



ASSEMBLY — 40TH SESSION

TECHNICAL COMMISSION

Agenda Item 30: Other issues to be considered by the Technical Commission

STANDARDS FOR SMALL AERODROME IN MOUNTAINOUS AREA

(Presented by Indonesia)

EXECUTIVE SUMMARY

This paper presents information related to small aerodrome in mountainous area Standards and Recommended Practices (SARPs) that not yet covered by ICAO Annexes and documents. Small aerodrome provides a mean of transportation in Indonesia that is impossible with any other transportation especially in mountainous area. This paper is provided to urge States to recognise the importance of SARPs for small aerodrome in mountainous area.

Action: The Assembly is invited to:

- a) request the Council review existing SARPs related to aerodromes; and
- b) develop specific Standards in order to address the design, certification, management, safety and reporting requirements for small aerodrome in mountainous area.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objectives on Safety.
<i>Financial implications:</i>	The activities referred in this paper will be undertaken with resources available in the 2020-2022 Regular Programme Budget.
<i>References:</i>	Annex 14 — <i>Aerodromes</i> Doc 9981, <i>Procedures for Air Navigation Services — Aerodromes</i> , (PANS-Aerodrome) Doc 9774, <i>Manual on Certification of Aerodromes</i>

1. INTRODUCTION

1.1 Indonesia is populated with over 240 million people living across a far stretched archipelago. Aviation plays an important role for the transportation and economic growth. Small aerodrome provides a mean of transportation in Indonesia that is impossible with any other transportation.

1.2 Small aerodrome is an area used where aircraft can take off and landing for aircraft with minimum facilities. In mountainous areas, small aerodrome is the only mode of transportation. Small aerodrome generally located in isolated area. Small aerodrome is considered as an airport. Small aerodrome couldn't comply with Annex 14 – Aerodrome due to operational condition and location. It should be certified or registered for the safety regulation compliance.

2. DISCUSSION

Existing Provision

2.1 Directorate General of Civil Aviation of Indonesia established guidance material for small aerodrome since there are 314 small aerodromes that have already operated in Indonesia especially in eastern Indonesia. Small aerodrome was built by local community, companies, missionary, and local government to support logistic, economic, business and religious activity.

2.2 The standards for small aerodrome in Indonesia were adopted from Manual of Standard Civil Aviation Safety Authority (CASA) Australia, which has been published as DGCA Manual of Standard CASR Part 139, Volume I, Chapter 13, Aerodrome Standard for small aircraft.

2.2.1 Physical characteristic

Runway and obstacle limitation surfaces (OLS)	MTOW more than 2,000 kg but less than 5,700 kg	MTOW less than 2,000 kg
Runway width	15 m	10 m
Runway strip width	45 m	30 m
- graded		
- ungraded	60 m	60 m
Runway end strip	30 m	30 m
Runway longitudinal slope	≥ 2%	≥ 2%
Runway transverse slope	≥ 2.5%	≥ 2.5%
Runway strip transverse slope	≥ 2.5%	≥ 2.5%

- a) Runway length: Runway length requirements are adjusted to the type of aircraft to be operated by applying corrections (runway slope, elevation and temperature) to local airstrip conditions. It is important to ensure that the runway lengths available are adequate for the most critical aircraft although they do not always have to operate at maximum take-off weights.
- b) Runway strength shall be assessed to accommodate critical aircraft.
- c) Runway and runway strip surface shall be maintained to minimize impact of the aircraft operation.
- d) Surface of unsealed runway shall not have uneven parts, which can be dangerous for take off and landing.
- e) Marking shall be provided for sealed surface, and marker shall be provided for unsealed surface.

2.2.2 Small aerodrome operation

- a) Small aerodrome operator shall provide information as accurately as possible. To provide this information, inspection of the small aerodrome is needed, ideally carried out before flight departure from original airport. Information provided includes:
 - 1) runway surface conditions (dry, wet, standing water, soft, or slippery);
 - 2) runway strip conditions (obstruction/obstacle, uneven roughness, ability to see markers (visibility));
 - 3) wind direction indicator (torn or obstructed);
 - 4) approach area and take-off (if there are objects that are near to or above the surface of the obstacle (obstacle surfaces)); and
 - 5) other risk known by airport operators, for example, animal or bird hazards.
- b) For unsealed runways, serviceability is affected by rain. If the small aerodrome cannot operate due to rain condition, small aerodrome operator shall provide unserviceability signal and notify the airline.
- c) Inspection of the movement area surface condition, at least shall cover:
 - 1) termite bumps or other surface disturbances caused by high grass:
 - if there is a high grass area used by aircraft, check every possible thing becomes a hazard including runway strips; and the aircraft parking area without pavement (unsealed);
 - if possible, move it;
 - if needed, mark each unserviceable area;
 - report high grass for maintenance; and
 - 2) large loose stone in runway.

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