ICAO BANGKOK   UNITING AVIATION

SAR Activities in the ICAO Asia/Pacific Region

05 October 2023

Mr. Tai Kit
Chair
Asia/Pacific SAR Working Group (APSAR/WG)

- Introduction

- Workshop Pre-Poll – Awareness of GADSS

- GADSS Workshop Presentations

- Stakeholders' considerations

- Summary

https://www.icao.int/APAC/Meetings/Pages/2020-AAITF15.aspx

Introduction:

- GADSS Workshop was held in conjunction with APSARWG/7

- Held via VC on 23 MAY 2022

- There were 144 registered participants from 25 Administrations including two non-APAC Administrations, International Organizations and industry

Workshop Pre-Poll – Awareness of GADSS:

– What role do you perform? the following distribution of roles was established;

Role	Responses	% of Total
• Aircraft operator	6	9.1%
• ANSP	13	19.7%
• SAR	21	31.8%
• Aviation Regulator	19	28.8%
• GADSS Service provider	3	4.5%
• Equipment Manufacturer/Supplier	0	0.0%
• Others	4	6.1%

For each of the poll questions more than 50% of respondents indicated their knowledge of the topic was either 'low' or 'none' or, in cases where either 'yes', 'no' or 'don't know' answers were requested, the response was 'no' or 'don't know'.

GADSS Workshop Presentations:

- GADSS Workshop presentations were:
  - GADSS Overview (Chair, ICAO/IMO Joint Working Group on SAR)
  - Autonomous Distress Tracking (ADT) Overview (Chair, ICAO/IMO Joint Working Group on SAR)
  - ADT Scenarios (ICAO)
  - Cospas-Sarsat ELT(DT)s and GADSS Support (Cospas-Sarsat)
  - ADT Solution (Satellite Authorization Systems Pte. Ltd)
  - Aviation Regulator Considerations (ICAO)
  - Airline Preparations for ADT (IATA)
  - SAR Service Considerations (Civil Aviation Authority of Singapore)
  - Air Navigation Service Provider Considerations (ICAO)

- Considerations for Aviation Regulators, Airline, SAR Services and ANSPs

Aviation Regulator Considerations:

– Four main areas:

–   Annex 6 Part 1 section 6.18 Location of an Aeroplane in Distress
–   ICAO Doc 8168 PANS-OPS Section 10 Chapter 2
–   Impending provisions: Annex 11 and Annex 12, requiring the appropriate ATS authority, RCCs and, as appropriate, RSC to maintain up-to-date contact details in the OPS CTRL Directory
–   Oversight

Aviation Regulator Considerations:

– Annex 6 Part 1 section 6.18 Location of an Aeroplane in Distress:
  – Do the State regulations align with Annex 6?
  – Has the regulator considered which organizations may be considered 'appropriate' to receive distress position information from the operator?

– ICAO Doc 8168 PANS-OPS Section 10 Chapter 2:
  – Elaborated on Annex 6 standards, to ensure operators have the means to receive, process and act upon information
  – Requires that operators update the LADR
  – Do national regulations support these provisions?

Aviation Regulator Considerations:

– Impending provisions: Annex 11 and Annex 12, requiring the appropriate ATS authority, RCCs and, as appropriate, RSC to maintain up-to-date contact details in the OPS CTRL Directory

  – ICAO State Letter 22/47
  – Has the State responded to the State Letter?
  – Has the State commenced preparation of regulations?
  – Has the State commenced registration on the OPS CTRL Directory?

– Oversight:

  – Has the regulator considered ways of checking implementation by ANSPs, RCCs and RSCs?
  – What training will be mandated in the ATS and SAR domains?

Airline Preparations for ADT:

- Four main areas:
  - IATA Operational Safety Audit (IOSA) Standards Manual
  - Equipage
  - ADT
  - LADR
  - Airline Feedback

Airline Preparations for ADT:

– IATA Operational Safety Audit (IOSA) Standards Manual:

– Aircraft is in a distress condition when it is in a state that, if the aircraft behavior event is uncorrected, can result in an accident
– IATA audits operators for compliance with ADT requirements

– Equipage
– Unsure of ADT solution for new aircraft

– ADT
– confusion exists in terms of autonomous equipment
– ADS-B – discussion indicated not suitable for ADT as it's not autonomous/independent from other aircraft systems
– ELT appears to be still needed

Airline Preparations for ADT:

- **LADR:**
  - Technical rollout/training/procedures may be a challenge given the proposed timeline

- **Airline feedback**
  - Delay may be sensible
  - Yet to fully understand the procedural and notification requirements placed on an operator
  - Require clear and standard airline actions for when an aircraft is identified as in distress
  - Require contact details for all necessary parties, and contacts that will always reliably receive and action calls
  - How will airlines be notified of LADR outages?

Preparatory work for SAR Responder/Rescue Coordination Centre (RCC):

– Four main areas:
  – Location of an Aircraft in Distress Repository (LADR) subscription
  – IT requirements
  – RCC staff training
  – Engagement with associated ATSU, aircraft operator, etc

Preparatory work for SAR Responder/Rescue Coordination Centre (RCC):

– LADR

– Free subscription through ICAO Ops Control Directory
– A focal point to request for access to Ops Control Directory e.g. SAR Authority, SPOC etc to request for an account
– Access for RCCs to OPS CTRL Directory is not yet available (expected around August 2022)

- IT requirements

- Reliable 24 hours internet access
- Ensure configure RCC systems to allow receipt of LADR notifications
- Flag LADR emails as a priority in the message queue
- Other possible LADR communication paths eg; AFTN, SMS, SWIM when available
- Configure ELT(DT) alert messages delivery to RCC systems
- Upgrade beacon register to cater for FGB and SGB with ELT-DT capability

Preparatory work for SAR Responder/Rescue Coordination Centre (RCC):

- RCC staff training:
  - Ensure staff have knowledge of GADSS, its functions, the LADR System and notification pathways
  - Ensure staff know how to handle ADT notifications, alignment of Annex 11 and 12
  - Understanding of ELT-DT alert messages
  - Handling of ADT notifications for cross-boundary incidents
  - SAREX to involve RCC, ATSU, airline operations centre, MCC and neighbouring SRR

- Engagement
  - Develop procedures with other stakeholders such as ATSUs and neighbouring RCCs to ensure understanding for handling ADT notifications

ANSP Considerations:

– Two main areas:

  – Annex 11, notification of Rescue Coordination Centres
  – Usage of ADT information

ANSP Considerations:

– Annex 11:
  – No impact to Emergency Phase except Alert Phase (possibly impacted)
  – Distress phase – no real change, but optional ADT data may lead to the conclusion that a forced landing is likely – earlier declaration of DETRESFA

– Using ADT information:
  – ADT notification is not an alert
  – ANSP's subscription to LADR through Ops Control Directory
  – Access information on aircraft within FIR and beyond
  – Recommend use of ATC supervisory position as the contact
  – Any changes to procedures? Needs collaboration between ACC/RCC

Summary of Discussion:

– The following were key discussion points/outcomes identified by the Workshop:

– Survey and discussions revealed significant low level knowledge of GADSS and ADT across the region and uncertainty in several areas. Poll at start indicated around 2/3 of participants had little or no knowledge. Obvious need for States and stakeholder agencies to get more active on preparations

– ICAO GADSS Manual Doc 10165 will be an important reference source when it becomes available to assist stakeholder education and preparedness

– RCCs need to prepare for the two pathways of receipt of ELT(DT) notifications. It is important for RCC staff to understand the difference. RCCs need to adapt their operational procedures and practices accordingly

– Need for further workshops likely to assist stakeholders with understanding and preparation

– Two ADT solutions presented to workshop – Cospas-Sarsat ELT(DT) and SatAuth ADT. Information on each available in presentations. There are likely to be other solutions

Summary of Discussion:

– The following were key discussion points/outcomes identified by the Workshop:

– Comments additional to Stakeholder presentations:
  Regulators – in absence of regulations being made by 1 Jan 2023, Filing of Differences needed
  States still need to be capable of handling ADT events by 1 Jan 2023 (or sooner) regardless, based on Cospas-Sarsat advice that the ELT(DT) system will be ready later this year with some aircraft fitted. Chicago Convention requirement for SARPs over international airspace regardless?
  Aircraft operator feedback – seeking clear ICAO HQ advice to airline industry to allow clear understanding of requirements and to avoid confusion

- Reminder for States to respond to State Letters on Annex 11 and Annex 12 PFAs

Workshop Q&A Sessions:

– Questions that were most asked by other participants:

- How are distress conditions identified?
- Will further workshops be available before the applicability date?
- Requirements for current fleets versus new fleets at 01 January 2023.
- How do operators contact the RCC responsible for the SRR the aircraft is operating in?
- Difference between Aircraft Tracking (Annex 6 section 3.5) and Location of Aircraft in Distress (Annex 6 section 6.18)
- How (or whether) LADR information can be integrated in RCC and ATSU systems.
- How many countries are ready to implement SARPs by the applicability date, or will be filing a Difference?
- Clarify who is running the OPS CTRL Directory? ICAO? EUROCONTROL?

Proposed Actions for Consideration:

– The following actions in response to the outcomes of the workshop are proposed by the Secretariat

- Explore what opportunities may be available for a further regional workshop to focus on:
  - Procedures for airline operators when notified of ADT activation
  - Procedures for RCCs when receiving ELT(DT) alerts
  - Procedures for RCCs when receiving other ADT notifications (not ELT(DT)
  - ANSP use of LADR information
  - ANSP procedures when informed by airline operators of ADT activation
  - ANSP procedures when informed by RCC of ADT notifications
- Develop brief guidance in the form of a checklist of considerations for stakeholders when an ADT is activated
- State Letter to:
  - remind States of the applicability date
  - inform them of the OPS CTRL and LADR registration process and encourage them to register
  - include a survey on readiness for applicability date 01 January 2023, and/or intentions to file a Difference

What is next?

– APSAR/WG/9, potentially including a GADSS workshop, was provisionally expected to be held in the April – June 2024 timeframe. The format of the meeting will be face-to-face.

– Responses to the survey indicated the majority of APAC Administrations were not ready for ADT. The majority had not yet developed procedures for the response to ADT notifications or ELT(DT) alerts, and had not conducted training of relevant SAR, ATS or aircraft operator personnel to understand such notifications and alerts. a modified survey that did not include an expectation of development of procedures for use of the LADR should be circulated with the dual aims of reminding States of the need to act now to prepare for the receipt of ELT(DT) alerts and notifications, and to gauge any improvement in State readiness for reporting in October 2023.