



OACI

Organización de Aviación Civil Internacional
Oficina para Norteamérica, Centroamérica y Caribe

NOTA DE ESTUDIO

ANI/WG/SAR/TF/1 — NE/03
16/08/19

Primera Reunión del Grupo de Tarea de Búsqueda y Salvamento (SAR) del Grupo de Trabajo sobre implementación de Navegación Aérea para las Regiones NAM/CAR (ANI/WG/SAR/TF/1)
Ciudad de México, México, 17 – 19 de septiembre de 2019

Cuestión 4 del

Orden del Día:

Programa de Trabajo y Actividades del Grupo de Tarea de Implementación de Búsqueda y Salvamento (SAR) del ANI/WG

4.2 Seguimiento a las recomendaciones de la Reunión de implementación de Búsqueda y Salvamento (SAR) y Coordinación Cívico-militar NAM/CAR 2018

APÉNDICE DEL GADSS AL PLAN REGIONAL SAR PARA LA REGIÓN CAR - FRANCIA

(Presentada por Estados Unidos)

RESUMEN EJECUTIVO	
Esta Nota de Estudio presenta acción de seguimiento a la Conclusión SAR/SM/2 del Informe de la Reunión de implementación de Búsqueda y Salvamento (SAR) y Coordinación Cívico-militar NAM/CAR, llevada a cabo en la Ciudad de México, México, del 5 al 7 de noviembre de 2018.	
Acción:	Las acciones sugeridas se presentan en la Sección 3.
Objetivos Estratégicos:	<ul style="list-style-type: none">• Seguridad Operacional
Referencias:	<ul style="list-style-type: none">• Informe de la Reunión de implementación de Búsqueda y Salvamento (SAR) y Coordinación Cívico-militar NAM/CAR, Ciudad de México, México, 5 – 7 de noviembre de 2018

1. Introducción

1.1 El Informe de la Reunión de implementación de Búsqueda y Salvamento (SAR) y Coordinación Cívico-militar NAM/CAR, llevada a cabo en la Ciudad de México, México, del 5 al 7 de noviembre de 2018, contenía:

CONCLUSIÓN SAR/CM/2

Que, con el fin de apoyar las funciones del Sistema Mundial de Socorro y Seguridad Operacional (GADSS),

- a) *el Grupo de Trabajo de Búsqueda y Salvamento del ANI/WG desarrolle directrices básicas para definir los requerimientos e interacción de los servicios de búsqueda y salvamento para apoyar al GADSS, que deberán ser incluidas como Apéndice en el Plan CAR de Búsqueda y Salvamento; y*

1.2 Varios foros regionales y mundiales de la OACI están trabajando en la implementación de las funciones del GADSS en general y Seguimiento Autónomo en Situaciones de Peligro (ADT) en particular debido a su fecha de implementación del 1 de enero de 2021. Se ha vuelto obvio que hay dos niveles de preocupación: (1) informar a las partes interesadas, y (2) desarrollar procedimientos operacionales. Esta Nota de Estudio tiene un **Apéndice** (*disponible únicamente en inglés*) con contenido para considerar su inclusión en el Apéndice al Plan Regional SAR para la Región CAR.

2. Antecedentes

2.1 El Grupo de trabajo conjunto OACI/Organización Marítima Internacional (IMO) sobre Búsqueda y Salvamento (ICAO/IMO JWG) generalmente se reúne en septiembre o principios de octubre de cada año. Se ha presentado una nota de estudio al ICAO/IMO JWG sobre la “Orientación básica inicial y lista de verificación del Centro coordinador de salvamento (CCS) para la fase de seguimiento autónomo en situaciones de peligro”. Esta nota del ICAO/IMO JWG se ha presentado como parte de una nota de estudio separada a la Reunión ANI/WG/SAR/TF/1 y propone que su “Orientación básica de la fase ADT del GADSS” sea la base del Apéndice del Plan Regional SAR para la Región CAR recomendado.

2.2 Francia presentó una Nota de estudio al ICAO/IMO JWG sobre el tema “Procedimiento de coordinación del Seguimiento Autónomo en Situaciones de Peligro (ADT)” (presentado como Apéndice a esta Nota de Estudio). Francia proporciona información y opiniones, que deben ser consideradas para la propuesta del Apéndice de GADSS al Plan Regional SAR para la Región CAR. Se recomienda que las Secciones 2.3 y 2.4 del Apéndice a esta Nota de Estudio se consideren en simultáneo al discutir otras notas de estudio de la reunión ANI/WG/SAR/TF/1 sobre este asunto.

3. Acciones Sugeridas

3.1 Se invita a la Reunión a:

- a) tomar nota de la información proporcionada en esta Nota de Estudios; y
- b) considerar las Secciones 2.3 y 2.4 del Apéndice en simultáneo con otras notas de estudio relacionadas al asunto del Apéndice del GADSS al Plan Regional SAR para la Región CAR.



International Civil Aviation Organization

WORKING PAPER

ICAO/IMO JWG-SAR/26-WP.20
8 August 2019
ENGLISH ONLY

Agenda item 3



**ICAO/IMO JOINT WORKING GROUP
ON HARMONIZATION OF AERONAUTICAL
AND MARITIME SEARCH AND RESCUE (ICAO/IMO JWG-SAR)**

TWENTY-SIXTH MEETING

Viña del Mar, Chile, 9 to 13 September 2019

CONVENTIONS, PLANS, MANUALS AND OTHER DOCUMENTS AFFECTING SAR**Autonomous Distress Tracking (ADT) coordination procedure****Presented by France****SUMMARY*****Executive summary:***

GADSS implementation being scheduled on 1 January 2021, there is a need to agree and communicate on a coordination procedure when an ADT system is triggered. A coordination procedure based on FIRs and aeronautical SRRs is proposed to JWG discussion. This procedure allows expediting the inflight event assessment by Airline and ATS, the triggering of the appropriate emergency phase by ATS to RCC and designating the RCC in charge of the SAR response. This procedure is fully compatible with the use of Aircraft tracking systems, all ADT systems, and Cospas-Sarsat data distribution plan for beacons currently in use

Action to be taken: Paragraph 3.1**1 INTRODUCTION****1.1 GADSS Implementation*****GADSS Schedule and IAMSAR publication cycle***

1.1.1 The implementation of GADSS should be effective on 1 January 2021. Next IAMSAR Manual issuance being scheduled in 2022, there should be a need to discuss new GADSS related items to be included in the next IAMSAR edition.

Impact of GADSS implementation on Airline, ATS, and RCC

1.1.2 As of 1 January 2021, airplanes fitted with ADT or airplanes complying with current ELT carriage requirements will share the same airspaces. Even in case of an ADT system transmission, there is a need for Airline and ATS to assess the situation on board the aircraft before considering any SAR action. GADSS is already about Aircraft Tracking by Airline or ATS. ADS-C, ADS-B, or CPDLC systems are already able to transmit at one-minute interval according to the criteria chosen by Airline or ATS.

Inflight events: FIR remains the geographical reference

1.1.3 Since discussions in the frame of aircraft tracking between Airline and ATS are based on ATS airspace reference (FIR), it makes sense to keep the same geographical reference for an inflight event detected by an ADT. ATS and Airline will have to coordinate events in the same airspace for aircraft with or without ADT.

1.2 Coordination tools***Point of contact***

1.2.1 The ICAO Operational Portal "DATA NETWORK for AVIATION (DNA)" should play a central role in the registration of the various stakeholders. Already available to airlines and ATS organizations as part of the "Aircraft tracking" concept of GADSS since November 2018, it will be made available to RCCs.

DTR

1.2.2 Sharing ADT data should be mandatory. The solution of a single ADT data repository, as promoted by ICAO, allow maintaining the consistency of coordination procedures between airlines and ATS, and between ATS and RCC when an emergency phase is declared. This also avoids the proliferation of distribution circuits and procedures and it helps to manage the workload and tools of RCCs.

1.3 Open items after ICAO DTR functional workshop

1.3.1 There are still open questions regarding ADT operational coordination procedure after ICAO DTR workshop. They are related to:

- .1 identification of the most appropriate RCC that ATS is required to alert, particularly when an aircraft is flying in the vicinity of several search and rescue regions. A coordination procedure is proposed in paragraph 2 below;
- .2 the need to define or not a maximum time to validate the data;
- .3 the definition of what is part of the same event if more than one transmission period; and
- .4 processing of incomplete data submitted but rejected or duplicated or dealing with an ADT that ceases to issue without transmitting.

2 DISCUSSION

2.1 Global objective of a coordination procedure

The objective of this paragraph is to propose a global coordination procedure between Airline, ATS, and RCC, when an ADT system transmits. GADSS being a global concept, this coordination procedure should allow a common understanding of the responsibilities between each of these operational stakeholders.

2.2 General principles

GADSS and ADT systems should not change current responsibilities of airlines, ATS, and RCC. In this frame, it appears of paramount importance to:

- .1 characterize an emergency phase by the situation encountered by the aircraft and not by the characteristics (frequency or distribution network) of each ADT system;
- .2 maintain the current logic for an aircraft in flight, where ATS sends emergency phases to RCC, after possible dialogue between ATS and airline; and
- .3 promote a single coordination procedure regardless of the ADT system used (Cospas-Sarsat, Iridium, Inmarsat, etc.).

2.3 ADT Coordination procedure – Responsibilities of Airline, ATS, and RCC.

2.3.1 When an ADT system transmits, Airline and ATS coordinate to assess the situation on board the aircraft.

2.3.2 Once the need for an emergency phase has been identified by ATS, ATS alerts the aeronautical RCC (ARCC) in charge of the aeronautical SRR interfering in its FIR with the position sent by ADT system. Thus even with ADT systems, ATS keeps sending the emergency phase to its usual referenced ARCC (as mentioned by ICAO regional navigation plans). Still to ease ATS task, it is also noticeable that aeronautical SRR boundaries are often the same as FIR boundaries footprint on the ground or at sea. In this paragraph, ARCC is a generic term meaning the SAR authority or the RCC responsible for SAR services into a given aeronautical SRR. According to each national SAR organisation, it may be an ARCC, a MRCC, or a JRCC.

2.3.3 Once the ATS has triggered an emergency phase, two main cases may happen depending on the Aircraft being still in flight or being on ground/at sea:

- .1 If ADT data show that the aircraft is still flying:
 - .1 if the track given by the ADT data evolves to another FIR, the ATS is responsible to coordinate with its neighbouring ATS units;
 - .2 each ATS unit remains responsible for alerting its "usual" ARCC interfering with its FIR; and
 - .3 alerted ARCCs coordinate together to identify the relevant SAR response (for instance ADT triggered after electrical failure at cruise level will not need an immediate triggering of SAR units by any RCC).

- .2 If ADT position data has stopped evolving (probably crashed aircraft), the Airline, the ATS unit and the ARCC try and confirm the accident (ADT data no longer available or not evolving, ELT-S or ELT-AF alert received, Aircraft Tracking data confirming the assessment that the aircraft reached the ground or sea). If "steady" ADT data indicate a location close to an aeronautical SRR boundary, the ARCC undertakes coordination with the other relevant ARCC/MRCC/JRCC, as it is currently performed.

Coordination between RCCs

2.3.4 After declaration of an emergency phase by ATS, the current regional or national SAR procedures between RCCs are used to initiate the appropriate SAR response. In this frame, each State in charge of a SRR should be responsible for registering its ARCC in the ICAO Operational Portal "DATA NETWORK for AVIATION (DNA)" and in the DTR. To improve information sharing and the coordination between RCCs, all ARCC, ARSC, MRCC or JRCC having to intervene in an aeronautical SRR should subscribe to the DTR.

2.4 Compatibility with Cospas-Sarsat data distribution plan.

2.4.1 With GADSS, the DTR will be used for any type of ADT. The Cospas-Sarsat (C/S) ground segment may be seen as an addition to the DTR for ELT-DT distribution, particularly when the SPOC is not the ARCC of the relevant aeronautical SRR or when the SPOC is non-responsive.

2.4.2 For the other C/S distress beacons (PLB, EPIRB, and all ELT except ELT-DT), the distribution and distress criteria do not change. Thus, non-similarity between C/S Data Distribution Plan and an ADT "FIR-based" distribution plan is not a problem, because:

- .1 ELT-DT triggered in flight will "notify" all stakeholders (Airline, ATSU, RCC) through DTR according to first the geographical criterion based on "FIR", and then ICAO aeronautical SRR when the aircraft is on the ground or at sea (thus facilitating coordinations between Airline, ATS, and ARCC); and
- .2 the triggering at impact with ground or sea of an automatic ELT or the triggering of an ELT-S will remain routed according to the C/S Data Distribution Plan, which relies mainly on the maritime SRRs.

3 ACTION REQUESTED OF THE JWG

3.1 The JWG is invited to:

- .1 take note of the ADT coordination procedure in paragraph 2.3;
- .2 share their views and comments on the proposed ADT coordination procedure; and
- .3 consider the need to include an ADT coordination procedure in the next IAMSAR 2022 edition.