



ICAO

International Civil Aviation Organization

Seventh Meeting of the ICAO Asia/Pacific Search and Rescue Working Group (APSAR/WG/7)

Video Teleconference, 24 – 27 May 2022

## Agenda Item 3: Global update

### ICAO Update on the LADR

(Presented by the Secretariat)

#### SUMMARY

This paper presents an update on the Location of an Aircraft in Distress Repository (LADR), which will support the Autonomous Distress Tracking standards in Annex 6 – *Operation of Aircraft Part I – International Commercial Air Transport – Aeroplanes*.

## 1. INTRODUCTION

1.1 The LADR is intended to meet the requirements for information sharing as part of the Global Aviation Distress and Safety System (GADSS).

1.2 The GADSS concept of operations and the functional specifications for the LADR are available at <https://www.icao.int/safety/globaltracking>.

1.3 Information related to the initial development of a centrally managed position data repository to address the concerns of Search and Rescue (SAR) services related to the ease and speed of obtaining autonomous distress tracking (ADT) information, was previously provided in State letter AN 11/1.1.29–19/63 dated 14 August 2019.

## 2. DISCUSSION

### Annex 6 Provisions

2.1 Referring to the location of an aeroplane in distress, Annex 6 Part I Section 6.18 states:

#### **6.18 LOCATION OF AN AEROPLANE IN DISTRESS**

6.18.1 All aeroplanes of a maximum certificated take-off mass of over 27 000 kg for which the individual certificate of airworthiness is first issued on or after 1 January 2023, shall autonomously transmit information from which a position can be determined by the operator at least once every minute, when in distress, in accordance with Appendix 9.

6.18.2 **Recommendation.**— All aeroplanes of a maximum certificated take-off mass of over 5 700 kg for which the individual certificate of airworthiness is first issued on or after 1 January 2023, should autonomously transmit information from which a position can be determined at least once every minute, when in distress, in accordance with Appendix 9.

6.18.3 The operator shall make position information of a flight in distress available to the appropriate organizations, as established by the State of the Operator.

*Note.— Refer to 4.2.1.3.1 for operator responsibilities when using third parties.*

2.2 State Letter AN 11/1.1.29-21/31 dated 26 April 2021 (**APSAR/WG/6 WP/03 Attachment A**) requested that States notify ICAO of their intentions to provide funding contributions to the LADR, and to express their interest in acting as its host.

2.3 ICAO Headquarters has provided the following information update on planning for LADR hosting and operations for the information of APSAR/WG:

- Eurocontrol will develop and host the LADR;
- Benin will develop and host a ‘regional satellite LADR’ (with help from ICAO to identify possible means of raising funding).
- User access to LADR will be controlled by the OPS CTRL directory;
  - The OPS CTRL directory is currently an ICAO product, but may be migrated to Eurocontrol to run on behalf of ICAO, as part of LADR development. TBD.
  - ICAO as LADR administrator will approve requests for an account, then Eurocontrol will create the account.

2.4 It is envisaged that data in the LADR could be accessed by users through the web-viewer<sup>1</sup>, or by extracting the data for use in their own software. While ICAO Doc 10150 Functional Specifications for the LADR specifies that the data will be available for extraction, it does not specify the data format. It does, however, list example formats that may be used, such as (but not limited to) the Flight Information Exchange Model (FIXM), Geography Markup Language (GML) and Geographical JavaScript Object Notation (GeoJSON).

2.5 It is currently expected that that the LADR data output will be in FIXM 4.2, with the additional intention to enable Open Geospatial Consortium (OGC) standards to satisfy the specification. Subject to further confirmation, this may mean that outputs would also be provided in GML 3.2 over OGC Web Feature Service (WFS) 2.0, based on a schema to be provided by EUROCONTROL. While GeoJSON will be considered it is not currently expected that it will be used.

2.6 Doc 10156 specifies, however, that the system will receive and validate data from one or more authorized LADR contributors in FIXM 4.2 format.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

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<sup>1</sup> Prototype demonstrated in the ICAO APAC GADSS Workshop, 23 May 2022