

**61ST CONFERENCE OF
DIRECTORS GENERAL OF CIVIL AVIATION
ASIA AND PACIFIC REGION**

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AGENDA ITEM III: AVIATION SAFETY

**LEVERAGING EMERGING TECHNOLOGIES TO
STRENGTHEN AVIATION SAFETY OVERSIGHT
AND RISK MANAGEMENT**

(Presented by the Republic of the Philippines)

INFORMATION PAPER

SUMMARY

This paper highlights the importance of collaborative risk management to enhance runway safety as airport operations become more complex. It identifies key risks such as runway incursions, excursions, wildlife hazards, foreign object debris, and deteriorating runway conditions, all of which require proactive monitoring and effective mitigation. The paper recommends strengthening Runway Safety Teams (RSTs), improving stakeholder coordination, standardizing procedures, and fostering a strong safety culture. It also stresses the need for continuous surveillance, timely reporting of runway conditions, and comprehensive wildlife hazard management. Finally, the paper calls for increased regional cooperation through the exchange of best practices, technical expertise, and safety information to achieve sustainable improvements in runway safety in the Asia-Pacific Region.

LEVERAGING EMERGING TECHNOLOGIES TO STRENGTHEN AVIATION SAFETY OVERSIGHT AND RISK MANAGEMENT

1. INTRODUCTION

Runway safety is a top priority in international civil aviation, as runway incursions, excursions, and wildlife strikes remain significant contributors to incidents. Rising air traffic and increasing operational complexity require closer coordination among Civil Aviation Authorities, airport operators, air navigation service providers, airlines, ground handling organizations, and other stakeholders to identify hazards and implement effective risk mitigation.

In the Philippines, the Civil Aviation Authority of the Philippines supports runway safety at international and domestic airports by implementing ICAO Standards and Recommended Practices. Due to diverse operating environments, including variable weather, wildlife activity, terrain, and airport characteristics, effective runway safety requires continuous oversight, timely risk assessment, and coordinated safety initiatives among all relevant organizations

2. DISCUSSION

A collaborative approach is essential for identifying operational hazards, assessing risks, and implementing preventive actions before incidents occur. Regular coordination enhances communication, strengthens situational awareness, and supports informed decision-making during all airport operations.

A key component of this framework is the establishment and ongoing development of Runway Safety Teams. These multidisciplinary teams provide a structured forum for airport operators, air traffic service providers, aircraft operators, ground handling organizations, rescue and firefighting services, and regulatory authorities to address local safety concerns, review operational data, and develop practical mitigation measures tailored to each airport's environment.

Runway incursions and excursions remain major operational challenges for many airports in the Asia-Pacific Region. These incidents may result from human factors, communication errors, reduced situational awareness, adverse weather, or infrastructure limitations. Addressing these risks requires consistent use of standardized procedures, effective communication, ongoing training, and a strong safety culture;

Wildlife hazards remain a significant operational concern, especially for airports near agricultural areas, wetlands, coastal zones, or grasslands. Effective Wildlife Hazard Management Programs, supported by regular habitat assessments, coordinated control activities, and cooperation with local government and conservation agencies, can substantially reduce wildlife-related risks while ensuring compliance with environmental requirements. Objects left in movement areas, regardless of size, can cause aircraft damage, operational delays, and increased safety risks. Periodic inspections, effective housekeeping practices, staff awareness initiatives, and established reporting procedures help reduce the likelihood of FOD-related occurrences;

3. ACTION BY THE CONFERENCE

3.1 The Conference is invited to note the information contained in this Paper.

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