

**60th CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGIONS**

*Sendai, Japan
28 July - 1 August 2025*

**AGENDA ITEM 8: CAPACITY DEVELOPMENT
AND IMPLEMENTATION**

**IMPLEMENTATION OF THE REVISED ANNEX 14 VOL 1
STANDARDS AND RECOMMENDED PRACTICES ON
OBSTACLE LIMITATION SURFACES (OLS)**

Presented by Singapore

SUMMARY

This paper updates the Conference on the progress regarding the revised ICAO Annex 14, Volume I SARPs on OLS, and the initiatives by ICAO to support States in their implementation of the revised OLS SARPs.

The revised OLS SARPs were adopted by the ICAO Council on 28 March 2025, following a review of the OLS SARPs that spanned a decade since 2015. These revisions will be effective from 4 August 2025, and will become applicable to all States from 21 November 2030.

The ICAO OLS Task Force comprises subject matter experts from States and international organisations, with the Rapporteur from Singapore. The ICAO Secretariat and the Task Force are developing implementation support initiatives to facilitate States in transiting to the revised OLS SARPs.

The Conference is invited to:

- i. Note Singapore's implementation of the revised Annex 14 OLS SARPs;
- ii. Encourage States to share their implementation plans or experiences with ICAO, which will facilitate ICAO to share such State practices through an appropriate website; and
- iii. Urge States to fully utilise ICAO's implementation support initiatives, and to implement the revised OLS SARPs at the earliest opportunity.

IMPLEMENTATION OF THE REVISED ICAO ANNEX 14 VOL 1 STANDARDS AND RECOMMENDED PRACTICES ON OBSTACLE LIMITATION SURFACES (OLS)

1. BACKGROUND

1.1 The 38th ICAO Assembly in 2013 called for a significant review of the Annex 14 Obstacle Limitation Surface (OLS) Standards and Recommended Practices (SARPs). In 2015, an ICAO OLS Task Force (OLSTF) was established and assigned the task of reviewing the effectiveness of the existing SARPs, given that the requirements were established in the 1950s, and to address the growing pressure faced by States to intensify land developments around their aerodromes. It comprises subject matter experts from ICAO member States and International Organisations¹, with the subject matter expert of Singapore elected as its Rapporteur.

2. ICAO’s REVISION OF THE OLS SARPS IN ANNEX 14 TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION

2.1 The objective of ICAO OLSTF’s review is to ensure that the OLS SARPs stipulated in Annex 14 Volume 1 – Aerodromes Design and Operations are effective in protecting airspace around an aerodrome against obstacles that could potentially affect aviation safety. As part of the review, the OLSTF took into account technological advancements in navigation equipment capabilities and aircraft avionics as well as the emergence of modern instrument flight procedures.

2.2 The OLSTF also took into account the fact that the “one size fits all” concept on which the current OLS requirements are based, no longer addresses the various types of aircraft and flight operations conducted at aerodromes, and may not be reasonable to be enforced in a uniform manner on all aerodromes. To enable more effective safeguarding of surfaces surrounding aerodromes, as well as the ability to free up airspace not required for aircraft operations for non-aviation uses such as land development, the review also sought to give States the ability to decide on the surfaces to adopt based on the type of operations at each aerodrome.

2.3 Following thorough reviews spanning over a decade, the OLSTF developed a set of revised Annex 14, Volume I OLS SARPs (“revised OLS SARPs”) which require less airspace to safeguard aircraft operations, while still ensuring aviation and air navigation safety (see [Attachment 1](#) for an illustration of the differences in airspace required to safeguard aircraft operations between the existing and revised surfaces). The reviews involved analysing flight track data to determine the containment surfaces needed to safeguard aircraft operations to the runway. Surfaces were classified into either Obstacle Free Surfaces (OFS) or Obstacle Evaluation Surfaces (OES), which collectively ensure that no objects that could affect aviation safety are unaccounted for. The OFS are surfaces closer to the runway which are critical for aircraft in the final phase of approach to land. The OES, on the other hand, are surfaces intended to protect the flight procedures and operations conducted at the runway. To ensure a holistic review of the OLS SARPs, the OLSTF also worked with ICAO’s Flight Operations Panel and Instrument Flight Procedure Panel and took into account input from international organisations such as International Coordinating Council of Aerospace Industries Associations (ICCAIA), Airports Council International (ACI), International Air Transport Association (IATA) and International Federation of Air Line Pilots’ Associations (IFALPA). States were consulted via ICAO State Letter AN 4/1.1.58-23/33 dated 30 May 2023.

2.4 On 28 March 2025, the revised OLS SARPs were adopted by the ICAO Council. An ICAO State Letter was issued on 24 April 2025 to inform States that the revised OLS SARPs would become effective on 4 August 2025, and become applicable to all States on 21 November 2030.

¹ OLSTF members are: (States) Australia, Austria, Brazil, People’s Republic of China, Canada, France, Germany, Italy, Japan, Republic of Korea, Spain, United States, and the United Kingdom; (International Organisations) ACI, European Union Aviation Safety Agency, IATA, IFALPA, and ICCAIA.

3. SINGAPORE'S IMPLEMENTATION OF THE REVISED OLS SARPS

3.1 Singapore has embarked on the implementation of the revised OLS SARPs in five phases. The overall implementation process is expected to take at least one year, and significant resources for interagency coordination and cross-sectoral work. Singapore's implementation phases are as follows, and may proceed concurrently:

Phases	Activities
Planning	(1) Determine the type of operations conducted at each aerodrome based on current and future operational needs; (2) Identify the revised surfaces required to protect current and future operations, including potential aerodrome expansions; and (3) Identify affected stakeholders and develop an engagement plan.
Application	(1) Adapt the surfaces to national requirements, including to account for any airspace restrictions such as those due to military operations, local operating conditions and the existing obstacle environment within and around the aerodromes.
Template development	(1) Develop a composite height template for all affected aerodromes comprising the applicable surfaces at each aerodrome based on the revised OLS SARPs and applicable national requirements; and (2) In areas where surfaces overlap, to determine the more limiting surface.
Communication	(1) Socialise the expected changes arising from the revised OLS SARPs to various stakeholders, including aerodrome operators, and land use planning and infrastructure agencies; (2) Share the implementation plan and key milestones with stakeholders; and (3) Manage queries and feedback from stakeholders.
Legislative amendments	(1) Identify affected national legislation; (2) Prepare amended national legislation; (3) Consult stakeholders; and (4) Publish amended national legislation.

4. ICAO'S IMPLEMENTATION SUPPORT FOR STATES

4.1 The changes to the Annex 14, Volume I, OLS SARPs require a paradigm shift in how States understand and apply the OLS, and States may as a result require assistance from ICAO to transition towards the new Annex 14 requirements.

4.2 The ICAO Secretariat has worked with the OLSTF through its Rapporteur to identify and develop training, aids, and programs to assist States' transition. As a result, a dedicated ICAO course on the revised OLS, a website on OLS implementation and other initiatives that help ease the generation of the revised OLS surfaces at their aerodromes have been developed. ICAO will roll out the OLS training course and work with the respective regional offices to arrange for webinars and workshops in the coming months.

4.3 States are also encouraged to share their implementation plans and challenges faced in applying the revised OLS SARPs. This information can then be accessed, through a common ICAO platform, by other States to support their implementation of the revised OLS SARPs. In addition, through these sharing, ICAO will be able to calibrate its transition support to support the implementation of the revised OLS SARPs in a more targeted manner.

5. ACTION BY THE CONFERENCE

5.1 The Conference is invited to:

- a) Note Singapore's implementation of the revised Annex 14, Volume I OLS SARPs;
- b) Encourage States to share their implementation plans or experiences with ICAO,

which will facilitate ICAO to share such State practices through an appropriate website; and

- c) Urge States to fully utilise ICAO's implementation support initiatives, and to implement the revised OLS SARPs at the earliest opportunity.

Enclosure:

Attachment 1 – Illustration of differences in airspace required to safeguard aircraft operations between existing and revised surfaces

— END —

ILLUSTRATION OF DIFFERENCES IN AIRSPACE REQUIRED TO SAFEGUARD AIRCRAFT OPERATIONS BETWEEN EXISTING AND REVISED SURFACES

Chart 1: Along the runway

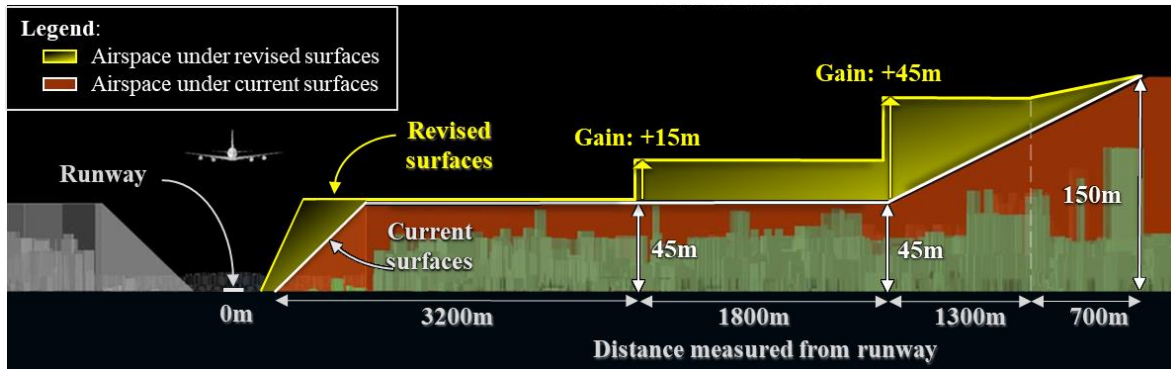


Chart 2: At the ends of the runway

