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Agenda Item 4: Asia/Pacific and Inter-regional SAR Planning, Coordination and Cooperation

**SAREX JASAR 2025: OFFSHORE JOINT AERONAUTICAL SEARCH AND RESCUE
EXERCISE IN MALAYSIA**

(Presented by Malaysia)

SUMMARY

This paper presents the conduct and outcomes of the Offshore Joint Aeronautical Search and Rescue Exercise (SAREX JASAR) 2025, jointly organized by Civil Aviation Authority of Malaysia (CAAM) and Petroliaam Nasional Berhad (PETRONAS).

The exercise was designed to strengthen coordination between government agencies and private sector stakeholders in responding to offshore helicopter incidents. Key focus areas include interoperability, communication effectiveness, unified command, and implementation of Offshore-JASAR operational procedures.

1. INTRODUCTION

1.1 The SAREX JASAR 2025 was conducted as a national-level SAR exercise led by the CAAM, in collaboration with PETRONAS through Malaysia Petroleum Management (MPM).

1.2 The exercise aimed to enhance multi-agency coordination involving national SAR authorities, aviation stakeholders, and offshore oil and gas operators in managing helicopter-related incidents in the offshore area within the Kota Kinabalu Search and Rescue Region.

1.3 The exercise incorporated both Table-Top Exercise - Dialogue (TTX - Dialogue) and Field Training Exercise (FTX) components, based on a simulated helicopter accident scenario located approximately 130 nautical miles offshore from Miri, Sarawak.

1.4 The Joint SAR operation (Government–Private collaboration) was conducted in accordance with the Offshore Joint Aeronautical SAR (Offshore-JASAR) Operational Guidelines and aligned with national SAR frameworks.

2. DISCUSSION

Exercise Overview

2.1 SAREX JASAR 2025 was conducted from 12 to 14 August 2025, in Miri Sarawak, involving a total of 23 organizations, comprising 16 Government ministries/agencies and seven oil and gas operators and private entities. The exercise involved multiple coordination centres, including Kota Kinabalu Aeronautical Rescue Coordination Centre (KK ARCC), Miri Aeronautical Rescue Sub Centre (MYA ARSC), Kuching Maritime Rescue Sub Centre (Kuching MRSC), as well as offshore and onshore Emergency Control Centres (ECCs) operated by industry stakeholders, namely PETRONAS-MPM, Mubadala Energy, Sarawak Shell Berhad and HAS International Sdn. Bhd.

2.2 The SAREX JASAR 2025 commenced on 12 August 2025 with an official opening ceremony officiated by the Minister of Transport Sarawak. The ceremony was attended by senior leadership, including Chief Executive Officer of CAAM and the Senior General Manager of PETRONAS-MPM. The high-level participation reflected the strategic importance of Offshore-JASAR cooperation and reaffirmed national commitment towards strengthening aeronautical SAR capabilities, particularly in offshore environments.

2.3 The exercise was conducted through a structured programme comprising the SAREX Briefing and TTX - Dialogue on 12 August 2025, followed by a full-scale FTX on 13 August 2025 simulating a six hour operational SAR scenario, and concluded with a post-exercise debrief and closing session on 14 August 2025.

Exercise Scenario

2.4 The exercise scenario simulated an offshore helicopter emergency involving an Airbus H175 conducting a routine crew-change flight from Miri Helibase to Mubadala Energy offshore platform.

2.5 During the final phase of the flight, approximately 10 minutes prior to the estimated time of arrival (ETA), communication between the aircraft and the offshore helideck was not established, followed by a complete loss of contact with the aircraft. The situation escalated through alert phase (ALERFA), before a distress phase (DETRESFA) was declared.

2.6 The aircraft ditched at sea, with survivors dispersed in the water, requiring immediate search and rescue response.

2.7 In accordance with the Offshore-JASAR concept, initial response actions were undertaken by the oil and gas operators using available offshore assets, including helicopters and vessels, prior to the activation and coordination by CAAM as the Aeronautical SAR Authority through ARCC/ARSC.

2.8 The scenario incorporated the full spectrum of SAR operational activities, with:

- a) initial alerting and activation;
- b) establishment of the Last Known Position (LKP) and determination of search area;
- c) coordinate deployment of multi-agency Search and Rescue Units (SRUs);
- d) on-scene coordination and rescue of survivors, who were subsequently transported to the offshore platform where initial medical triage and treatment were conducted using established onboard medical facilities. This was critical in addressing operational constraints with helicopter transit time from/to shore estimated up to maximum two hours; and

- e) survivors were transferred to hospital for medical treatment by government responders and termination upon successful recovery of all survivors.

Participation and Multi-Agency Involvement

2.9 The exercise involved extensive participation from government ministries/agencies, including, national SAR authorities, maritime and defence agencies, law enforcement, emergency services, meteorological services and medical responders.

2.10 Private sector participation included offshore oil and gas operators, aviation service providers, and emergency response teams.

2.11 The exercise demonstrated a whole-of-government and whole-of-industry approach, reflecting Malaysia's commitment to integrated SAR operations.

Key Operational Highlights

2.12 The key operational highlights are as follows:

- a) Integration of Government and Private SAR Operations: the exercise successfully demonstrated the implementation of Offshore-JASAR, whereby initial SAR response was conducted by private sector assets prior to transition into coordinated SAR operations led by MYY ARSC. Private assets continued to be utilised under MYY ARSC coordination, particularly in view of operational constraints affecting government assets, including on-route adverse weather conditions and limited air asset availability;
- b) Unified Command and Coordination: a unified command structure was established through the deployment of Liaison Officers (LOs) at the aircraft operator's HAS ECC, enabling coordinated decision-making between MYY ARSC and oil and gas operators (Mubadala Energy and Sarawak Shell Berhad's ECC and platform's);
- c) Search and Rescue Execution: SAR operations involved the coordinated deployment of two helicopter sortie from HAS International and two vessels from Mubadala Energy and Sarawak Shell, and land-based response units from the Government agencies, leading to the successful rescue and evacuation of all simulated survivors (mannequins and persons) within the operational timeframe; and
- d) Communication and Information Sharing: the exercise validated multiple communication channels, including VHF, satellite communication, and landline systems, while highlighting the importance of structured information dissemination, such as SITREP, LKP, and passenger manifest.

Key Findings and Lesson Learned

2.13 Key findings and lessons learned include challenges related to coordination and communication, including delays in information sharing, inconsistent communication protocols, and difficulties contacting certain stakeholders during critical phases. In addition, limited clarity was observed regarding roles and responsibilities, particularly in relation to ECC and ARSC authority and command handover procedures between private operators and SAR authorities.

2.14 Operational information management also presented challenges, including delays in confirming the LKP and inconsistencies in disseminating critical operational data. Furthermore, gaps were identified in medical evacuation coordination, particularly regarding hospital destination protocols between government and private healthcare facilities.

Recommendations

2.15 Based on the outcomes of the exercise, several improvements were proposed to enhance the effectiveness of future SAR operations and exercises. These include strengthening standardised communication protocols and structured information-sharing mechanisms, enhancing clarity of roles and responsibilities particularly in relation to ECC and ARCC/ARSC authority and command handover, as well as improving early-stage coordination through timely SAR activation and rapid confirmation of the LKP.

2.16 In addition, it is recommended to continue conducting regular joint SAR exercises involving both government and private stakeholders to reinforce interoperability and operational readiness, alongside a review and enhancement of Offshore-JASAR operational guidelines, particularly in areas related to medical evacuation procedures and multi-agency coordination.

Knowledge Sharing Session during FTX

2.17 In parallel with the FTX, a dedicated knowledge sharing sessions was conducted at Pullman Miri Waterfront for observers, evaluators and participating agencies. The session was designed to provide strategic and operational insights while the live SAR exercise was ongoing, enabling participants to correlate real-time developments with practical SAR concepts and experiences.

2.18 The session featured subject matter experts from CAAM, Malaysian Maritime Enforcement Agency (MMEA) and Sarawak Shell Berhad, covering aeronautical SAR operation case study, maritime SAR and operational coordination, and offshore environment and emergency response protocol.

2.19 Conducted concurrently with the FTX, the session enables observers and participants, those not directly involved in field operations to gain both theoretical and practical understanding of SAR operations in real time.

2.20 This approach enhanced situational awareness, strengthened understanding of inter-agency coordination, and provide valuable insights into the complexities of offshore SAR operations.

2.21 The integration of knowledge sharing alongside live exercise execution was assessed to be highly effective and may be considered a best practice model for enhancing learning outcomes and overall exercise effectiveness.

2.22 A short video highlighting moments of SAREX JASAR 2025, including exercise execution, coordination activities and participating agencies, is available as the following link: <https://www.youtube.com/watch?v=9aREmunvF8g&pp=ygUQc2FyZXggamFzYXlzMjAyNQ%3D%3D>.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information contained in this paper.

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