International Civil Aviation Organization

Twentieth Meeting of the ICAO Aeronautical Information Services – Aeronautical Information Management Implementation Task Force (AAITF/20)

Chitose, Japan, 9 – 13 June 2025

Agenda Item 6: Any Other Business

IMPORTANCE OF INFORMATION SHARING IN WINTER AIRPORT OPERATIONS AND FUTURE PROSPECTS

(Presented by Japan)

SUMMARY

This paper presents the importance of information sharing and coordinated action to ensure safe and punctual operations at airports affected by snowfall during the winter season. It is essential that all relevant parties share timely information on runway and aircraft operations in response to rapidly changing weather conditions. Furthermore, snow clearance on runways and taxiways, lighting maintenance, and other related activities must be carried out promptly while maintaining ongoing airport operations. This Information Paper introduces the example of New Chitose Airport, a key airport in the northern region of Japan that operates 24 hours a day.

1. INTRODUCTION

1.1 New Chitose Airport is a 24-hour airport with two runways, each 3,000 m long and 60 m wide. It handles approximately 150,000 aircraft movements annually, which amounts to an average of around 400 per day.

1.2 Chitose City, where the airport is located, had an average annual snowfall of 227 cm from 2006 to 2020, with the heaviest snowfall from December to March and the deepest snowfall reaching 50 cm in some months. Therefore, depending on snowfall conditions, runway snow removal is performed not only at night but also during the daytime, totalling more than 150 times per year. The number of times the runway is closed during the daytime varies from year to year, sometimes exceeding 30 times a year in some years, but in the most recent FY2024, it was 12 times.

2. DISCUSSION

Overview of snow removal operations

2.1 In order to perform snow removal during the daytime without interrupting take offs and landings, the company uses alternating snow removal, whereby one of the two runways is used for take offs and landings while the other is closed for snow removal. For the runway, 15 snowploughs form an inverted V formation to remove snow from the entire runway width in one direction. The runway is cleared in 20 minutes, followed by a 10-minute runway surface condition assessment (RWYCC). For taxiways and other areas, snow removal teams are divided into smaller groups, and snow removal patterns are determined to make short work of the snow removal. Snow around lights is cleared manually by workers, except for areas that can be removed by vehicles. Since there are few aircraft

operations at night, parked aircraft are moved to the apron for night stays, and the entire driving area, including other apron areas, is cleared in the middle of the night.

Information Sharing among Stakeholders

2.2 In 2018, New Chitose Airport introduced A-CDM to support coordinated decision-making among airport managers, operators, and ATC agencies. A-CDM is equipped with functions to display information such as restricted area closures, flow control, aircraft operation status, weather information, etc. In winter, it also displays the condition of the runway surface and the progress of snow removal plans. In particular, the progress of the snow removal work is shown on the airport map and is shared in real-time via chat. NOTAM is also displayed. This information allows operators to make timely decisions on aircraft handling and reduces the number of inquiries from operators to airport management. However, because the information displayed on the A-CDM is special information, it is displayed only to a limited number of people and cannot be confirmed in real-time by the workers on the ground.

Expectations for Digitalization Challenges and Further Development

2.3 NOTAM is used as official information to help operators make operational decisions, so its necessity will not change. In addition, NOTAMs provide clear and concise information in a globally standard format. The ability to share information on the planning and progress of related operations is essential for operators to be able to take off and land in a timely manner when runway operations are resumed. However, the knowledge and understanding of NOTAM varies among the hundreds of snow removal and airfield maintenance workers who work daily, as well as among contractors.

2.4 It can be very challenging for non-specialist personnel to understand the specialised terminology and abbreviations used in NOTAMs. Therefore, from a safety perspective, it is essential to digitise information, integrate related data such as NOTAMs and CDM, and share it in real time with on-site workers, including those involved in snow removal operations.

2.5 The digitalisation and advancement of information are expected to enable greater possibilities, such as the use of native language notation and graphical representations, allowing information to be more easily recognised by all users.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper; and

b) discuss any relevant matters as appropriate.

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