



International Civil Aviation Organization

WORKING PAPER

A40-WP/548

EX/235

10/9/19

(Information paper)

English only

ASSEMBLY — 40TH SESSION

EXECUTIVE COMMITTEE

Agenda Item 17: Environmental Protection – Carbon Offsetting and Reduction Scheme for International Aviation (CORSA)

INDONESIA’S PRIORITY MEASURES IN REDUCING CARBON EMISSIONS IN AVIATION SECTOR

(Presented by Indonesia)

EXECUTIVE SUMMARY

Mitigation measures of greenhouse gas (GHG) emissions in aviation sector are covering a range of implementation actions by multi-stakeholders not only those who directly relate to aviation but also those who are not directly involved. This Paper provides the current Indonesia’s priority on the implementation of the Indonesia State Action Plan for climate change and mitigation of greenhouse gas (GHG) emissions in aviation sector. It also provides the updated information and future action as well as looking for sharing knowledge and experiences on the implementation of aircraft operational efficiency, green airport and Carbon Offsetting and Reduction Scheme for International Aviation (CORSA).

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective E - Environmental Protection.
<i>Financial implications:</i>	None
<i>References:</i>	<ul style="list-style-type: none">• Resolution A39-2: <i>Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate Change</i>• Resolution A39-3: <i>Consolidated statement of continuing ICAO policies and practices related to environmental protection – Global market-based measure scheme</i>

1. INTRODUCTION

1.1 The 39th Session of the International Civil Aviation Organization (ICAO) Assembly through the Resolution A39-2 “*Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change*” invited the ICAO member States to prepare or submit their State Action Plan regarding actions to reduce GHG emissions in aviation sector. In addition, the 55th Conference of Directors General of Civil Aviation for Asia and Pacific Regions in Fiji has also

encouraged States to cooperate with ICAO and among States themselves to further the development of their State Action Plan on CO₂ emissions reduction from international aviation.

1.2 The main content of the State Action Plan was developed in accordance with the ICAO Document 9988 “Guidance on the Development of States’ Action Plans on CO₂ Emissions Reduction Activities” with necessary adjustment taking into account the national circumstances.

1.3 The Directorate General of Civil Aviation (DGCA) of Indonesia has scheduled regular meetings with national stakeholders (aircraft operators, airport operators, air navigation service provider, fuel producer, Ministry of Energy and Mineral Resources, Ministry of Environment and Forestry and National Accreditation Body) in order to update the progress of State Action Plan implementation.

2. DISCUSSION

2.1 ICAO introduced several measures to reduce emissions from civil aviation which elaborated in the ICAO Document 9988 and concluded into four main measures within the ICAO Assembly Resolution A39-2 including air traffic management modernization, acceleration of the use of fuel-efficient aircraft technologies, development and deployment of sustainable alternative fuels and implementation of Carbon Offsetting and Reduction Scheme for International Aviation (CORSA).

2.2 Since the development processes of the third version of Indonesia Action Plan, the DGCA has prioritized to provide more coordination on the aircraft operational efficiency procedures, airport improvement and CORSA implementation. These measures are considered more “operator friendly” because it is in line with the organization revitalization programs and also users or passenger needs. While the implementation of CORSA is a compliance action to the Standard and Recommended Practices ICAO Annex 16 Volume IV.

2.3 **Operational efficiency procedures.** Two major national airlines have contributed to promoting the operational efficiency program through several actions. Some of them include direct routes and optimum flight level, one engine taxi in, potable water management, and determining the closest alternate airports for reducing fuel uplift. From January 2019, four airlines (Garuda Indonesia, Indonesia Air Asia, Citilink and Batik Air) reported to DGCA that single engine taxi-in procedure has been formulated by them. Verbal testimony has shown that significant fuel use was given through this efficiency procedure. In addition, Garuda Indonesia has initiated the use of electronic flight bag to reduce some weight by replacing their conventional manuals. DGCA has requested these operators to calculate and report the exact number of fuel reduction in order to complete the Indonesia Action Plan.

2.4 **Improvement of eco-airport.** Airport development and revitalization has become government priority since four years ago. In particular on the installation of solar panel for electricity generation has increased from 25 in 2015 to 39 airports in 2017 and to 47 airports in 2018. These achievements are just three airports away from the 2020 target. The four biggest solar system installed at four small airports in the Eastern part of Indonesia can generate up to 1,2 MW electricity power in total. According to the Ministry of Transportation national strategic plan from 2014 to 2019, it was planned to build 13 airports Light Rapid Transit (LRT). It is already operating in Kualanamu airport, Medan, Jakarta Soekarno-Hatta International Airport, Palembang Sultan Mahmud Badarudin, Padang Minangkabau International Airport, Solo Adi Sumarmo International Airport and Adi Sucipto Airport, Yogyakarta.

2.4.1 In order to monitor and inventory the use of energy as well as the impact of eco-airport programs, DGCA Indonesia through the Directorate of Airport was distributing a circular (INST 011 Year 2017) to request airport operators to monitor, record and calculate their energy used by using Airport Council International Airport Carbon and Emissions Reporting Tool (ACERT).

2.5 **CORSIA implementation.** DGCA Indonesia has actively participated in various familiarization or capacity building programs for CORSIA implementation by ICAO. Indonesia was also involved on the ICAO Assistance, Capacity Building, and Training Programme for CORSIA (ACT-CORSIA) together with other States in the region. The programme was important in providing States with required knowledge especially on monitoring-reporting-verification (MRV) and potential shape of national regulation.

2.5.1 Currently, DGCA Indonesia is in the final stage for approval of the adoption of CORSIA SARPs into Civil Aviation Safety Regulations. The Emissions Monitoring Plan (EMP) submitted by nine aircraft operators have been evaluated and agreed between DGCA and operators. In addition, accrediting the CORSIA report verifiers are now being intensively discussed with Indonesia National Accreditation Body that hold ISO 17011 (Komite Akreditasi Nasional). As agreed, on the Memorandum of Understanding between DGCA Indonesia and Indonesia Accreditation Body signed in December 2018, DGCA will support and provide CORSIA training for the candidates of verification bodies. The training program for verification bodies also include basic aircraft and airlines business processes in order to strengthen the verifiers skills and knowledge of CORSIA and general aviation.

2.5.2 This action will support the needs of airplane operators who impacted by CORSIA MRV requirements to get more options of accredited verification bodies for few years ahead.

3. CONCLUSION

3.1 The Assembly is invited to note the content of this paper; share the knowledge and experiences as well as to collaborate in implementing the aircraft operational efficiency procedures and eco-airport; and encourage ICAO and the States in Asia Pacific regions to continue collaborate through any kind of capacity building programme to ensure a successful CORSIA implementation especially on the emissions MRV and accrediting the verification bodies for CORSIA.

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