



ICAO

International Civil Aviation Organization

The Eighth Meeting of the Asia/Pacific
Aerodrome Assistance Working Group (AP-AA/WG/8)

(Bangkok, Thailand, 21 to 24 April 2026)

Agenda Item 3: Aerodrome Certification and Safety Management System

PROGRESS REPORT ON DEVELOPMENT OF GUIDANCE MATERIAL ON ALTERNATIVE MEANS OF COMPLIANCE (AMOC) FOR RESCUE AND FIREFIGHTING (RFF) SERVICES AT AERODROME CATEGORY 1 AND 2

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SUMMARY

This paper presents a progress report on the work undertaken by AP-AA/WG Task 7/1 Small Working Group (SWG) to develop guidance material on Alternative Means of Compliance (AMOC) for Rescue and Firefighting (RFF) Services at Aerodrome Category 1 and 2. The paper highlights key discussions, findings, and next steps, and seeks the Working Group's endorsement to continue the work.

1. INTRODUCTION

1.1 At the AP-AA/WG/7 meeting, Fiji presented a paper on Rescue and Firefighting requirements, recommending a review of ARFFS requirements for Aerodrome Categories 1 and 2. The review aims to assess the necessity for airport operators to provide ARFFS, while achieving an appropriate balance between flight safety and the economic sustainability of smaller aerodrome operators.

1.2 The AP-AA/WG/7 established Task 7/1 to develop guidance material on Alternative Means of Compliance (AMOC) for Rescue and Firefighting (RFF) Services applicable to Aerodrome Category 1 and 2, recognizing the operational challenges faced by small and remote aerodromes while ensuring that safety objectives are met.

1.3 A Small Working Group (SWG) led by Fiji, supported by Maldives, Malaysia, New Zealand, Philippines, Solomon Islands, United State, ACI and ICAO APAC representatives was formed to carry out this task.

2. DISCUSSION

Work Undertaken

- 2.1 Meetings Conducted: The SWG has conducted four meetings to date:
- First meeting: Identification of task scope and key challenges
 - Second meeting: Sharing of State practices and regulatory approaches
 - Third meeting: Review of FAA regulatory framework and ICAO provisions related to AMOC for RFF
 - Fourth meeting: Sharing of State practices (FAA), challenges and AMOC.

2.2 Key Issues Identified: During the initial discussions, the SWG identified the following areas requiring further guidance:

- Absence of specific guidance on determining quantities of complementary extinguishing agents for Cat. 1 and 2 aerodromes.
- Limited availability of rescue tools and lack of training at small aerodromes.

State Practices

2.3 SWG members shared national practices related to RFF requirements for Aerodrome Category 1 and 2, which can be summarized as follows:

- New Zealand and Solomon Islands
 - RFF is not required for aerodromes serving aircraft carrying fewer than 30 passengers.
 - Such aerodromes are generally uncertified and serve domestic operations only.
 - Local procedures are adopted based on risk assessment and operational context.
 - Task Resource Analysis (TRA) is used to define RFF responsibilities.
- Philippines
 - RFF is required for Aerodrome Category 1 and 2.
 - Task Resource Analysis documentation established.
- Maldives
 - RFF is required for all aerodrome categories.
 - Aerodromes serving domestic routes are also required to be certified.
- Fiji
 - RFF is required for all aerodrome categories based on ICAO requirements.
 - Aerodromes serving commercial domestic routes are also required to be certified.
- Malaysia
 - RFF is required for Aerodrome Category 1 and 2.

2.4 These differing practices demonstrate the need for guidance material that supports a flexible, risk-based AMOC approach while maintaining safety objectives.

FAA and ICAO Input

2.5 The FAA shared its regulatory framework for ARFF applicable to Class I to IV airports and highlighted that:

- The categorization of ARFF in the FAA regulation is depicted in the use of Index A – E while ICAO apply Category numbers (1 – 10) to depict ARFF requirement.
 - The ARFF requirement is based on type of aircraft and services provided by the airport (international or domestic).
 - On challenges of transporting the vehicle or equipment, there are skid unit (portable unit) that can be used for the small airport either to install it onto the pick-up truck or towed.
 - A back-up plan to be established to manage in the event of vehicle breakdown.
 - FAA requires airport to establish replacement plan once vehicle reaches 15 or 20 years of use
- <https://www.nationalfirefighter.com/Skid-Units>
 - <https://www.burnerfire.com/equipment/twin-agent-units/>

- Alternative means of compliance may be based on the best available provisions, provided the capability to perform rescue and firefighting functions is demonstrated and verified.
- ARFF vehicles may include non-traditional solutions (e.g. converted vehicles) if minimum extinguishing agent and performance requirements are met.
- Regulatory oversight focuses on functional capability rather than prescriptive equipment.

- 2.6 ICAO provisions were also reviewed, including:
- Annex 14 recommendations for aerodromes to establish Memoranda of Understanding (MoU) with local fire services.
 - The requirement for personnel involved in RFF functions to undergo appropriate ARFF training.

Progress to Date

- 2.7 The following actions have been completed or are in progress:
- Establishment of a document-sharing platform by ACI to consolidate regulations, circulars, and guidance materials.
 - Collection of State regulations, circulars, and reports related to RFF and AMOC.
 - Establishment of a form to gather AMOC practices from selected States with ARFFS Category 1 and 2 aerodromes (**Attachment A**).
 - Development of a consolidated table comparing State practices.

Next Steps

- 2.8 The SWG will work on the following:
- ICAO APAC office to engage and arrange with selected States (Bhutan, Indonesia, Mongolia, Nepal and Papua New Guinea) for a side meeting with the SWG lead.
 - Progress towards drafting the Regional Guidance Material (RGM) on AMOC for RFF services at Aerodrome Category 1 and 2 in our next meeting.
 - Review and analyse State and international guidance on RFF AMOC for Category 1 and 2.
 - Identify and agree on fundamental principles for AMOC, including:
 - Functional capability
 - Risk-based approach
 - Training and preparedness
 - Availability of extinguishing agents and rescue equipment

- 2.9 The next SWG meeting is planned for 11 June 2026, 0800hrs BKK time (UTC 0100hrs).

3. ACTION BY THE MEETING

- 3.1 The meeting is invited to:
- a) note the progress made by AP-AA/WG Task 7/1 SWG;
 - b) endorse the continued development of guidance material on AMOC for RFF Services at Aerodrome Category 1 and 2; and
 - c) provide guidance or comments, as appropriate.

Airport Firefighting & Rescue Capability – Data Collection Form (Cat 1 & 2)

A. Airport & Administration

Airport Name: _____
ICAO/IATA Code: _____
State/Regulator: _____
Aerodrome Operator: _____
Aerodrome Reference Code (runway(s) served): _____
Aerodrome Operating Hours: _____
ARFF Operating Hours: _____
Declared Category (Normal Ops): _____
Aircraft Types & MTOW: _____
Peak Movement Periods: _____
Fuel Types & Storage: _____
Special Hazards: _____

B. Staffing & Competency

Minimum On-Duty Personnel per Shift: _____
Role Breakdown: _____
Total ARFF Personnel: _____
Shift Pattern: _____
Training Frequency: _____
Most Recent Live-Fire Training Date: _____
Certifications/Standards: _____
Medical Fitness & PPE Testing: _____

C. Vehicles & Equipment

Vehicles (list details): _____
Portable Equipment: _____
Foam/Agent Details: _____

D. Response Performance

Turnout Time: _____
Response Time (furthest runway point): _____
Drills Conducted (12 months): _____
Interoperability/Communications: _____
Airside Access & After-Hours Measures: _____

E. Water Supply & Foam Logistics

Foam Performance Level (A or B or C): _____
Total Usable Water: _____
Foam Concentrate: _____
Hydrant/Static Sources: _____
Resupply Time & Process: _____
Foam Compatibility/Batch Records: _____

F. Mutual Aid & External Support

Local Fire Brigade Agreement: _____

Mutual Aid Response Time: _____

Access & Escort Procedures: _____

Air Ambulance/Rescue Contacts: _____

Joint Exercises (dates/results): _____

I. Maintenance & Readiness

Vehicle Maintenance Dates: _____

Pump/Proportioner Tests: _____

Foam Quality Test Records: _____

SCBA & Cylinder Test Dates: _____

PPE Inspections: _____

Deficiency Log: _____

J. Records & Documentation

SOP/Emergency Plan Revision Date: _____

Incident Log Summary: _____

Training Records Location: _____

Audit Findings: _____