INTERNATIONAL CIVIL AVIATION ORGANIZATION

Twenty-Fifth Meeting of the AFI Planning and Implementation Regional Group (APIRG/25)

7 - 11 November 2022

Agenda Item 3: Implementation of air navigation goals, targets and indicators, including the priorities set in the regional air navigation plan

3.6 Other Air Navigation Initiatives

Autonomous Distress Tracking (ADT) and Location of an Aircraft in Distress Repository (LADR)

(Presented by IATA)

SUMMARY	
This paper highlights the emerging technology in aircraft tracking for purposes of improved Search and Rescue (SAR) as provided for by the changes to the ICAO Annex 6, Part 1- Operation of Aircraft. **Action by the Meeting is as per paragraph 3**	
Strategic Objectives	**A – Air Safety** **B – Air Navigation Capacity and Efficiency**

1 INTRODUCTION

1.1 Search and Rescue (SAR) environment is set to change with the envisaged changes to the ICAO Annex 6, Part 1- Operation of Aircraft. All the different stakeholders e.g., operators, States, ANSPs and SAR communities need to review their procedures in respect to the implementation of Global Aeronautical Distress and Safety System (GADSS) and associated systems infrastructure.

1.2 Global Aeronautical Distress and Safety System (GADSS) implementation is intended to mitigate challenges in the global air navigation system in respect to the timely identification and localization of aircraft in distress.

1.3 The primary GADSS functions for ATS and SAR include, a) aircraft tracking (which came into effect since 2018) and b) Autonomous Distress Tracking (ADT) for aircraft certified on or after 1 January 2024.

1.4 ADT is a performance-based system designed to alert ground personnel of a possible event. Although there may be others envisioned, the two primary methods of meeting ADT requirement are via a communication satellite link or through the use of an Emergency Locator Transmitter (ELT) with a Distress Tracking (DT) capability known as ELT(DT).

1.5 Major manufacturers (Airbus, Boeing, Bombardier, and Embraer) of aircraft required to equip with an ADT device have confirmed that their device of choice is the ELT(DT). This devise will enable operators comply with ICAO Annex 6 Part I, that is, the provision of information of a flight in distress to appropriate organizations.

1.6 The ELT(DT), which is a satellite-based system, sends position information to the Location of an Aircraft in Distress Repository (LADR) which, when operational, will send notification messages to the appropriate organizations e.g., Operators, relevant Rescue Coordination Center (RCC), ATSUs and other organizations as established by the State of the operator. ELT(DT) sends its messages directly to the RCC through the Cospas-Sarsat data distribution network.

1.7 Implementation of ADT will likely require ANSPs, the SAR community, regulators, and industry stakeholders to adapt policies and procedures accordingly to encompass new inputs/outputs received via the ADT devices and LADR.

1.8 ICAO Annex 6 Part I (Procedures for Air navigation Services-Aircraft Operations, Vol. III), Annex 11 (Air Traffic Services) and Annex 12 (Search & Rescue) calls for establishment and maintenance of current GADSS point of contact (PoC) details in the ICAO OPS Control Directory for ATSUs, Operators and RCC.

1.9 ICAO, in the spirit of No Country Left Behind has delivered three workshops in the ESAF and WACAF region to sensitize States and relevant stakeholders on the implementation of GADSS, ADT, LADR, ICAO OPS Control Directory and associated systems and procedures and their impact on ATS and SAR.

2 DISCUSSION

2.1 Recognize the need to prepare for the global implementation of the existing and proposed ADT provisions. In this regard, propose the establishment of a GADSS Project Management Team (PMT) under AAO/SG to drive the effective implementation of GADSS in the region.

2.2 The GADSS PMT to develop and conduct an exercise(s) to test the operation of the LADR in the case of receipt of ADT notification to States and stakeholders, and the coordination amongst ANSPs, SAR/RCCs, and aircraft operators. The exercise(s) may need to be coordinated with other regions in order to explore collaboration opportunities.

2.3 The exercise(s) would provide useful information to ANSPs, regulators, the SAR

community, ICAO, and industry partners to identify gaps, or if/where existing procedures may need to be modified as the LADR is introduced into established ANSP-SAR-aircraft operator coordination.

2.4 It requires to update the AFI SAR Plan, where necessary, in view of the introduction of ADT devices. In addition, there may be requirement for modification of National SAR Plans, ANSPs, regulators, the SAR community procedures.

3 ACTION BY THE MEETING

3.1 The meeting is invited to take note of the content of this working paper and:

a. Urge Air Traffic Services Units (ATSU), SAR/RCCs, aircraft operators and other relevant stakeholders to develop procedures for GADSS implementation as per ICAO Annex 6, IAMSAR Manual (2022) and ICAO Doc 10165 (2022) by July 2023 in view of introduction of ADT devices.

b. Establish GADSS PMT under AAO/SG to drive the effective implementation of GADSS in the region by February 28, 2023. The GADSS PMT should conduct an exercise(s) to test the operation of the LADR in the case of receipt of ADT notification by September 30, 2023. The PMT should include States, operators, ANSPs, SAR communities and international organization.

c. ICAO to schedule two (2) face-to-face workshops (ESAF, WACAF) with all the relevant stakeholders to ensure effective implementation of GADSS within the wider AFI SAR Plan endorsed by APIRG 24 (Decision 21/10), the State National Plans, the SAR communities and the envisaged responses, processes, and procedures by the all the stakeholders.