

**55th CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS**

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AGENDA ITEM 3 : AVIATION SAFETY

**PHYSICAL CHARACTERISTICS PARTICULARLY THE
RUNWAY SIDE STRIPS, A HINDRANCE TO
CERTIFICATION OF AIRPORTS**

Presented by Bangladesh

INFORMATION PAPER

SUMMARY

Physical characteristics particularly the runway side strips constitute a hindrance to Certification of airports of many countries.

This Paper introduces the difficulties faced by the states during safety risk assessments associated with the certification of airports; those do not meet the ICAO requirements of runway side strips.

PHYSICAL CHARACTERISTICS PARTICULARLY THE RUNWAY SIDE STRIPS, A HINDRANCE TO CERTIFICATION OF AIRPORTS

1. INTRODUCTION

It is important to assist states in the process of certifying their existing airports which are lacking in physical characteristics as required by ICAO and other associated limitations. For example, improving ability to assess the risks associated with the non-availability of required lateral depth of the runway side strips throughout the whole length & presence of other essential systems like water drainage on the runway strip and finds their possible mitigations.

2. DISCUSSION

2.1 Responsibility for ensuring safety, regularity and efficiency of aircraft operations at aerodromes and compliance with the relevant ICAO SARPs and/or applicable national regulations by the aerodrome operators rest with the individual States.

2.2 Certification of aerodromes is needed to ensure that aerodrome operators can meet their obligations in accordance with the terms and conditions of the aerodrome certificate.

2.3 Safety, regularity and efficiency of aircraft operations at aerodromes being of paramount importance, the requirement for aerodrome certification should apply equally to State-owned and private aerodromes.

2.4 The limitations in general of many CAAs in certifying an aerodrome are two folds:-

- (a) As aerodrome operator -
 - (i) Aerodrome Infrastructure,
 - (ii) No of competent staff to run the aerodrome operation,
 - (iii) Lack of Required Training
- (b) As aerodrome regulator -
 - (i) Insufficient number of inspectors,
 - (ii) Lack of required Training,

2.5 In many Airports, runway side strip is not available laterally as required by Art 3.4.3 of Annex 14, Vol-1 throughout the whole length of the strip. This is the major hindrance for the certification of such airports. In some cases graded area up to 105m or slightly beyond is available. Land acquisition is required to meet the minimum requirement. But land acquisition is a quite lengthy process in most of the countries. Sometimes there exists no land around or the acquisition of surrounding land is not possible due to one or more strategic reasons.

2.6 In the 14th amendment to Annex 14, Vol-1, which will be applicable on 08 Nov'2018, lateral extension of the strip has been adopted to be 140m where the code number is 3 or 4. Still runway side strip of many airports of this region will not meet the requirement. Even it meets; the height of the boundary wall would make OLS violation.

2.7 According to Annex 14; Vol-1 lateral extension of runway side strip has been mandated wherever practicable. Again using information on aircraft running off runways, grading of runway side strip up to 105m has been recommended for a precision approach runway with code number 3 or 4.

2.8 Based on analysis above, the main discussion point is, does the circumstances where some portion of side strip beyond the graded part is not fully available or is marginally available, constitute such a hazard whose associated risk exceeds the acceptable level of safety? If so, what are the possible mitigation measures other than acquisition of land?

2.9 Another discussion point is that many airports of the region have, as an essential need, storm water drainage systems on the side strips of runway because of non availability of land around the airports outside the strips. At times storm water drainage system lies outside the graded area of 105m.

2.10 According to definition, the intention of providing Runway strip is to reduce the risk of damage to aircraft running off a runway and to protect aircraft flying over it during take-off or landing operations. Analysis of the information on aircraft running off runways over the years led ICAO to adopt the decision of reducing the lateral width of runway strip from 150m to 140m. This means aircraft running off runways remains mostly within the limit of the graded portion (105m) of the runway.

2.11 In these circumstances, does the storm water drainage on the side strip of an Airport at a distance of more than 105m from the runway central line constitute a hazard?

2.12 If the answer pertaining to Sections 2.8 & 2.11 is “Yes”, an aeronautical study & risk assessment of the situations would be required to suggest mitigation measures to achieve equivalent level of safety in which, most of the regional countries would require assistance in the field of ‘Aeronautical study & Risk assessment’. Appropriate authority and/or competent states should/may come up with the support in this respect.

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to:

- a) note the limitation of states pointed out in this Paper;
- b) encourage other States to share their experiences on the issue;
- c) support the States concerned in this regard;

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