects is detailed in the dashboard on the ICAO ACT-SAF website.



Delivered studies

Chile, Ethiopia, India, Jordan

Under Development

Argentina, Côte d'Ivoire (BIS), Ghana, Kenya, Panama, Peru, Rwanda (BIS), South Africa (BIS), Uganda, Zimbabwe (BIS)

Kick-off Phase

Equatorial Guinea, Mauritania, Mozambique, Senegal

Pipeline

Angola, Cameroon, Chile (BIS), Egypt, Ethiopia (BIS), Madagascar, Mexico, Namibia

New funding to support the ACT-SAF programme

During the 2025 ICAO Aviation and Climate Week, Airbus and Volaris signed a Letter of Intent to support the development of SAF in Mexico. This joint initiative will contribute to ICAO's Voluntary Environmental Fund and includes a feasibility study for local SAF production. Read more here.



Switzerland, Italy, and France have provided new voluntary contributions to support the global scale-up of sustainable aviation fuels. ICAO is coordinating with several other supporting states looking to provide resources soon. This strengthened financial backing will enable ACT-SAF to expand technical assistance, capacity-building, and SAF deployment projects worldwide in 2026.

At ICAO's 42nd Assembly we were happy to announce an upcoming feasibility study in Angola, funded by Italy, and a business implementation study in Chile, funded by the Netherlands. We are happy to add another new announcement through this newsletter: a feasibility study in Namibia will take place using part of the funds Switzerland has contributed.

ICAO ACT-SAF Series

The ACT-SAF Series offers training sessions held on a regular basis. It delivers comprehensive training to ACT-SAF Partners on an array of important SAF-related topics, ranging from sustainability, to policy, economics/financing certification and logistics.

Twenty ACT-SAF training sessions have been delivered to date; latest events are summarized below. The recordings of these sessions and the presentations are available at the <u>ACT-SAF-Series website</u>.

Latest completed ACT-SAF Series

- O ACT-SAF Series #20 Updates on default life cycle (August 2025) This session covered the latest updates to the ICAO Document on CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels. Participants learned about revised ILUC and core LCA values, correction factors for hydrogen, heat production, and feedstock transport, as well as equations for co-processed SAF production on LCAF-certified facilities. The event also addressed the extension of low LUC risk practices in calculating actual life cycle emissions values.
- ACT-SAF Series #19 Building Bankable SAF Projects (May 2025) Developing bankable SAF project proposals involves navigating a range of technical, financial, and regulatory complexities. Participants heard from experts from the Brazilian Development Bank (BNDES), the UK Department for Transport's Advanced Fuels Fund, and Twelve (a producer of eFuels), who shared how they have supported SAF development, aligned with national priorities, mitigated risks, and provided insights into the preparation and assessment of robust project proposals.
- ACT-SAF Series #18 Understanding SAF Clearing Houses (March 2025) The event provided insights into the role and function of SAF Clearing Houses, featuring expert speakers from the EU, US, and UK. Discussions covered the importance of Clearing Houses in supporting SAF certification, streamlining testing processes, and facilitating collaboration between fuel producers, regulators, and research institutions.

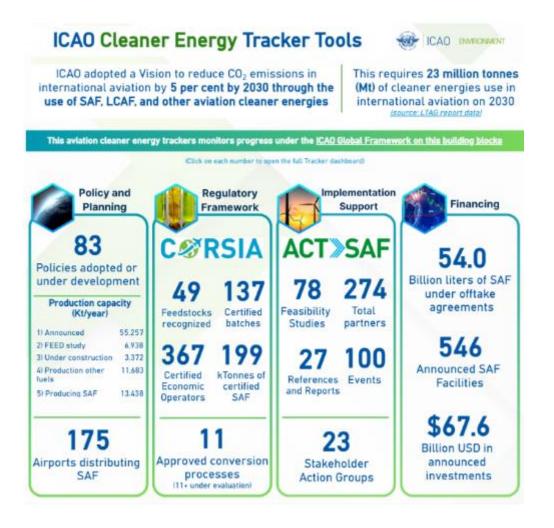
Participation is open to all states and organizations interested in further action on SAF, following the acceptance of the ACT-SAF Terms and Conditions.

ACT-SAF now reaches 280 partners!



ACT-SAF participation has now reached 280 partners, comprising 117 states and 163 organizations, increasing its role in providing support for states to develop their full potential in SAF development and deployment.

ICAO Clean Energy Tracker Tools



The <u>ICAO Cleaner Energy Tracker Tools</u> enable the monitoring of progress under the ICAO Global Framework on its four Building Blocks. They provide easy to access, and useful information on global SAF developments, sorted into the Building Blocks comprising:

- Policy and planning
- Regulatory framework

- o Implementation support
- o Financing.

It also features implementation support initiatives from ACT-SAF partners, which will further enhance outreach and coordination of efforts across partners and stakeholders.

Reach out to ICAO to have your initiative reflected in the tracker. Send an email to: officeenv@icao.int



Following the encouraging progress in CORSIA Eligible Fuels (CEF) production in 2024, a new tracker on CORSIA certified operators and fuels was published to allow easier verification and visualization of the certified economic operators and CEF batches information based on the annual reports (2022-2024) of the Sustainability Certification Schemes (SCS). This dynamic dashboard will be updated each year based on the new SCS reports.

Updated documentation on CORSIA Eligible Fuels (CEF)

Editions of the five ICAO documents related to CORSIA Eligible Fuels (CEF) (i.e., Sustainable Aviation Fuel (SAF) and Lower Carbon Aviation Fuel (LCAF)) were approved by the ICAO Council with a view to providing an incentive and means to reduce an aeroplane operator's CO2 offsetting requirements under CORSIA. The ICAO document <u>CORSIA Eligibility Framework and Requirements for Sustainability Certification Schemes (SCS)</u> now includes clarifications on SCS roles and definition of "economic operator".

The ICAO document <u>CORSIA Methodology for Calculating Actual Life Cycle Emission Values</u> now includes guidance on electricity sourcing, specifications for waste gases, methodologies for soil carbon accumulation (SCA) and geological carbon capture and storage (CCS), updated transport emission factors for LCAF, and a postponement of the temporal limitation for low-LUC-risk practices (LLRP) from 2030 to 2035.

The ICAO document <u>CORSIA Default Life Cycle Emissions Values for CORSIA Elegible Fuels</u> introduces updated default ILUC values for pathways, updated Core LCA values for stand-alone ATJ-ethanol pathways, and new ILUC values for the corn-grain ATJ pathway (ethanol and isobutanol) while all the technical details are provided in the CORSIA supporting document "Life Cycle Assessment Methodology". Sample Calculations have been developed on Core LCA and DLUC, aiming to support the implementation of these methodologies. These updates further strengthen the robustness and clarity of the CORSIA eligible fuels framework.

Decision-making in the ICAO Council is currently on-going to further improve the CEF documentation and expand the feedstock basis.

Latest information captured in the ICAO Cleaner Energy Tracker Tools

India to start sustainable aviation fuel production by end of 2025

India is set to launch its first production of Sustainable Aviation Fuel (SAF) by the end of this year, marking a major milestone toward cleaner aviation. Speaking during her recent visit to India, Jane Hupe, ICAO Deputy Director of the Environment Programme highlighted the country's strong potential to not only meet its domestic demand but also become an exporter of SAF, thanks to its abundant agricultural and biomass resources. Production is expected to begin at Indian Oil Corporation's refinery in Panipat, ahead of the 2027 blending mandate for airlines. A recent study supported by ICAO identified multiple production pathways, including the use of used cooking oil and alcohol-based processes, and emphasized the need for supportive government policies to accelerate the industry's growth. Read more here.

Singapore Advances Sustainable Aviation with New SAF Levy

Singapore has introduced a Bill to support the adoption of sustainable aviation fuel (SAF) by creating a dedicated SAF levy, fund, and central procurement mechanism. The levy, applied to outbound passenger and cargo flights, will generate revenue exclusively for the SAF fund, which will be used to purchase SAF or related credits and cover administrative costs. The Bill also allows the government (or a designated entity) to aggregate SAF demand, helping secure more cost-effective supply. Singapore aims for SAF to account for 1% of fuel use at Changi and Seletar airports in 2026, increasing to 3–5% by 2030, signaling a strong commitment to greener aviation. Read more here.

SAF Events

The <u>SAF events tracker</u> is being constantly updated with various events being hosted by <u>ACT-SAF partners</u> and aviation stakeholders to

discuss global challenges and solutions for further developing SAF.

Reach out to ICAO to have your event reflected in the tracker. Send an email to:

officeenv@icao.int



ICAO Finvest Hub



Major breakthrough for sustainable aviation fuels: Launch of the Finvest Hub at ICAO Innovation Fair

ICAO and IRENA launched the Finvest@ETAF portal, a key milestone in aviation's path toward net-zero emissions. The portal will connect project developers with financiers to scale up investments in Sustainable Aviation Fuels (SAF) and other cleaner energy projects through ICAO's Finvest Hub. Presented during the ICAO Innovation Fair, the initiative highlights the power of innovation and partnerships in accelerating the decarbonization of global aviation.



ICAO Assembly 42nd Session



The 42nd Session of the ICAO Assembly (A42) took place from 23 September to 3 October 2025 at ICAO Headquarters in Montréal. The Assembly welcomed the significant progress achieved under the ICAO ACT-SAF Programme in supporting the global scale-up of SAF, LCAF, and other aviation cleaner energies. In line with ICAO's *No Country Left Behind* initiative, Member States recognized the critical importance of partnerships, capacity-building, and international cooperation to accelerate decarbonization across all regions.

The Assembly highlighted the urgent need for substantial investments — estimated at up to USD 3.2 trillion by 2050 — to produce aviation cleaner energies and support complementary $\mathrm{CO_2}$ reduction measures. Initiatives such as the ICAO ACT-SAF Programme and the ICAO Finvest Hub were welcomed for facilitating access to public and private finance, particularly for developing countries and States with specific needs. The resolution also called for expanding ACT-SAF to encompass other emissions-reduction measures, laying the foundation for a future ACT-LTAG Programme to strengthen long-term climate action across the global aviation sector.

The Assembly also provided an opportunity for ACT-SAF Partners to connect, fostering collaboration and dialogue on current and future ACT-SAF projects. This engagement helped strengthen partnerships, identify new areas for technical assistance, and highlight the growing interest from both governments and industry in advancing sustainable aviation fuels. The exchanges underscored the importance of continued international cooperation and resource mobilization to ensure that all States- especially those with particular needs- can actively participate in the transition toward cleaner aviation energy.



Delivery of the feasibility studies for India and Ethiopia, and business implementation study for South Africa, funded by the EU



Delivery of the Chile feasibility study, funded by the Netherlands

Relevant information and documentation on environmental protection and the Assembly can be accessed through ICAO's Environment website.

During the Assembly, the ICAO secretariat delivered several presentations on environmental issues, including on CORSIA, as part of the A42 SkyTalks. These are available on ICAO TV.

- o <u>Is aviation's sustainability on-track?</u>
- o Aviation's Cleaner Energy Transition toward SAF scale-up and ICAO vision
- o Assistance, Capacity-building, Training for Sustainable Aviation Fuels programme
- o Carbon offsetting and reduction scheme for international aviation
- o State action plans on CO₂ emissions reduction activities
- o ICAO Environmenmental Tools
- o CORSIA Elegible Credits
- o Measuring progress: LTAG monitoring and reporting

A42 - Progress towards Net Zero Carbon Emissions

The 42nd Session of the ICAO Assembly also adopted the resolution on ICAO policies and practices related to environmental protection - Climate change, as contained in the document A42-WP/688. The Assembly acknowledged the substantial progress since the last Assembly, including the adoption of the ICAO Global Framework on SAF, LCAF and other aviation cleaner energies and the approval of the ICAO Roadmap by the Council. It also recognized the timely development of the LTAG monitoring and reporting (LMR) methodology (refer to document A42-WP/25).

ICAO at UNFCCC COP30

The 2025 United Nations Climate Change Conference, also known as COP30, is being held in Belem, Brazil, from 10 to 21 November 2025, under the Presidency of Brazil. ICAO is actively participating, including through submissions and statements, to inform Parties and relevant stakeholders of the recent developments and achievements by ICAO Member States on international aviation and climate change including the outcomes of the 42nd Session of the ICAO Assembly. The key topics related to aviation are on aviation cleaner energies, CORSIA and in particular the issuance of Letter of Authorization for CORSIA Eligible Emissions Units, bunker fuels, and matters related to climate financing. ICAO is promoting its efforts and achievements to decarbonize international aviation, and to express a clear concern regarding proposals to use international aviation as a potential source for the mobilization of revenue for climate finance to other sectors.

ICAO has organized two side events and contributed to several other events at COP30. "International Aviation and SDG7: Accelerating the Global Clean Energy Transition Skyward" on 10 November 2025, showcased how the international aviation sector contributes to the UN Sustainable Development Goal (SDG7) on Clean Energy, and related topics in support of socio-economic development. On 17 November 2025, ICAO's event on "Assistance, Capacity-Building and Training (ACT) to Drive Aviation's Clean Energy Transition and the Achievement of the SDGs". highlighted the four building blocks of international aviation's clean energy transition and explored how the ACT-SAF programme fosters innovative multi-stakeholder partnerships to accelerate the aviation cleaner energy transition, ensuring that No Country is Left Behind.

ICAO's outreach activities at COP30, and all relevant documentation are available on the dedicated <u>ICAO</u> <u>COP30 webpage</u>. That includes the slides and video recordings for the side events.

For queries, send an email to officeenv@icao.int



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