



**WORKING PAPER**

Agenda item 4



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

**THIRTIETH MEETING**

**SAR OPERATIONAL PRINCIPLES, PROCEDURES AND TECHNIQUES**

**Remarks on the use of the LRIT system by MRCCs**

**Presented by IMSO**

**SUMMARY**

**Executive summary:** This document provides information and analysis on use of the LRIT system by SAR services to support the search and rescue of persons in distress at sea.

**Action to be taken:** Paragraph 6.1

**1 INTRODUCTION**

1.1 The long-range identification and tracking of ships (LRIT) system was established by IMO through the adoption, on 19 May 2006, of resolution MSC.202(81) on *Adoption of amendments to the International Convention for the Safety of Life at Sea, 1974, as amended*, to enhance security at sea and protection of the marine environment along with the aim to support search and rescue (SAR) of persons in distress at sea. The LRIT system has been operational since 1 July 2009 and is currently hosting 70 LRIT Data Centres, which are effectively facilitating the exchange of LRIT information from approximately 40,000 ships among 133 flag State Administrations as well as security forces and SAR entities from across the world.

1.2 According to SOLAS regulation V/19-1.12, the SAR services of SOLAS Contracting Governments are entitled to request and receive, free of any charge, LRIT information (latitude, longitude, ship identity and date/time of the position) in relation to the SAR of persons in distress at sea.

1.3 This document provides an overview of the LRIT system usage over 12 months, considering SAR-related use by maritime rescue coordination centres (MRCCs) associated

with LRIT Data Centres, and discusses the potential lack of knowledge amongst MRCC operators about the LRIT system and how to benefit from it while conducting SAR operations.

## **2 LRIT FOR SAR SERVICES**

2.1 MSC.1/Circ.1338/Rev.1\* on *Guidance to search and rescue services in relation to requesting and receiving LRIT information* provides comprehensive guidance to SAR services in relation to requesting and receiving LRIT information and is made available on the IMO public website.

2.2 The LRIT system includes invaluable features to support SAR operators in conducting SAR operations free of charge. For example, after receiving a distress alert from the global maritime distress and safety system (GMDSS) in an area far from shore, the SAR operator can use the LRIT to request a surface picture of the area of up to 1,000 nautical miles, a more comprehensive range than usually needed for SAR operations.

2.3 The surface picture request is broadcast to all LRIT Data Centres, and, in a few minutes, the MRCC will be aware of all SOLAS ships that are or have been in the area in the last 24 hours. Following the receipt of the surface picture, the SAR operator may select ships that are estimated to be near the event and request their actual real-time position in the LRIT to confirm their position. After deciding which ships are better positioned to support the SAR event, the SAR operator can contact their master by satellite phone or radio and request their support for the safety of life at sea.

2.4 The above-described scenario can be executed in some minutes and should be considered together with other actions, such as the distress relay through the GMDSS or mobilizing SAR units. Thus, using the LRIT does not impose an extra cost on the MRCC. It is simple to operate and provides information that can lead to locating ships near the event leading to a potentially faster rescue. It ultimately does not interfere with the other potential actions the MRCC will take upon receiving a distress alert.

2.5 There are several real-world examples where SOLAS ships identified and selected using LRIT information had their positions near the SAR event and provided immediate support, rescuing people even before SAR units could leave the port.

2.6 The LRIT resources are even more valuable when the MRCC does not benefit from the support of a vessel monitoring system (VMS) able to provide a continuous enhanced maritime awareness in their coastal region, which is the status quo for several coastal States.

## **3 REQUESTING AND RECEIVING LRIT INFORMATION**

3.1 In order to request and receive LRIT information, a SAR service must use the LRIT Data Centre serving the Contracting Government in whose territory the service is located. Usually, the system is operated through web interfaces using secure access. Additionally, a SAR service wishing access to the LRIT system must be listed in the Global SAR Plan module of the Global Integrated Shipping Information System (GISIS) to be issued with an LRIT ID and associated with an LRIT Data Centre.

3.2 The provision of LRIT information to support SAR operations is not chargeable. Thus, there is no associated cost for MRCCs to benefit from the LRIT system.

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\* <https://wwwcdn.imo.org/localresources/en/OurWork/Safety/Documents/LRIT/1338-Rev.1.pdf>

3.3 Once given access to the LRIT system, a SAR service can send, through its associated LRIT Data Centre, SAR SURPIC Request (Message Type 6) or SAR Position Request (Message Type 5) messages to request the provision of LRIT information from ships that are subject to SOLAS regulation V/19-1, as amended. SAR services can make this request for geographical areas outside the search and rescue regions of their responsibility.

3.4 SAR SURPIC Request message is broadcast to all LRIT Data Centres to request the provision of LRIT information from all ships within a specific geographical area defined by the requesting SAR service in the SAR SURPIC Request message. Up to four position reports received from each ship in the last 24 hours can be requested with this message. These position reports enable the SAR service to obtain information about the name, type, IMO number, and course and speed of the ships in the area of concern so that the SAR service can identify the ship or ships that may be able to assist the SAR operation.

3.5 Once the surface picture of the area is obtained with the SAR SURPIC Request message and the potential ships to assist the SAR operation are identified, the SAR Service can send SAR Position Request messages to the Data Centre of the potential assisting ships to request their current positions (poll request), most recent six-hourly position or archived positions (up to last 30 days). These assisting ships are often asked to divert to a location and look for the vessel or person in distress but are not always the rescue vessel.

#### 4 REMARKS ON THE USE OF THE LRIT SYSTEM BY MRCCs

4.1 Despite the advantages offered by the LRIT to MRCCs, the system has not been used to its full potential with regard to SAR support. A 12-month analysis from June 2022 to May 2023 showed that:

- .1 only MRCCs from 36 of the 119 SOLAS Contracting Governments into the LRIT issued requests for information in the system;
- .2 2,393 SAR requests were issued in the period, 749 surface picture requests and 1,644 position requests; and
- .3 MRCCs from seven Contracting Governments were responsible for 91% of all SAR requests.

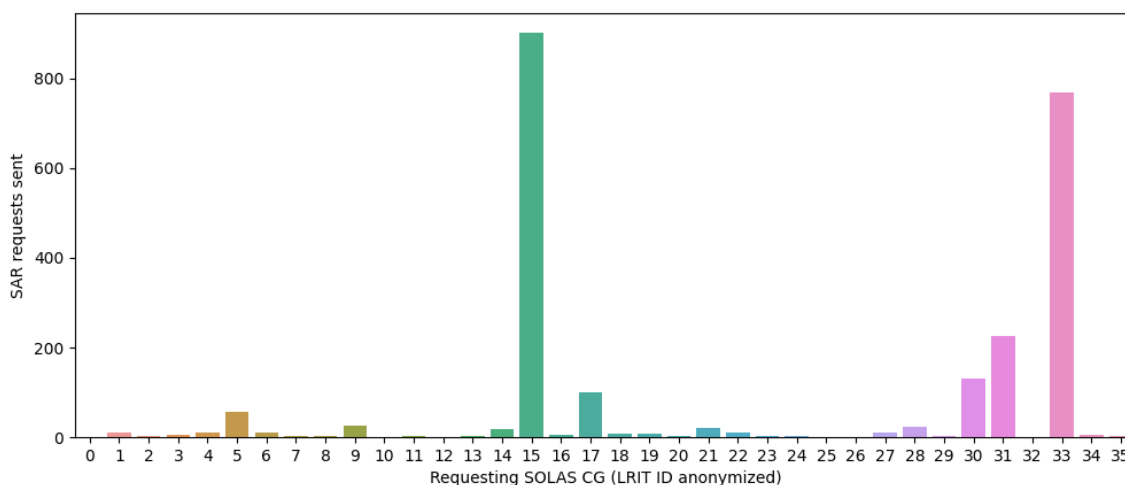


Figure 1: LRIT SAR requests from June 2022 to May 2023

4.2 Based on the information presented in this document and the experience gathered while conducting LRIT audits and interacting with stakeholders, such as Data Centre operators, National LRIT points of contact and SAR operators, the IMSO Directorate notes that, in general, there is a lack of knowledge among the SAR operators regarding the potential use of the LRIT and how to access the LRIT system. Additionally, in some cases, the SAR operators are not aware that they could use LRIT for SAR operations without incurring charges.

4.3 Furthermore, it was noted that the SAR entities are often not under the same organizational structure as the LRIT national point of contact and the LRIT Data Centre operator. Under this arrangement, the LRIT Data Centre operators are expected to be more concerned with maritime administration affairs, such as monitoring the maritime coastal area and tracking the ships under the administration flag.

4.4 In short, there is a need to share knowledge of the LRIT system with the SAR operators and ensure their access to the LRIT system.

## **5 RECOMMENDATIONS**

5.1 To ensure MRCC operators would be able to benefit from the LRIT system in a way that could improve their efficiency when conducting SAR operations, it is recommended that SAR authorities should:

- .1 coordinate with their national LRIT point of contact and LRIT Data Centre operator to ensure that SAR operators have access to the LRIT System;
- .2 define internal procedures for using the LRIT system in support of SAR operations; and
- .3 establish periodic training of SAR operators on requesting and using the LRIT SAR information.

## **6 ACTION REQUESTED OF THE JWG**

6.1 The JWG is invited to note the information provided, particularly the recommendations in paragraph 5.1, and take action as deemed appropriate.