



WORKING PAPER

**SEVENTH WORLDWIDE AIR TRANSPORT CONFERENCE
(ATCONF/7)**

Montréal, HQ, 16 to 20 November 2026

**Agenda Item 4: Emerging technologies, new business models and other associated aspects
4.2: Support and economic opportunities of access to aviation cleaner energies**

**UNLOCKING THE ECONOMIC AND INVESTMENT POTENTIAL OF
AVIATION CLEANER ENERGIES THROUGH A GLOBAL SAF
MARKET**

(Presented by Brazil, and supported by 20 LACAC Member States¹)

EXECUTIVE SUMMARY

This paper highlights the economic and investment potential of Sustainable Aviation Fuels (SAF), Lower Carbon Aviation Fuels (LCAF) and other aviation cleaner energies, particularly for developing countries and States with special needs. It supports policies, production, investment and regulatory frameworks that can scale supply, reduce costs and consolidate a global SAF market under harmonized International Civil Aviation Organization (ICAO) and Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) criteria, while expanding access to sustainable feedstocks across regions. Brazil's biomass resources, clean electricity mix, biofuels experience and emerging SAF project pipeline illustrate this potential. The paper also cautions that support measures must avoid discriminatory eligibility rules, local-content preferences, regulatory barriers or subsidy designs that protect domestic production and distort global investment flows.

Action: The Conference is invited to

- a) recognize the economic and investment potential of aviation cleaner energies, SAF in particular, for developing countries and States with special needs;
- b) encourage States to promote policies to foster investments for SAF production and demand;
- c) support infrastructure, targeted incentives and CORSIA-compatible book-and-claim or certificate systems that link investments in SAF production to demand by aeroplane operators;
- d) urge States to avoid regulatory barriers, origin-based eligibility rules or subsidy regimes which could lead to a fragmentation of the global SAF market;
- e) highlight the centrality of the effective implementation of ICAO framework on cleaner energies for the consolidation of a stable and predictable regulatory environment which could foster investments to create a truly global SAF market, with the distribution of production across all regions; and
- f) request ICAO to strengthen work with financial institutions, United Nations (UN) agencies and international organizations to mobilize financing, de-risk investment and accelerate approval of eligible feedstocks and pathways.

¹ Argentina, Belize, Bolivia (Plurinational State of), Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela (Bolivarian Republic of).

<i>Strategic Goal:</i>	This working paper relates to Strategic Goals: <i>The Economic Development of Air Transport Assures the Delivery of Economic Prosperity and Societal Well-Being for All and Aviation is Environmentally Sustainable.</i>
<i>Financial implications:</i>	The activities referred to in this paper would be undertaken subject to the resources available in the 2026–2028 Regular Budget and/or from extrabudgetary contributions.
<i>References:</i>	ICAO Global Framework for SAF, LCAF and other Aviation Cleaner Energies (CAAF/3, Dubai, November 2023); Assembly Resolutions A42-21 and A42-26; A42-WP/162 (Brazil and Ethiopia); ATConf/7-WP/8 (Secretariat);

1. INTRODUCTION

1.1 The transition to aviation cleaner energies is not only an environmental imperative. It is also an economic-development and investment agenda for international air transport. SAF, LCAF and other aviation cleaner energies can help deliver in-sector emissions reductions while creating new value chains in energy, agriculture, waste management, hydrogen, logistics, certification services and airport infrastructure. These opportunities are especially relevant for developing countries and States with special needs, many of which have sustainable feedstocks, renewable-energy potential and industrial capabilities that can contribute to a global supply base.

1.2 As emphasized by Brazil and Ethiopia in a Working Paper (A42-WP/162) for the 42nd ICAO Assembly, SAF production remains far below the scale needed for ICAO's long-term aspirational goal (LTAG) and for the 2030 Vision under the ICAO Global Framework. Furthermore, IATA estimates that aviation may need approximately 500 million tonnes of SAF annually by 2050 to reach net-zero emissions, while global production in 2025 was about 1.9 million tonnes. Increasing production is essential to reduce the price gap with conventional jet fuel, create predictable demand and enable all regions to participate in a just and inclusive aviation energy transition.

1.3 The document ATConf/7-WP/8, “Economic Regulatory Frameworks on Emerging Technologies and Aviation Cleaner Energies”, presented by ICAO Secretariat, further reinforces that the scale-up of SAF, LCAF and other aviation cleaner energies is central to ICAO's environmental goals and has major economic regulatory implications. It recalls the LTAG objective of net-zero carbon emissions from international aviation by 2050 and the collective ICAO Vision to reduce CO₂ emissions from international aviation by 5 per cent by 2030 through cleaner aviation energies, while noting that cleaner energies are expected to make the largest contribution to aviation CO₂ emissions reductions. It also underlines the significant financial implications of this transition, including the need to invest approximately USD 3.2 trillion in aviation cleaner energy production through 2050. ICAO Secretariat, also in document WP/8, emphasizes the importance of promoting regulatory convergence to avoid fragmentation and barriers to market development and investments²:

“Divergent regulatory frameworks may create barriers to market development, limit investment flows, and hinder the realization of potential socio-economic benefits. The development of internationally consistent approaches, in line with ICAO policies and guidance, will be necessary

² See paragraph 3.2 of ATConf/7-WP/8, presented by ICAO Secretariat.

to promote regulatory certainty, facilitate cross-border operations, and support the efficient allocation of resources. Such harmonization will be particularly important in ensuring equitable access to opportunities arising from these developments, including for developing states and those with special needs”.

1.4 The necessary political mandates to achieve high-level commitments on decarbonization of international aviation have already been agreed by ICAO Member States and reinforced by the 42nd ICAO Assembly. The critical challenge towards 2030 and 2050 is about implementation. The economic and investment potential of aviation cleaner energies is an essential part of that agenda, as its materialization will enable the concrete achievement of those high-level goals on a global scale.

2. DISCUSSION

2.1 Developing countries should be able to participate in the supply chain of SAF and aviation cleaner energies as producers, logistics hubs, technology partners and sources of bankable projects. A global SAF market can support rural development, sustainable agriculture, waste valorisation, renewable power deployment, new industrial employment and improved energy security. Brazil illustrates this opportunity: IATA has highlighted Brazil's large biomass feedstock potential, estimated at around 180 million tonnes by 2050, which could generate around 60 million tonnes of SAF, together with a clean electricity mix, liquid biofuels expertise and established infrastructure.

2.2 The scale challenge is broader than refinery or fuel-processing capacity. Some conversion technologies are already mature and airline demand signals are growing, but long-term supply security depends on access to sustainable feedstock systems. SAF competitiveness will require a wider pool of viable feedstocks and pathways adapted to different regional realities, rather than reliance on a few sources of feedstock or technology. IATA also estimates that, by 2030, Brazil's sustainably sourced sugar-based ethanol and virgin and waste oils could translate into approximately 12 million tonnes of SAF production potential, while about 15 projects under way could bring around additionally 2 million tonnes if completed.

2.3 Realizing this potential requires financing mechanisms that address both capital intensity and demand risk. SAF projects need long-term policy signals, credible sustainability certification, offtake arrangements, project-preparation capacity, concessional and blended finance, guarantees, insurance and risk-sharing instruments. ICAO can add value by convening development banks, climate funds, private investors, UN agencies and international organizations around pipelines of projects that are aligned with ICAO standards and national development priorities. Such pipelines should also target infrastructure, logistics and conversion technologies that connect feedstock supply with production facilities, involving regulators, airlines, fuel producers, technology developers, farmers, researchers and investors across the value chain.

2.4 The foundation for such investment must be a harmonized global market. CORSIA should remain the globally accepted sustainability framework for CORSIA eligible fuels. A common approach reduces certification costs, gives investors regulatory predictability, facilitates the recognition and claiming of environmental benefits by aircraft operators and avoids a patchwork of standards that only the largest producers and airlines can navigate.

2.5 Harmonization must be accompanied by non-discrimination and science-based technical neutrality. ICAO should not prefer or exclude feedstocks, pathways, regions or production models for reasons unrelated to transparent, science-based sustainability and life-cycle emissions criteria. Eligible

solutions that meet CORSIA criteria should be able to compete. CAEP work processes should also accelerate the assessment of sustainable feedstocks, pathways and productivity-enhancing agricultural practices, because delayed recognition can become an unintended technical barrier and can postpone investment decisions.

2.6 Public government support will nevertheless be necessary during market formation. States may use mandates, incentives, contracts, tax measures, grants or other tools to bridge the cost gap and crowd in private capital. These measures should be sequenced transparently and in a manner that expands global supply before compliance mandates tighten, rather than protecting domestic markets. Chain-of-custody and book-and-claim systems, if aligned with CORSIA and robust sustainability safeguards, can help connect aeroplane operators' demand with investment where sustainable supply can be scaled. On the other hand, origin-based eligibility rules, local-content preferences, closed feedstock lists or subsidies available only to regional supply chains can fragment demand, raise costs, redirect investment away from efficient and sustainable projects in developing countries and weaken the emergence of a global SAF market.

2.7 Recently proposed policy developments in some jurisdictions illustrate this risk. Support measures intended to reduce the price differential for eligible aviation fuels can help stimulate early demand, but they may also create market distortions when access to support, eligibility, or higher levels of benefit depends on production location, feedstock origin, or regional supply-chain preferences. Whatever their domestic rationale, such approaches may fragment demand, redirect investment away from otherwise sustainable and efficient projects, and limit participation by developing countries. Climate finance and industrial policy for cleaner aviation energies should therefore be assessed against ICAO principles of non-discrimination, technical neutrality and global market development.

3. CONCLUSION

3.1 Brazil supports robust policies and investment to scale SAF, LCAF and other aviation cleaner energies. The objective should be to make cleaner aviation energies available, affordable and sustainable in all regions, while preserving CORSIA-based harmonization and equal opportunity for eligible feedstocks and pathways. Brazil's own potential shows how developing countries can contribute materially to a diversified global SAF supply base when sustainability, infrastructure, finance and policy sequencing are aligned. A global market for aviation cleaner energies that is open to producers in all regions and is anchored in a global sustainability framework for aviation (CORSIA) is the fastest and least costly path to the LTAG, and the safest way to make the energy transition an opportunity for developing countries rather than a barrier.

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