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

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AGENDA ITEM 3: AVIATION SAFETY

UPDATES OF MEASURES TO PREVENT RUNWAY INCURSIONS IN RESPONSE TO THE ACCIDENT AT HANEDA AIRPORT OCCURRED ON 2ND JANUARY 2024

(Presented by Japan)

INFORMATION PAPER

SUMMARY

ICAO continues to focus its global and regional efforts on aviation safety by addressing the identified G-HRCs and R-HRCs, of which runway safety, particularly runway incursions, is one of the most important aviation issues. This paper highlights the aviation safety measures implemented by Japan in response to the accident occurred at Haneda Airport on 2 January 2024. It outlines the key measures taken to prevent recurrence and improve runway safety, particularly those implemented after 60th DGCA.

UPDATES OF MEASURES TO PREVENT RUNWAY INCURSIONS IN RESPONSE TO THE ACCIDENT AT HANEDA AIRPORT OCCURRED ON 2ND JANUARY 2024

1. INTRODUCTION

1.1 At around 17:47 on 2 January 2024, (Japan Standard Time; 8:47 UTC), on Runway 34R at Tokyo International Airport (hereinafter referred to as "Runway C"), a Bombardier DHC-8-315 aircraft (registration JA722A, hereinafter referred to as "Aircraft A"), operated by the Japan Coast Guard carrying a total of six people on board (the Pilot in Command and five other crew members) and an Airbus A350-941 aircraft (registration JA13XJ, hereinafter referred to as "Aircraft B"), operated by Japan Airlines Co., Ltd. carrying a total of 379 people on board (the Pilot in Command, 11 other crew members and 367 passengers), collided on Runway C during landing and taxiing operations.

1.2 The PIC of the Aircraft A sustained a serious injury and 5 other crew members sustained fatal injuries. Aircraft A was totally destroyed by fire.

1.3 All crew and passengers evacuated from Aircraft B after it came to a stop, but one passenger sustained a serious injury and four passengers sustained minor injuries. In addition, 12 passengers who complained of feeling unwell were examined by a doctor. Aircraft B was totally destroyed by fire.

1.4 On 2 January 2024, the Japan Transport Safety Board (JTSB) received information about the occurrence of the accident and appointed one chief investigator and five other investigators to investigate this accident. Three investigators were additionally appointed on 5 January and one on 10 January.

1.5 On 25 December 2024, the JTSB released its "Aircraft Accident Investigation Interim Report", which summarized the overview of this accident and its contributing factors. The report states that this accident likely occurred due to a combination of the following factors: *(Note: the JTSB's investigation is still ongoing)*

- Aircraft A understood that it had received clearance from the air traffic controller to enter the runway, entered the runway and stopped there.
- Tokyo Airport Control was not aware that Aircraft A had entered the runway or stopped on the runway
- Aircraft B did not recognize Aircraft A stopped on the runway until just before the collision

2. DISCUSSION

2.1 In response to this accident, "Haneda Airport Collision Prevention Measures Review Committee" (hereinafter referred to as the "Committee") was established and on 24 June 2024, the Committee released its "Interim Report", which recommended the following five measures:

- Prevent human errors in ATC communications
- Strengthen the warning system for runway incursions
- Strengthen the implementation system for ATC operations
- Strengthen the collaboration and promotion system for runway safety
- Promote research and development of new technologies

2.2 This chapter outlines the progress made on these five measures, including the implementation of the legal/regulatory framework.

a) Prevent human errors in ATC communications

- Mandatory CRM (Crew Resource Management) Training for all pilots, including private pilots:

On 6 June 2025, the "Act to Partially Amend the Civil Aeronautics Act and Other Related Acts" (hereinafter referred to as "the Act") was promulgated. The Actestablished a requirement for pilots who take off or land at airports within air traffic control zones to complete the CRM training conducted by registered training institutions approved by the Minister of Land, Infrastructure, Transport and Tourism (MLIT).

On 1 December 2025, the Act and the "Ministerial Ordinance on approved training institutions under the Civil Aeronautics Act" came into effect. The Ministerial Ordinance sets forth the registration procedures for "registered training institutions"—which are registered by the national government and are responsible for conducting the relevant training—as well as the requirements for instructors, standards for training operations, and the content to be specified in the training regulations.

- Exchange of views between air traffic controllers and pilots, etc. and training and drills using instructional materials:

To deepen mutual understanding between air traffic controllers and pilots and to further facilitate communication, exchanges of opinions are being held at each airport.

In June 2025, the ATC Communication Handbook was revised, and a communication map of the major airports was created, which is currently being used for opinion exchange, training, and drills. (*Note: The major airports are Haneda, Narita, New Chitose, Chubu, Osaka, Kansai, Fukuoka, and Naha.*)

A communication map illustrating air traffic controllers' intentions regarding information provision to pilots based on airport characteristics and traffic conditions have been created and distributed to operators at the major airports.

b) Strengthen the warning system for runway incursions

- Enhancement of runway occupancy monitoring support functions:

At the major airports, alert systems for ATCs to prevent runway incursions have been strengthened.

- Expansion of runway condition indicators (RWSL):

RWSL are scheduled to be expanded to all runways and taxiways at the major airports where takeoffs and landings are expected to occur on the same runway. In addition, to evaluate the visibility of RWSL, observations were made to verify how its appearance changes when different types of lights (takeoff hold lights (THL) and approach lights) are illuminated.

- Installation of position information transmitters on vehicles approaching runways:

Under the "Ordinance for Enforcement of the Civil Aeronautics Act" (hereinafter referred to as "ORDINANCE"), which were amended considering the Act, it has become mandatory as of 31 March 2026, for owners of vehicles approaching runways at the major airports to install position information transmitters.

c) Strengthen the implementation system for ATC operations

- Strengthening and expanding the human resources system for air traffic controllers:

On 1 April 2025, a new position called "Coordinator for departure and arrival traffic management" was established to enhance situational awareness, and 56 ATCOs were assigned to seven major airports. To ensure enough ATCOs, the enrollment capacity of the

training institution for ATCOs was expanded to 120 per year.

- Improving the working environment for air traffic controllers:

To enhance fatigue management for ATCOs, we have already implemented a stress care system. In addition, we will introduce a seat assignment planning system at the end of this fiscal year, based on projections of increased and concentrated traffic volume.

d) Strengthen the collaboration and promotion system for runway safety

- Implementation of runway safety team (RST):

The Act mandated the establishment of RST at the major airports and ORDINANCE stipulates that RST activities must comply with Runway Safety Action Plan (RSAP) established by the national government.

RST facilitates discussions among stakeholders - including airport operators, ATCs, airlines, and ground handling operators - across organizational and occupational boundaries to maintain and improve runway safety for each airport. These activities include collecting hazard information, assessing safety risks, and exploring risk mitigation measures.

e) Promote research and development of new technologies

Japan has formulated "CARATS," a long-term vision for realizing a safe, convenient, and sustainable air traffic system. With 2040 as the target year, a system will be established where the public and private sectors work together to address challenges such as improving air traffic safety.

With the aim of reducing the risk of collisions between aircraft or aircraft and other vehicles on runways, we are currently conducting research and studies on the following items to further utilize digital technologies:

1. Study on the development status of onboard runway incursion detection systems, such as Onboard Collision Avoidance System.

2. Research and studies aimed at improving air traffic management systems, such as A-SMGCS.

f) Other Measures

At the time of the accident, the aircraft's cabin systems such as the intercom in-flight public address system were inoperable. Some of the cabin crew therefore used megaphones but some of them stopped using the megaphones because they did not seem to be effective. The right engine did not shut down and continued rotating, which might affect the acoustic environment inside the cabin.

As part of the analysis for damage mitigation, the JTSB and Airbus conducted verification experiments regarding the onboard use of portable megaphones of the same type as those installed on Aircraft B. As a result, it was found that the range over which crew instructions could be conveyed was insufficient.

Based on these findings, while the investigation is ongoing, the JTSB determined that it is necessary to consider countermeasures not only for aircraft of the same type as Aircraft B but also for other aircraft types and proactively provided this information to the Japan Civil Aviation Bureau (JCAB) prior to the issuance of the final report.

In response to this information, to enhance emergency evacuation capabilities, the JCAB requested airlines to make efforts to install higher-output megaphones; methods for crew communication and addressing passengers in the event that the interphone system and the passenger address system fail; and to conduct training using the methods described in the preceding item, etc. The JCAB requested aircraft manufacturers to consider possible measures to enable installation of higher output megaphones.

2.3 Japan will continue to take necessary measures to ensure aviation safety, including safety measures based on the recent accident, in collaboration with all related aviation stakeholders. In addition, Japan will also actively promote the provision of information regarding the accident and the sharing of knowledge on runway safety at international and regional conferences.

3. ACTION BY THE CONFERENCE

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

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