



**WORKING PAPER**

**ASSEMBLY — 40TH SESSION**

**EXECUTIVE COMMITTEE**

**Agenda Item 25: ICAO Civil Aviation Training and Capacity Building**

**STANDARDISATION OF SEARCH AND RESCUE TRAINING**

(Presented by United Arab Emirates)

**EXECUTIVE SUMMARY**

Some recent high profile accidents have highlighted the need for improved interoperability in search and rescue operations, in order to support timely and effective rescue operations. The UAE hosted a workshop on search and rescue training and identified areas for improvement which are recommended to the Assembly for consideration.

**Action:** The Assembly is invited to:

- a) note the contents of the working paper;
- b) consider other issues that could be addressed by the international standardisation of search and rescue training; and
- c) request the Secretary General to consider the concept of an ‘international competency-based training framework for search and rescue operations’ in cooperation with other agencies such as the International Maritime Organization (IMO).

<i>Strategic Objectives:</i>	This working paper relates to the Strategic Objectives of Safety and Security & Facilitation.
<i>Financial implications:</i>	Not applicable.
<i>References:</i>	ICAO Doc 9731, International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, Volume II ICAO Doc 10075, Assembly Resolutions in Force (2016) Resolution 38-12 ICAO Doc 10004, Global Aviation Safety Plan (2017-2019), pp. 3.2.2.2 ICAO, Concept of Operations (CONOPS) Global Aeronautical Distress & Safety System (GADSS) V6.0

## 1. INTRODUCTION

1.1 A prompt and effective search and rescue (SAR) response is critical to the preservation of life following an aircraft accident or disappearance. The timeliness and effectiveness of the SAR operation is dependent on close coordination between the applicable Rescue Coordination Centre (RCC) and any supporting agencies; particularly in the case of cross-border or multi-state events. The successful communication and coordination between different agencies of a State, or agencies of different States, is reliant upon standardisation of terminologies and procedures.

1.2 There have been several high profile accidents in recent years that have highlighted shortcomings in multi-State search and rescue operations. Even minor delays in any SAR operation significantly reduces the chances of survival for persons on-board, and therefore ensuring effective coordination and communication between different SAR agencies is of the utmost importance when saving lives.

## 2. DISCUSSION

2.1 The National Search and Rescue Centre (NRSC) of the United Arab Emirates (UAE) hosted an international workshop on the standardisation of search and rescue training on 12-13 June, 2019. The event was attended by 55 representatives of aeronautical and maritime agencies from Russia, Kuwait, New Zealand, United Arab Emirates, Saudi Arabia and the United States of America.

2.2 The primary aim of the workshop was to identify current SAR challenges and determine if the international standardisation of training and the certification of SAR personnel could address those challenges. Consensus was reached on at least five items where the international standardisation of search and rescue training offers the opportunity to enhance the provision of search and rescue.

2.3 Many smaller search and rescue services place a heavy dependence on commercially sourced search and rescue training courses. The lack of international standardisation runs the risk of the contracting SAR agency receiving training that is out-dated and not in compliance with existing IMO/ICAO procedures, hindering interoperability between states and potentially placing lives at risk.

2.4 There are currently no international requirements for the qualification, certification and recertification of many commercial search and rescue instructors. That lack of international requirements for SAR instructors exposes students to non-standard procedures, and to training material that is not aligned with current IMO/ICAO regulations. The establishment of a framework with minimum standards can improve the overall quality of the training provided, enhance standardization and interoperability between States and provide assurances that SAR organizations are employing appropriate instructors.

2.5 A number of required competencies required of the SAR Mission Coordinator are outlined in the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual, Vol. II. However, this list is not all inclusive. The effectiveness and ability of a SAR service to work in harmony with other States is largely dependent upon quality standardized training and the competency of SAR personnel. Many of the skills required for RCC personnel to successfully conduct a search and rescue event diminish with time. Without frequent exercise, training, demonstration and an established review process, the potential exists for the loss of life of SAR responders and persons in distress.

2.6 The accreditation of SAR personnel currently rests with the State SAR Authority. While IAMSAR Vol. II provides a great deal of guidance on the provision of search and rescue, the qualification and accreditation process for SAR personnel is often developed independently without consultation with other SAR partners and neighbouring States.

2.7 The lack of a standardized process in the qualification of SAR personnel can result varying degrees of proficiency for SAR responders from different agencies or states, leading to miscommunications, an inability to effectively work together and slowing the overall response

2.8 The report into the Air France 447 accident noted that “...*The training courses undertaken by the ARCC<sup>1</sup> and MRCC<sup>2</sup> personnel rely heavily on the experience within these centres. There is no formalised and common training specific to the SAR mission.*”<sup>3</sup>”

2.9 Consequently, the *Bureau d’Enquêtes et d’Analyses pour la sécurité de l’aviation civile* (BEA) recommended that:

*“The DGAC<sup>4</sup>, in concert with the other services responsible, develop a homogeneous framework for training and for approval of operators responsible for search and rescue activities in France; [Recommendation FRAN-2012-033]”*

and

*“ICAO define the framework for the training of SAR operators in its standards and recommended practices. [Recommendation FRAN-2012-034]”*

2.10 Existing Assembly Resolutions in force support the concept of global harmonisation, as highlighted in consolidated Resolution 38-12<sup>5</sup>;

*“Whereas the satisfactory implementation of SARPs<sup>6</sup> and PANS<sup>7</sup> is contingent upon having qualified and competent personnel;”*

*“The Council should assist Member States to harmonize aviation professionals’ levels of competency. These efforts should be based on ... a competency-based approach.”*

2.11 Additionally, the Global Aviation Safety Plan notes that “*an effective and globally consistent approach to the alerting of search and rescue services is essential.*”<sup>8</sup>”.

2.12 The loss of Malaysian Flight 370 highlighted the complexities of multi-State operations, particularly where the search location has not been localised. The general public was highly critical of the aviation industry in the sense that not only could the aircraft not be located, but even the approximate

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<sup>1</sup> Aeronautical Rescue Coordination Centre.

<sup>2</sup> Maritime Rescue Coordination Centre.

<sup>3</sup> Bureau d’Enquêtes et d’Analyses pour la sécurité de l’aviation civile (BEA), Final Report on the accident on 1st June 2009 to the Airbus A330-203 registered F-GZCP.

<sup>4</sup> Direction Générale de l’Aviation Civile (French Civil Aviation Authority).

<sup>5</sup> ICAO Doc 10075, Assembly Resolutions in Force (2016) Resolution 38-12.

<sup>6</sup> Standards and Recommended Practices.

<sup>7</sup> Procedures for Air Navigation Services.

<sup>8</sup> ICAO Doc 10004, Global Aviation Safety Plan (2017-2019), pp. 3.2.2.2.

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location of the accident has still yet to be determined. This led to the development of the Global Aeronautical Distress & Safety System (GADSS).

2.13 The Executive Summary in the GADSS CONOPS recognises the importance of harmonised training; *“The effectiveness of the alerting and search and rescue services is only as good as the weakest link in the chain of people, procedures, systems and information. It is therefore of paramount importance that a global perspective be adopted in designing the GADSS, including key areas of improvement such as ... improved coordination and information sharing and enhanced training of personnel in reacting to rarely-encountered circumstances.”*<sup>9</sup>

2.14 The international standardisation of training, qualification and certification of personnel is common in the aviation and maritime industries. The pilot and air traffic control professions have been subject to internationally standardised training frameworks for decades. The recent introduction of the Competency-Based Training Frameworks for air traffic control (ATC) and Air Traffic Safety Electronics Personnel (ATSEPS) has further improved on decades of harmonised training. The Computer-based Training (CBT) approach uses an “outcomes-focused” method aimed at providing the persons with the competencies to be safe, highly effective and efficient in the performance of their duties.

### 3. CONCLUSIONS

3.1 States are required to provide an effective search and rescue response in their territory or responsible areas.

3.2 The provision of an effective SAR service is reliant on successful communication and coordination between all parties, and that those personnel are adequately qualified.

3.3 There is no globally harmonised framework for the training of search and rescue personnel to ensure interoperability between RCC and other agencies, this is critical to a timely and effective rescue operation.

3.4 The aviation industry is experienced in the standardisation of training and recent initiatives support a competency based approach as highlighted in previous Assembly Resolutions, SARPS, PANS, and guidance material.

3.5 The workshop hosted by the UAE NRSC determined that the development of an international training framework would provide significant benefit to SAR operations potentially saving lives in the long term.

3.6 The ICAO/IMO JWG on SAR would be the most appropriate body to continue further work on the concept of an international training framework.

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<sup>9</sup> ICAO, Concept of Operations (CONOPS) Global Aeronautical Distress & Safety System (GADSS) V6.0.