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AGENDA ITEM 7: AVIATION AND ENVIRONMENT

IMPLEMENTATION OF SUSTAINABLE AVIATION FUEL (SAF) AND CORSIA ELIGIBLE EMISSIONS UNITS (CEU) IN THAILAND: TOWARDS GREEN GROWTH IN THE AVIATION

(Presented by Thailand)

INFORMATION PAPER

SUMMARY

This Information Paper outlines Thailand's recent progress in implementing Sustainable Aviation Fuel (SAF) and CORSIA Eligible Emissions Units (CEU) as part of its aviation decarbonization strategy.

This paper highlights national efforts, industry partnerships, and institutional readiness to scale SAF and CEU implementation to serve aviation sectors in Thailand.

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1. INTRODUCTION

1.1 In response to ICAO's Long-Term Global Aspirational Goal (LTAG) of achieving net-zero carbon emissions by 2050, Thailand has demonstrated a strong commitment by actively participating in the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). Recognizing the critical role of sustainable aviation fuels (SAF) and CORSIA Eligible Emissions Unit (CEU), Thailand has adopted a progressive, multi-stakeholder approach to meet its international obligations while strengthening domestic readiness.

1.2 The Civil Aviation Authority of Thailand (CAAT), in collaboration with key stakeholders and industry partners, has initiated capacity-building programs, regulatory design, and pilot implementations to enhance readiness for CORSIA offsetting requirements and long-term emissions reduction objectives.

2. DISCUSSION

2.1 For the first phase, CAAT initiated a Memorandum of Understanding (MOU) in collaboration with eight major Thai aeroplane operators (including Bangkok Airways, K-Mile Air, Nok Air, Thai AirAsia, Thai AirAsia X, Thai Airways, Thai Lion Air, and Thai VietJet) to support SAF deployment. Under this MOU, all signatory airlines commit to ensuring that the proportion of SAF consumed in all their international flights is at least one percent of the total quantity of fuel consumed in international flights between states participating in CORSIA, for both 2026 and 2027. This commitment marks a key milestone for the collective adoption of SAF in Thai aviation.

2.2 Collaboration has also been fostered between airlines and domestic fuel producers (Bangchak and PTT) to strengthen the SAF supply chain. As of now, Thai SAF producers currently produce SAF through two conversion processes: Hydro processed Esters and Fatty Acids (HEFA) and Co-processing HEFA, using used cooking oil (UCO) as a feedstock. The total estimated production capacity is approximately 370 million liters per year by 2026.

2.3 By 2030, SAF production potential is also being explored through Alcohol-to-Jet (ATJ) using molasses and sugarcane as feedstocks. However, producing SAF from molasses presents a challenge for Thailand. According to ICAO's "CORSIA Default Life Cycle Emission Values for CORSIA Eligible Fuels", The Life Cycle Emissions Factor (LCEF) for molasses is relatively high due to its classification as a co-product. In Thailand's context, it is considered a by-product of sugar production. Therefore, Thailand plans to propose a study on country-specific Life Cycle Emissions Factor (LCEF) for Thai molasses, based on national data and production practices.

2.4 Enhancing production efficiency and increasing the production volume of SAF would lead to economies of scale, reduce costs, and promote wider adoption among fuel users. By advancing both the supply and demand sides of the SAF market in parallel, Thailand can accelerate the development of a robust and self-sustaining domestic SAF ecosystem, while also positioning itself to serve growing international demand for sustainable fuels.

2.5 Importantly, Thailand now has the technical capability to supply SAF. Aeroplane operators seeking to refuel with SAF, whether for voluntary environmental initiatives or to meet CORSIA compliance, are now able to access SAF through available local supply channels. This demonstrates the country's readiness to operationalise SAF deployment at a commercial scale.

2.6 As ICAO Member States enter the First Phase of CORSIA (2024-2026), Thailand has taken proactive steps to raise awareness, build capacity, and enhance coordination among key stakeholders involved in implementing CORSIA Eligible Emissions Units (CEUs). A national workshop on CEU was held on 28 February 2025, organised by CAAT, with participation from Thai aeroplane operators, government agencies, and a verification body.

2.7 Key outcomes from the workshop highlighted Thailand's growing readiness to operationalize CEU-related obligations under CORSIA. The event resulted in increased awareness among Thai stakeholders regarding CEU compliance pathways, emissions reporting requirements, and offsetting timelines. Participants gained a clearer understanding of the procedures for acquiring, verifying, and retiring CEUs in accordance with ICAO guidelines. The workshop delivered multiple benefits, including improved preparedness purchasing and reporting of CEU, better comprehension of CEU eligibility criteria, and enhanced alignment with international standards. It also served as a platform to identify practical challenges and promote dialogue among stakeholders, thereby supporting a more efficient and transparent implementation of CORSIA. This initiative not only reinforces national compliance efforts but also strengthens Thailand's role in the global movement to reduce aviation-related carbon emissions.

2.8 Additionally, the Thai Government provided updates on the development of national guidelines under Article 6 of the Paris Agreement, which are intended to support the international transfer of emissions reductions. These forthcoming guidelines will establish procedures for project authorization, corresponding adjustments, and the operation of a national carbon registry aligned with international standards.

2.9 The workshop emphasized the importance of coordinated efforts across government agencies and the aviation industry in implementing CORSIA. It served as a platform for dialogue, knowledge sharing, and identifying policy gaps that needed to be addressed in upcoming regulatory developments.

2.10 The development and use of domestically produced SAF and CEU present a strategic opportunity for Thailand to align climate goals with national economic benefits. Sourcing SAF from local feedstocks not only reduces reliance on imported fossil-based jet fuel but also stimulates domestic investment in advanced biofuel technologies, feedstock cultivation, and refining infrastructure. This contributes to job creation, energy security, and the development of rural economies.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to note the information contained in this Paper.

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