International Civil Aviation Organization

INFORMATION PAPER

ASIA AND PACIFIC (APAC) FIFTEENTH MEETING OF THE METEOROLOGICAL REQUIREMENTS WORKING GROUP (MET/R WG/15)

Bangkok, Thailand 07 April – 10 April 2026

Agenda Item 3: Collaboration between MET and ATM stakeholders

INTERACTION BETWEEN LOW-ALTITUDE ECONOMY AND MET/ATM

(Presented by Hong Kong, China)

SUMMARY

This paper presents Hong Kong, China's efforts in developing MET support for the 'Low-altitude Economy (LAE)' enabled by Advanced Air Mobility (AAM), while enhancing MET support for civil and general aviation. It highlights that a boundaryless sky demands harmonized and interoperable support across all altitudes and use cases, underscoring the need for standards and guidance to govern safe and efficient LAE/AAM operations.

1. INTRODUCTION

1.1 At its 41st Session in 2022, the ICAO Assembly recognized that the Advanced Air Mobility (AAM) sector calls for ICAO's involvement, including consideration of establishing a globally harmonized framework. Consequently, the ICAO Secretariat established the Advanced Air Mobility Study Group in light of rapid technological advances of new entrants and the potential impact on the aviation ecosystem, with the first meeting held in May 2023.

1.2 The first ICAO AAM Symposium, held in September 2024 at ICAO Headquarters, aimed to urge AAM stakeholders to collaborate on supporting, governing, and regulating AAM. This involved cooperating to establish adaptive, flexible, and harmonized regulatory frameworks that embrace innovation while remaining compatible with current aviation frameworks.

1.3 During the 42nd Session of the Assembly in 2025, multiple working papers demonstrated how various ICAO Member States were pursuing the integration of AAM operations into their national airspace systems. In one of its resolutions, the Assembly 'requests the Council to continue to monitor the progress of the unmanned aircraft systems industry, promote and coordinate the gathering and sharing of information and best practices on economic regulatory issues on unmanned aircraft amongst Member States'.

2. DISCUSSION

2.1 To steer Low-Altitude Economy (LAE) initiatives across multiple fronts, the Working Group on Developing Low-altitude Economy was established in Hong Kong, China in 2024. This Working Group formulates the development strategies and inter-departmental action plans, beginning with pilot projects for AAM. It will designate specific venues, draft regulations, design the institutional framework, develop plans for the required infrastructure and networks.

2.2 At the 60th Conference of Directors General of Civil Aviation, Asia and Pacific Region in mid-2025, the Hong Kong Civil Aviation Department presented 'Development of Low-Altitude Economy in Hong Kong, China' and shared the efforts made by Hong Kong, China in capitalizing on AAM technologies to enhance public services and drive innovation through the operationalization of diversified application scenarios. The presentation aimed to encourage Members to share their experiences and best practices in regulating and promoting the diverse applications of different types of AAM; and urge the ICAO to continue supporting the development of global standards, guidance, and frameworks to facilitate the safe and efficient integration of AAM into the low-altitude airspace.

2.3 Since the first quarter of 2025, the pilot LAE projects have tested operations under various scenarios to collect technical data and identify infrastructure requirements, while ensuring aviation and public safety. Initial operations focused on smaller unmanned aircraft for emergency search and rescue, logistics and deliveries, inspection and maintenance, and surveillance. Building on the initial success, "Regulatory Sandbox X" has been launched in 2026. This next phase of pilot projects introduces three new elements**:** 'extra' capabilities, 'extended' operations, and enhanced 'collaboration'. It will advance LAE development to support more complex application scenarios, including unmanned aircraft traffic management (UTM), unconventional aircraft, and cross-border applications—moving closer to international navigation as aircraft capabilities continue to improve.

2.4 In response to the increasingly widespread and in-depth development of the LAE, the Hong Kong Observatory (HKO), as the designated meteorological authority in Hong Kong, China to provide weather facilities and services for international air navigation, is expanding its operations to comprehensive low-altitude airspace weather monitoring and potential collaboration with nearby MET services. HKO collaborates with the venue partners and Sandbox participants to install meteorological equipment for monitoring the low-altitude airspace in key testing areas. It has developed a weather service web platform prototype to support drone operations by integrating weather observations and forecasts (winds, temperature, visibility, cloud cover, precipitation, etc...), enabling continuous weather risk assessment before and during the low-altitude flights (see **Appendix A**).

2.5 The platform prototype began testing in mid-2025 and currently has over 40 accounts, covering government drone teams, Sandbox stakeholders, universities, research institutions, and civil aviation authorities. It will continue to be optimized through agile development approach (continuous delivery and improvement), flexibly adapting to the specific MET requirements of various LAE projects. To ensure consistency and future seamless integration across civil aviation, general aviation and LAE operations, HKO will harmonize MET support with both ATM and UTM systems. This includes standards development, guidance formulation, standardized application programming interfaces, advanced numerical weather forecasts with higher fidelity, and enhanced observation technologies. The impacts of space weather and ionospheric scintillation on communication networks and/or GNSS signal reception should also be addressed for better LAE weather assessments.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper; and

b) share information and best practices on weather support for AAM/LAE and potential MET/ATM/UTM integration.

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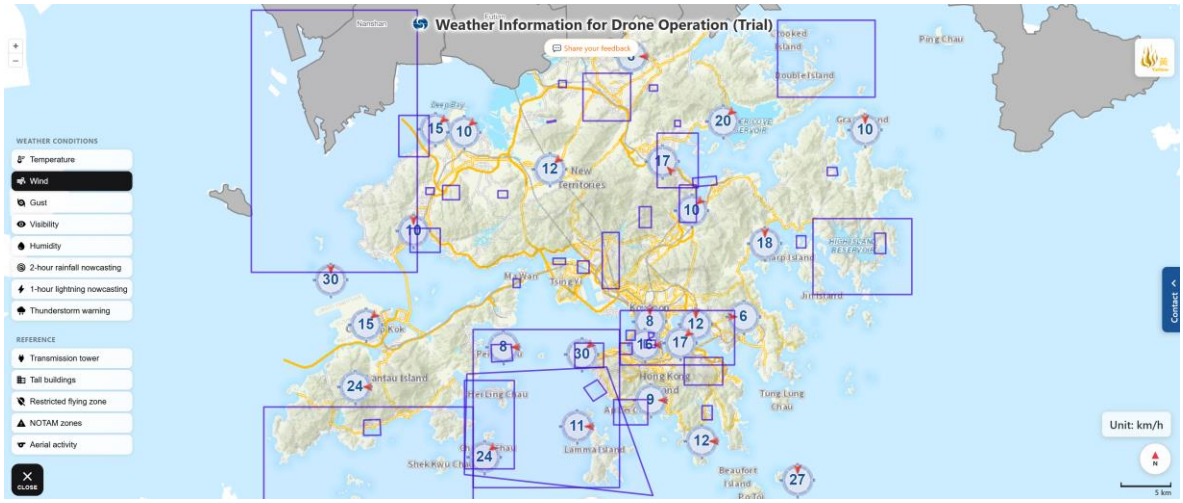
APPENDIX A



Screenshot of the weather service web platform prototype