



WORKING PAPER

TWELFTH AIR NAVIGATION CONFERENCE

Montréal, 19 to 30 November 2012

Agenda Item 6: Future direction

6.2: Standardization – approach to SARPs development in support of One Sky

GUIDELINES FOR AERONAUTICAL STUDIES – INDIA

(Presented by India)

EXECUTIVE SUMMARY

This paper highlights the need for comprehensive guidelines for uniform application by States for conducting aeronautical studies to assess the permissible penetration of obstacle limitation surfaces (OLS).

Action: The Conference is invited to consider appropriate action for developing comprehensive guidelines.

1. INTRODUCTION

1.1 In fast developing economies, the airports have become the hub of economic activity with the consequent demand for construction of high-rise buildings/structures even penetrating obstacle limitation surfaces (OLS). States are permitting construction of such structures after carrying out aeronautical studies with respect to PANS-OPS surfaces which are normally protected. In the absence of comprehensive guidelines, States have developed their own criteria. There is a need to define harmonized guidelines to permit construction of such structures around the airport. The standardized guidelines will ensure safety and regularity of flight operations on the one hand and facilitate economic growth of the city on the other.

2. DISCUSSION

2.1 OLS are established around the airport as per ICAO Annex 14 — *Aerodromes* to protect the air space and ensure safety and regularity of aircraft operations. Even though OLS are rigid, paragraph 4.2.20 of Annex 14 permits penetration of inner horizontal and conical surfaces as given below:

“4.2.20 Recommendation.— New objects or extensions of existing objects should not be permitted above the conical surface or inner horizontal surface except when, in the opinion of the appropriate authority, the object would be shielded by an existing immovable object, or after aeronautical study it is determined that the object would not adversely affect the safety or significantly affect the regularity of operations of aeroplanes.”

2.2 The PANS-OPS surfaces described in the *Procedures for Air Navigation Services — Aircraft Operations* (PANS-OPS, Doc 8168) ensure safety of flights carrying out instrument approach procedures by

specifying minimum altitudes/heights for each segment of the procedure and are used by procedure designers for the construction of instrument flight procedures.

2.3 Even though the penetration of conical surface and inner horizontal surface is permissible through aeronautical study, no uniform guidelines are available with respect to the extent of penetration, density of such obstacles, etc. In the absence of uniform guidelines, States are following their own criteria to permit such penetration, while PANS-OPS surfaces are normally protected. The criteria adopted by States are at variance from one another and set up precedence to be quoted by other States, leading to proliferation of obstacles around the airports and possible degradation of safety levels. Such an obstacle growth will also adversely impact development of new IAL procedures and may force an operational penalty on aircraft operations.

2.4 The standardized guidelines for aeronautical studies will ensure safety and regularity of flight operations and facilitate growth of the city around the airports and overall economic development as well.

3. **CONCLUSION**

3.1 The Conference is invited to note the above issues and consider taking appropriate action for development of uniform and comprehensive guidelines for the conduct of aeronautical studies.

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