Sixth Meeting of the Aerodromes Operations and Planning Sub-Group (AOP/SG/6)

Video Teleconference, 27 to 30 June 2022

Agenda Item 6: Airport Environmental Initiatives

AIRCRAFT NOISE MANAGEMENT SURVEY FINDINGS

(Presented by Airport Council International)

SUMMARY

Anticipating that aircraft noise issues will be escalated when the aviation industry restarts and recovers from the COVID-19 pandemic, through this Aircraft Noise Management Survey in 2020 to airport operators, ACI Asia-Pacific aims to support its member airports to mitigate aircraft noise impacts by exploring various measures implemented in the region according to ICAO's Balanced Approach principle. This paper presents the findings of the Survey. It was found that most airports in the region adopt ICAO's Balanced Approach principle to address aircraft noise issues with local governments and aviation authorities being the most common partners and airports lobbying for quieter aircraft despite slow uptake.

1. INTRODUCTION

1.1 Traditionally, aircraft noise management has long been many airports' focus to obtain social permission to grow and operate with their communities. With the increasing air traffic and expansion of airport operations in the Asia-Pacific and Middle East Regions, aircraft noise issues continue to be one of the top environmental priorities.

1.2 Anticipating that aircraft noise issues will be escalated when the aviation industry restarts and recovers from the COVID-19 pandemic, through this survey in 2020, ACI Asia-Pacific aims to support its member airports to mitigate aircraft noise impacts by exploring various measures implemented in the region according to ICAO's Balanced Approach principle.

1.3 ICAO's Balanced Approach consists of identifying the noise problem at a specific airport and analyzing various measures available to reduce noise through the exploration of various measures which can be classified into four principal elements. These are reduction at source, land-use planning and management, noise abatement operational procedures and operating restrictions, with the goal of addressing the noise problem in the most cost-effective manner.

1.4 The objectives of this survey are to develop a database of aircraft noise management practices at airports in the ACI Asia-Pacific Region; and identify and analyze measures to reduce aircraft noise.

1.5 The survey findings are deduced from thirty-three participating airports across fourteen countries and territories, and economies in the Asia-Pacific and Middle East Regions.

2. DISCUSSION

High-Level Findings

2.1 Local governments and aviation authorities are the most common partners for airports in aircraft noise management: Local government and the aviation authority are the most engaged stakeholders in creating a balanced approach to aircraft noise mitigation, especially for the implementation of land-use planning and noise abatement operational procedures. Service providers, employees and partners are important but less engaged stakeholders.

2.2 Most Asia-Pacific and Middle East airports adopt ICAO's Balanced Approach principle to address aircraft noise issues: banning of ICAO Chapter 2 aircraft, environmental impact assessment, long-term master planning, noise abatement departure procedures and curfew are the most common measures to mitigate aircraft noise issues.

2.3 Airports lobbying for quieter aircraft despite slow uptake: aircraft manufacturers and airlines are integrating noise and environmental sustainability objectives at the aircraft conceptual design stage. Airports are not yet required to adjust their operating environments or policies to accommodate emerging aircraft such as supersonic aircraft, hybrid-electric aircraft and electric aircraft due to technology maturities. Therefore, airports' aircraft noise management focus remains on the existing aircraft types, with measures like limiting access to outdated aircraft types (e.g., ICAO Chapter 2 and sometimes Chapter 3 aircraft) to help deliver quieter outcomes.

Reduction of Noise at Source

2.4 76% of responding airports have noise measuring terminals or stations and monitoring systems to measure aircraft noise metrics. The average number of noise-measuring terminals or stations used to measure aircraft noise have an increasing trend as airport size increases.

2.5 39% of the responding airports implemented different retrofits or restricted certain types of aircraft with airlines to operate in their airports. The banning of ICAO Chapter 2 aircraft is one of the most common implementations.

Land-use Planning and Management

2.6 Majority of the responding airports have land-use compatibility plans/ policies to guide the overall land use planning near their airports and have a master plan in place to ensure the long-term development and compatible uses in the airport vicinity.

2.7 Two measures taken to reduce the noise level for the household living within the noise contour and surrounding area of the airport were mostly highlighted by airports: aircraft noise disclosure and land acquisition.

Noise Abatement Operational Procedures

2.8 The top three noise abatement operational procedures are noise abatement departure procedures, noise preferred arrival and departure routes and flight track dispersion or concentration.

2.9 The top three methods to reduce ground aircraft noise are ground run-up procedures, run-up enclosures and restrictions on APU usage.

Operating Restrictions

2.10 The top three imposed operating restrictions to reduce noise impacts are curfews, movement caps and noise quotas but only less than 6 airports have each of these restrictions in place.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note that most Asia-Pacific and Middle East airports which participated in the survey have adopted ICAO's Balanced Approach principle to address aircraft noise issues;

b) note the importance of engagement with main stakeholders to address aircraft noise issues; and

c) discuss any relevant matters as appropriate.

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