International Civil Aviation Organization
Asia and Pacific Office

Twenty-second Meeting of the Asia Pacific Regional Aviation Safety Team (APRAST/22)

(Bangkok, Thailand, 30 September to 04 October 2024)

Agenda Item 5: Presentations – State / Industry / ICAO

FINDINGS OF A SURVEY ON RUNWAY SAFETY TEAM

(Presented by ACI and CANSO)

SUMMARY

The purpose of this paper is to share the findings of a survey on the challenges for aerodrome operators and ANSPs in the establishment and implementation of runway safety teams (RST), and in upkeeping runway safety during runway maintenance works, in view of promoting runway safety.

1. INTRODUCTION

1.1 Paragraph 8.2.1 of PANS Aerodromes states that "an aerodrome operator shall establish a runway safety team comprised of relevant organizations operating or providing services on the aerodrome".

1.2 However, as of June 2023 only 26%, i.e., 93 out of 355 of international aerodromes in the Asia-Pacific region had established RST per IP/05 submitted to AOP-SG/7. AOP/SG/8 held in July 2024 adopted a framework to monitor the implementation of RST in the region. This framework is displayed in Appendix G1 to the report of AOP/SG/8.

1.3 ACI and CANSO consider RST as an important tool to improve runway safety and that runway maintenance works are a potential source of runway safety hazards, and with a view of promoting RST and runway safety in the region, decided to conduct a survey in January 2023 amongst their respective membership in the region to find out about:

a) The challenges in the establishment and running of RST;

b) Safety issues arising from runway maintenance works, especially runway incursion; and

c) How these issues might be resolved in the view of the survey participants.

1.4 The survey questionnaire and results are presented below.

2. DISCUSSION

2.1 *ACI Survey Questionnaire*. The participants were asked about:

a) Key challenges in the set up and running RST;

- What might be done jointly with ANSP (for aerodrome operators) or aerodrome operators (for ANSP) to facilitate the setup and running of RST;

b) Key safety issues that might arise from runway maintenance;

c) What may be done to help resolve these issues; and

d) Issues on learning from safety occurrences.

2.2 *Key Challenges in setup and running of RST (replies from airports).*

a) Getting commitment from stakeholders to attend meetings consistently;
b) Reluctance to report incidents and accidents;
c) Communications between RST members; and
d) Lack of training and competence amongst RST members.

2.3 *Suggestions for improving setup and running of RST (replies from airports).*

a) Promote safety culture especially reporting culture;
b) Encourage sharing of information on safety incidents and accidents, and hazard reports;
c) Encourage active participation in RST meetings;
d) Share safety best practices; and
e) Promote safety training.

2.4 *Challenges in upkeep of safety in runway maintenance (replies from airports)*

a) Promote safety culture especially reporting culture;
b) Encourage sharing of information on safety incidents and accidents, and hazard reports;
c) Encourage active participation in RST meetings;
d) Share safety best practices; and
e) Promote safety training.

2.5 *Challenges in the upkeep of safety in runway maintenance (replies from airports)*

a) Risk of runway incursion arising from runway maintenance activities;
b) FOD left on the runway after maintenance; and
c) Coordination and communication issues.

2.6 *Suggestion for the upkeep of safety in runway maintenance (replies from airports)*

a) Schedule in advance maintenance activities in coordination with the ANSP;
b) Ensure NOTAMs are issued before commencement of maintenance works.

2.7 *CANSO survey demographic*

a) Participants included air traffic controllers working in tower environment.

b) From the total of 58 responses received, 52% of the responses are from Asia and Pacific, 17% from North America and Central America, 14% from Africa, 5% from Europe, and 12% from unspecified regions.

2.8 *CANSO survey results on runway maintenance*

a) Question: What have you found to be the best way for an ANSP or Airport to manage short notice or emergency runway maintenance safely?

a) Broadcasting on ATIS/NOTAM with reasons and estimated completion (24%).

b) Immediately notifying stakeholders. Primary stakeholders should be communicated directly via phone or in-person, followed by radio, letter, NOTAM (24%).

c) Creating focal point for communicating to all stakeholders (with extensive list of contacts for all stakeholders).

d) Work time on runway should be limited as far as possible. If necessary, work time should be allocated during low traffic period.

e) Try to plan as much as possible with stakeholders to determine best strategy for type of closure/repair work, e.g. open 30 min / close 30 min).

f) Signage and lighting to be sufficient to warn of work in progress

b) Question: What have you found to be the best way for an ANSP or Airport to manage long-term runway maintenance safely?

a) NOTAM, formal letter, ATIS, AIP supplement (18%).

b) Train staff to understand airport construction plan and procedures (15%).

c) Define procedures (if different from normal).

d) Stakeholder collaboration (focus on impact).

e) Formal communication platform.

f) Planned schedule.

g) Perform a safety assessment / impact assessment.

c) Question: Please provide the top three areas of improvement for an ANSP or Airport to better manage runway safety during maintenance activities.

a) Continuous communication.

b) Frequent briefings / sharing of information between airport and ATC (allow for Q&A).

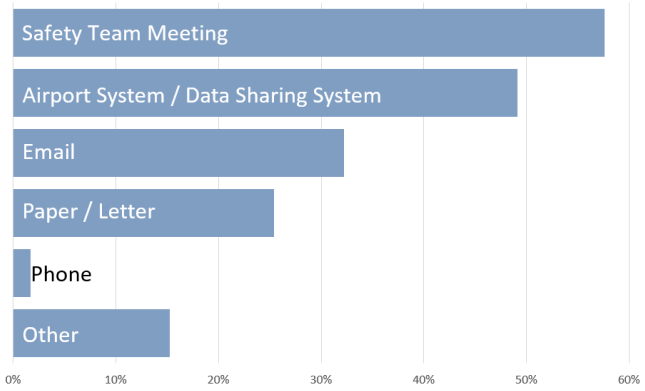
c) Training of workers in airside safety and communication with ATC. Consider establishing back-up communication solution.

d) Plan course of action then stick to planned times, monitor progress, communicate anticipated delays in construction work as soon as possible.

e) Establish procedure (with checklist) for whole process from need identification, notification, maintenance practice, and opening of runway. The procedure should include preparation to react during unusual or emergency situations.

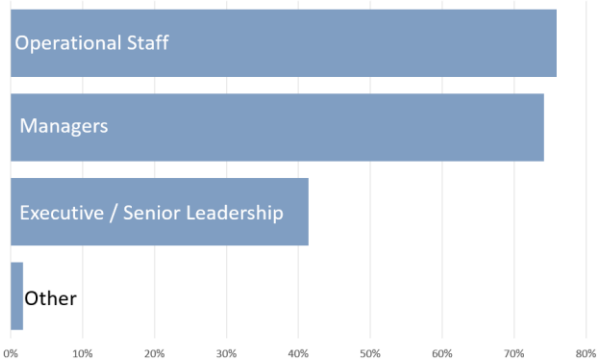
2.9 *CANSO survey results on learning from safety occurrences*

a) How are safety occurrences reported amongst the various stakeholders at your airport?



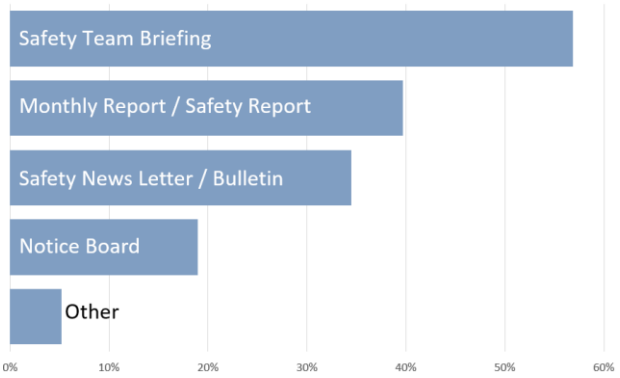
Percentage of Responses (note that participants may select more than one answers)

b) To which levels within your own stakeholder groups are safety lessons shared/translated/discussed?



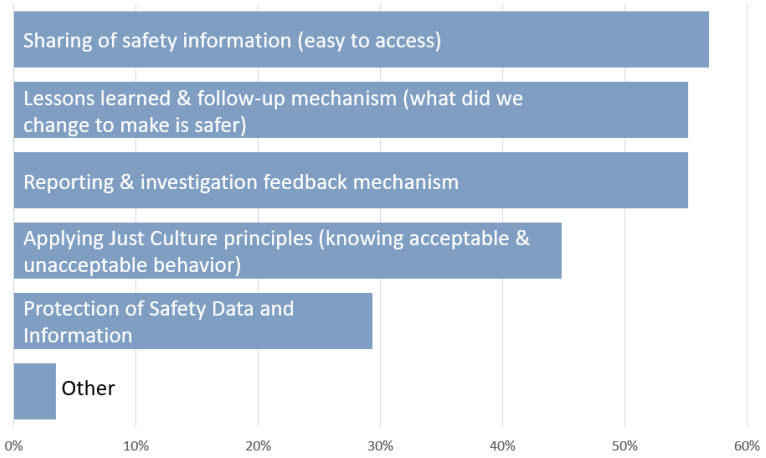
Percentage of Responses (note that participants may select more than one answers)

c) How are safety lessons shared amongst the various stakeholders of a Runway Safety Team (RST)?



Percentage of Responses (note that participants may select more than one answers)

d) At your airport, which area(s) of improvement will greatly enhance stakeholder's interface in safety reporting and learning?



Percentage of Responses (note that participants may select more than one answers)

2.10 *CANSO survey results on how best to run a runway safety team (RST)*

a) Question: What good practices are being used by your RST;

i. Meeting (month, quarterly) with airlines / pilots involved;
ii. A multi-year runway safety enhancement program with quarterly progress updates;
iii. Airside driver's training with ATC coordination/ATC involvement in communication procedures / radio telephony;
iv. Sharing information on aerodrome condition and planning;
v. Sharing of safety knowledge;
vi. RST monthly bulletin;
vii. Robust safety reporting with follow up;
viii. Wildlife report and management / issuance of BirdTAMS when necessary;
ix. Consult and resolve safety issues among stakeholders;
x. Multi-stakeholder discussion on airport capacity;
xi. Weather information sharing amongst all airport stakeholders;
xii. Integrated planning on construction projects;
xiii. Discussion on stop bars, ASMGCS, MLAT-VELO, marking/sign;
xiv. Coordination of runway condition / inspection;
xv. Quarterly safety initiatives amongst staff;
xvi. Aerodrome hot spots discussions and actions

b) Question: What are the areas of improvement identified by your RST with a potential airport safety impact:

i. Safety Culture
   – Adopt Just Culture to encourage more safety reporting on errors.

- Promote safety culture.

ii. Training

- For contractors doing work on runway
- Integrated training for winter operation
- Communication and phraseology

iii. Meetings

- Schedule meeting dates in advance and send reminders
- Ensure a representation of all stakeholders
- Follow up on meeting action items delegated to individuals
- Communication with all airport stakeholders on meeting outcomes and progress

iv. Safety Report

- Set timelines for actions needed;
- Provide regular progress reports to the airport community/feedback;
- Ensure protection of safety information and reporters

v. Standards and Best Practices

- Create opportunities for discussion on new ICAO recommendations
- Search for and share best practices on runway safety

vi. Taxiway/Airport Layout Enhancement

- Periodically set time to consider changes in operational needs
- Aim to eliminate blind or high-risk areas

vii. Coordination on Work Plans

- Runway maintenance to avoid busy periods
- Close coordination needed for runway closure or other large projects
- Multi-stakeholder RST team to discuss optimal times and timing constraints during panning of work.

viii. Improvement on Equipment

- Airport lighting system to be monitored /evaluated periodically
- Consistent use of VELOs (vehicle tracking devices / squitter)

2.11 Use of stop bars and request for more stop bars in high-risk areas

ix. Need to Establish RST

- Multi-stakeholder RST doesn't exist in many airports
- In some instances, RST became inactive because of the pandemic

a) Question: What measures do you employ to assess the effectiveness of your RST?

i. Feedback and surveys
   - Stakeholders / operational users' feedback
   - Level of coordination / fruitful discussion / regular dialogue
   - Periodic member survey
   - Safety interview

ii. Analysis and follow up
   - Complete interview and investigation of safety events
   - Follow up remedial actions and communicate lesson learned
   - On-going monitoring of implemented measures

iii. Statistics
   - Set safety KPIs (e.g. runway events, wildlife occurrence)
   - Monitoring the number of reports / safety occurrences
   - Search for increase or reduction in specific types of occurrences
   - Trend analysis, monthly statistics

2.12 **In conclusion, the challenges in the set up running of RST are many and this may have contributed to the slow uptake of RST in the region.**

2.13 The challenges, however, are not insurmountable and may be met by:

a) Encouraging aerodrome operators to set up and run RST with the support from the ANSP and regulator;

b) Promoting a positive safety culture, in particular a reporting culture; and

c) Providing combined training on RST to relevant stakeholders.

2.14 The survey finding from ACI and CANSO highlight good practices and challenges faced in managing RST and runway safety operations in many airports. Aerodrome operators, ANSPs, Air Operators, and regulators may utilise information when developing or reviewing their local runway enhancement plans.

3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

a) Note the information contained in this paper;

b) Discuss the challenges in the setup and running of RST;

c) Encourage States to support the setup and running of RST; and

d) Encourage aerodrome operators, ANSPs, Air Operators, and regulators to utilise survey findings contained in this paper when developing or reviewing runway enhancement plans.

— END —