



**REPORT OF THE THIRTY-FIRST MEETING OF
THE ICAO/IMO JOINT WORKING GROUP ON HARMONIZATION OF
AERONAUTICAL AND MARITIME SEARCH AND RESCUE**

4 to 8 November 2024

1 ADOPTION OF THE AGENDA

1.1 As approved by MSC 107 and the ICAO Secretariat, the thirty-first meeting of the International Civil Aviation Organization/International Maritime Organization (ICAO/IMO) Joint Working Group (JWG) on Harmonization of Aeronautical and Maritime Search and Rescue was held in Dublin, Ireland, from 4 to 8 November 2024.

1.2 The meeting was chaired by Mr. D. Edwards (United States) and the Vice-Chair, Mr. Tai Kit (Singapore), was also present.

1.3 A welcome was extended to all members and observers by the host of the meeting, represented by Mr Eamon Ryan, Minister for Transport of Ireland.

1.4 The meeting recalled that the JWG was established in 1993, with the objective of assisting ICAO and IMO in developing provisions regarding new search and rescue (SAR) techniques and procedures where both aeronautical and maritime interests were involved.

1.5 The meeting also recalled the JWG guidelines, as reaffirmed by ICAO and IMO, as follows:

- .1 members were expected to serve as individual SAR experts rather than State representatives;
- .2 the JWG had no power to make recommendations to States, nor to any organization other than ICAO and IMO;
- .3 recommendations from the JWG were made directly to both organizations; and
- .4 representatives of other organizations or States might attend the JWG and participate as observers, however, meeting announcements and documentation relating to the JWG would only be distributed to the members and observers invited to attend by the JWG and others who request advance notification.

1.6 The JWG further recalled that it consisted of eight aeronautical and eight maritime members and that others were invited to participate as observers. Observers, being SAR experts, were invited to contribute to the discussions, as appropriate.

1.7 The JWG noted that deadlines for registration and submission of documents were required and needed to be adhered to, to allow the secretariats and the fellow members of the JWG to have appropriate time to organize matters and be fully prepared for the meeting.

1.8 The members and observers who participated at this meeting of the JWG are listed in **appendix 1**.

1.9 The JWG noted **IP.1**, containing the provisional agenda for this meeting and adopted the agenda without changes to it. The JWG noted the identification by the Chair that discussion of how the JWG can continue to advance the overall SAR system, assist States in implementing improvements to their SAR services and make good use of new SAR technologies would be critical during this meeting.

2 DECISIONS OF ICAO AND IMO BODIES RELATED TO THE JOINT WORKING GROUP WORK

2.1 Terms of reference of the JWG

2.1.1 The JWG noted that its terms of reference were set out in the invitation letter (IMO Circular Letter No.4894, dated 26 June 2024).

2.2 Outcome of IMO activities

2.2.1 The JWG noted the information provided by the IMO Secretariat (**WP.1**) on the outcomes of the 108th session of the Maritime Safety Committee (MSC) and the eleventh session of the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR 11) and took action as indicated in the following paragraphs and relevant agenda items.

Dissemination of information over multiple recognized mobile satellite services (RMSS)

2.2.2 The JWG noted, in particular, that MSC 108 had, inter alia:

- .1 instructed the NCSR Sub-Committee to prepare draft amendments to the SOLAS Convention, including any necessary consequential amendments to related instruments, clearly stating the requirement for dissemination of MSI and SAR related information through all operational RMSSs, as appropriate; and
- .2 agreed that rescue coordination centres (RCCs) should disseminate SAR related information through all operational RMSSs, as appropriate, or, alternatively, establish the necessary arrangements with other certified providers for dissemination of information within the areas for which the RCC was responsible, taking into account the guidance provided in MSC.1/Circ.1659 and the relevant provisions of SOLAS regulation V/7.

2.2.3 The JWG noted also that NCSR 11, after consideration, had instructed the Joint IMO/ITU Experts Group on Maritime Radiocommunications, at its twentieth meeting (IMO/ITU EG 20, 7 to 11 October 2024), to prepare draft amendments to the

SOLAS Convention, including any necessary consequential amendments to related instruments, to state clearly the requirement for dissemination of MSI and SAR related information through all operational RMSSs as soon as possible.

2.2.4 The JWG noted further that IMO/ITU EG 20, having considered a number of options to reflect the above requirement under SOLAS chapters IV and V, had submitted draft amendments to the following SOLAS regulations and resolution for further consideration by NCSR 12:

- .1 regulation IV/5 (provision of radiocommunication services);
- .2 regulations V/4 (navigational warnings), 5 (Meteorological services and warnings) and 7 (search and rescue services); and
- .3 resolution MSC.509(105) on *Provision of Radio Services for the Global Maritime Distress and Safety System*, which was referred to in a footnote under regulation IV/5.1, by adding a new annex on criteria when providing an international enhanced group call service in the GMDSS.

2.2.5 The JWG recalled that the *Guidance for the dissemination of search and rescue related information through the international enhanced group call service* (MSC.1/Circ.1659), which was approved by MSC 106 in November 2022, provided that SAR authorities requiring to disseminate information through EGC services should either:

- .1 establish arrangements with an existing authorized EGC information provider that can disseminate the information on their behalf; or
- .2 obtain an authorization from the IMO EGC Coordinating Panel to access EGC services directly, including through their designated RCCs.

2.2.6 After consideration, the JWG encouraged participation in relevant discussions at NCSR 12 and to ensure, if they have not done so, that SAR related information was disseminated on all EGC services providing coverage within the SAR regions under their responsibility, taking into account the guidance provided in MSC.1/Circ.1659, and record such arrangement in the Global SAR Plan module of GISIS.

Implementation of NAVDAT

2.2.7 The JWG noted that NCSR 11 had approved the draft MSC resolution on Performance standards for the reception of maritime safety information and search and rescue related information by MF and HF digital navigational data (NAVDAT) system and the draft revision of resolution MSC.509(105) on *Provision of radio services for the Global Maritime Distress and Safety System (GMDSS)*, with a view to adoption by MSC 109. It was also noted that the IMO NAVTEX Coordinating Panel had been invited to develop a NAVDAT service coordination scheme, and IMO/ITU EG 20 had further reviewed the draft NAVDAT manual and draft road map on issues to be considered regarding the introduction of the NAVDAT service, which would be further considered by NCSR 12.

IMO model courses related to SAR

2.2.8 The JWG invited participation in the review of IMO model courses, noting, in particular, that NCSR 12 was expected to validate the revised model course 3.14 on *SAR Mission Coordinator (IAMSAR Manual, Volume II)* and that the further revision of model courses 3.13 and 3.15 would be made in near future following the established review cycle. In this regard, the JWG noted the feedback provided by Cospas-Sarsat on the positive experience of participating in the review work which had contributed to the development of Cospas-Sarsat model courses.

Developments related to workload

2.2.9 The JWG noted that MSC 108 had considered the workload of the Committee and its subsidiary bodies and, inter alia, invited all sub-committees to undertake an analysis of the continuous and annual outputs under their purview and make relevant suggestions to the Committee for their efficient consideration, minimizing additional workload; and had instructed the NCSR Sub-Committee to explore additional measures to return to five-day sessions.

2.2.10 The JWG noted also that NCSR 11, in order to facilitate the planning and conduct of NCSR 12 in a more efficient manner, had requested the Secretariat to conduct an analysis of the scope of continuous outputs contained in the biennial agenda of the Sub-Committee, in consultation with the Chair and Vice-Chair of the Sub-Committee, and advise MSC 109 accordingly. Such analysis had been made available in document MSC 109/13/1. The document proposed specific scope for continuous outputs, including output 1.34 on *Development of global maritime SAR services, including harmonization of maritime and aeronautical procedures and amendments to the IAMSAR Manual*, and presented other actions for consideration by the Committee to efficiently manage the workload of the Sub-Committee and intersessional groups, including the ICAO/IMO JWG, according to the method of work of IMO committees.

2.2.11 During the consideration, a concern was raised regarding seemingly conflicting tasks under the JWG terms of reference and JWG agenda, noting that restrictions coming from higher IMO bodies were preventing free discussions at JWG level, for example, SAR related considerations in relation to the introduction of MASS or remotely controlled unmanned maritime craft.

2.2.12 The JWG recalled the guidelines for the conduct of JWG meetings, as stated in paragraph 1.5 above, and, in particular, that the work of the JWG on maritime-related issues should be aligned with the scope of existing outputs assigned to the NCSR Sub-Committee.

2.2.13 After consideration, the JWG participants were invited to engage in the discussion taking place at MSC 109 on the workload of the NCSR Sub-Committee, either by participating directly or engaging with their national delegations participating in MSC 109 to ensure that their views were reflected in the deliberations.

2.3 Outcome of ICAO activities

2.3.1 The JWG noted the information provided by the ICAO Secretariat (**WP.12**) on work undertaken in ICAO since JWG 30.

2.3.2 The JWG noted that on 18 March 2024, the ICAO Council adopted Amendment 19 to Annex 12 to the Convention on International Civil Aviation. Amendment 19 required that, as of

28 November 2024, RCCs maintain up-to-date contact details in the OPS Control Directory and subscribe to the LADR. Amendment 19 also introduced Standards and Recommended Practices originally arising from JWG 27, applicable from 26 November 2026, concerning drift measurement, responsiveness of SAR points of contact, methods for allowing other States to assist in SAR operations, safety of SAR personnel at accident sites, conduct of exercises, and procedures to be followed when intercepting a distress transmission. The meeting also noted that EB 2024/22 (*Universal Safety Oversight Audit Programme (USOAP) Continuous Monitoring Approach (CMA) Protocol Questions (PQs) – 2024 Edition*) included updates to the SAR PQs reflecting Amendment 19 to Annex 12. The updated PQs were available in the USOAP library.

2.3.3 The JWG noted that State letter AN 11/1.1.29 – 24/16, dated 25 June 2024, had informed States of the operational availability of the LADR, and that an update to the GADSS-related guidance material contained in the IAMSAR Manual, based upon experience gained with operational usage of the LADR, would be presented to JWG 32. The JWG also noted that each organization represented in the LADR was required to nominate a single focal point user, responsible for updating the operational contact details of the organization and authorizing additional users from the same organization to access the OPS Control Directory and the LADR. Requests for focal point registration should be sent to aircrafttracking@icao.int.

2.3.4 During the ensuing discussion, the following views were expressed, that:

- .1 making the LADR user manual, as developed by EUROCONTROL, more easily available could assist stakeholders with obtaining a subscription;
- .2 a training video on how to register to the LADR would likely prove useful to users;
- .3 South Africa had developed a document for use in training their SPOCs on LADR which could be shared with interested parties; and
- .4 the GADSS Manual (Doc 10165) would be an important resource for RCCs and publication as soon as possible would be beneficial.

2.3.5 The meeting recalled that JWG 25 had requested the ICAO Secretariat to establish a "SAR calendar" to provide an overview of upcoming events, and that concerns regarding both the provision and visibility of the information contained in the calendar had been discussed since JWG 29. The JWG noted that in the period since JWG 30, only updates related to meetings of the Cospas-Sarsat Programme had been made to the calendar; such information was more readily available directly from the Cospas-Sarsat website. As such, the JWG agreed that the calendar would cease to be hosted on the JWG website following JWG 31.

2.3.6 The meeting recalled that the Fourteenth Air Navigation Conference (AN-Conf/14) was held in Montreal, Canada, from 26 August to 6 September 2024, and that the working arrangements of the Conference determined that all information papers would be forwarded to the appropriate expert groups for consideration as necessary in progressing their concerned work programmes.

2.3.7 Document AN-Conf/14-WP/50, presented by the Central American Corporation for Air Navigation Services (COCESNA) on behalf of Belize, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua, described the intention of States to implement multinational agreements to coordinate and carry out SAR operations in international maritime areas. The paper noted that multinational agreements would involve sharing SAR resources, applying

SAR operational protocols and communications and developing coordination procedures, and that international cooperation was essential to preserve lives. As such, the paper requested the promotion of the establishment of multinational agreements for the provision of SAR service on the high seas.

2.3.8 During the ensuing discussion, the following views were expressed:

- .1 IAMSAR Manual Volume I, appendix I contained guidance and a sample SAR agreement; and
- .2 while multinational agreements for SAR services had on occasion been implemented, bilateral agreements were often found to be simpler to agree and enact.

2.3.9 After consideration, the JWG agreed that the guidance material contained in the IAMSAR Manual provided sufficient promotion of multinational agreements for the provision of SAR service on the high seas.

3 CONVENTIONS, PLANS, MANUALS AND OTHER DOCUMENTS AFFECTING SAR

Amendments to the IAMSAR Manual

3.1 Sweep widths tables in IAMSAR Manual Volumes II and III

3.1.1 The JWG considered the information provided by the United States (**WP.2**) regarding the 'merchant vessels' sweep widths tables in IAMSAR Manual Volumes II and III.

3.1.2 During the ensuing discussion, the JWG noted the views that similar revision should be made to other tables which seemed to be originated from the MERSAR Manual developed in the 1980s. It was also suggested that the height of the observer was more important than the length of the boat.

3.1.3 After discussion, the JWG agreed that further consideration was required and, in this regard, invited the United States to consider the proposal intersessionally and submit a revised proposal to JWG 32.

3.2 Naming convention for maritime, aeronautical and joint rescue coordination centres and rescue sub-centres

3.2.1 Noting the outcome of NCSR 11 that the need for a standardized international naming protocol for maritime, aeronautical and joint rescue coordination centres and rescue sub-centres had been agreed, the JWG considered the information provided by the United States (**WP.3**) regarding the naming convention for these centres, including possible amendments to the IAMSAR Manual, Volume I.

3.2.2 After consideration, the JWG agreed to the draft amendments to Volume I, for inclusion in the 2028 edition of the Manual, as revised and set out in **appendix 3**.

3.3 SRS abbreviation used in the IAMSAR Manual

3.3.1 The JWG considered a proposal from South Africa and the United States (**WP.5**) proposing the abolishment of abbreviated use of the term SRS for “ship reporting system” in order to avoid confusion with the abbreviation for “search and rescue sub-region”.

3.3.2 Noting that the use of SRS for “ship reporting system” would be removed by the Secretariat during the abbreviations consolidation process for the 2025 edition of the IAMSAR Manual, the JWG agreed that no further action would be necessary.

4 SAR OPERATIONAL PRINCIPLES, PROCEDURES AND TECHNIQUES

4.1 Radar SART

4.1.1 The JWG considered the information provided by IMRF (**WP.11**) regarding radar SART detection and proposals for SAR procedures guidance to SAR units and RCCs, together with the information provided by the United States (**WP.4**) proposing amendments to IAMSAR Manual Volume III, to align with those already approved for Volume II.

4.1.2 During the consideration, the JWG noted that a similar discussion at NCSR 11 had resulted in the understanding that the development of comprehensive new guidance materials would need to be undertaken under a new output. A view was expressed and supported by some participants that, given the perceived risk involved in the issue, urgent action should be taken by the JWG at least to make an amendment to the IAMSAR Manual, and that a recommendation should be formulated to the NCSR Sub-Committee.

4.1.3 The JWG also noted that existing guidance addressed the issue in SN/Circ.197 *Operation of marine radar for SART detection* which warned that "Care should be taken in operating the radar in the detuned condition as other wanted navigational and anti-collision information may be removed."; therefore, new guidance might not be required as the issue could be mitigated through implementation of existing guidance.

4.1.4 Noting that the United States had submitted a draft circular for consideration by MSC 109 (MSC 109/13/3), outlining the issue and providing a partial solution, the JWG agreed to await the outcome of discussions at MSC 109, for which SAR experts were invited to engage with relevant delegations.

4.1.5 After discussion, the JWG agreed to the draft amendments to Volume III for inclusion in the 2028 edition of the Manual, as set out in **appendix 4**.

4.2 Remotely piloted aircraft (RPA) and other autonomous craft

4.2.1 The JWG considered the information provided by United States (**WP.6**) regarding issues associated with the use of remotely piloted and other autonomous craft and vehicles.

4.2.2 The JWG noted that while discussion on RPA had been on the JWG action items list since JWG/28, in terms of MASS, it might require careful consideration, as MSC had not yet tasked the NCSR Sub-Committee to start consideration of the subject. Noting that MSC 109 was expected to consider implications of MASS to SAR operations as presented in document MSC 109/5/10 (France *et al.*), the JWG agreed to await the outcome of discussions.

4.2.3 The JWG recalled that the terms “distress”, “search” and “rescue” were all used only in relation to persons in distress. After discussion, the JWG agreed that SAR services were

not required to conduct searches for craft with no persons on board. The JWG also agreed that distress beacons should not be used for alerting on craft with no persons on board, and was of the view that as such distress beacons should not be carried or operated on such craft. The JWG invited the NCSR Sub-Committee to confirm these understandings. Recognizing the need for harmonization between aeronautical and maritime SAR for craft without persons onboard, and noting that the term “craft” was currently defined in IAMSAR Manual as “Any air or sea-surface vehicle, or submersible of any kind or size”, the JWG agreed that existing terminology was sufficient.

4.2.4 A view was expressed and supported by others that non-SAR emergency response such as urgent recovery or craft salvage service might be still required for the purpose of mitigating, for example, safety of navigation or environmental pollution. The JWG was of the view in general that these non-SAR emergency responses, including how to fund such services, should be left with individual States and should not be the subject of State responsibility for SAR.

4.2.5 Regarding craft with no persons on board providing SAR assistance, some useful examples were noted for drones being effectively used for the purpose of search operations and surveillance. However, noting the possible limitation of such a craft providing for rescue operations, concerns were expressed for future SAR mission coordination, in particular, maritime scenario, where craft, in particular MASS, with no persons on board might have challenges recovering persons, or providing medical care.

4.2.6 As such, the JWG invited interested participants to consider actively participating in the discussions at MSC 109.

4.2.7 The JWG noted that Japan would host a seminar on 6 and 7 March 2025 on Unmanned Systems and Coastguard¹, to be held as a hybrid meeting with in-person element in London.

4.3 Psychology of emergency

4.3.1 The JWG recalled previous discussions regarding psychology of emergency (**JWG 27 WP.18**, **JWG 28 WP.20** and **JWG 30 WP.21**), and that JWG 28 had agreed that SAR personnel could benefit from further detailed guidelines on psychological first aid, and JWG 30 had formed an ad hoc correspondence group, under the coordination of the member from Chile, to further consider the matter and report to JWG 31.

4.3.2 In this context, the JWG considered the information provided by Chile (**WP.13**) presenting its report setting out in the annex comprehensive work covering many aspects of psychology as preliminary draft amendments to IAMSAR Manual, elaborating issues related to providing psychological first aid from a psychology of emergency approach.

4.3.3 During ensuing discussion, the following views were expressed that:

- .1 the issue had been neglected by many SAR services for a long time and required management level officials to take immediate actions to prevent affecting the mental health of both SAR professionals and those who required assistance alike;

¹ <https://london.nikkaibo.or.jp/2025>

- .2 the preliminary draft text might be too bulky given the nature of the IAMSAR Manual being concise for the users, though the work was most comprehensive and possibly exceeded the expected coverage for a material used for non-medical personnel engaged in SAR, particularly for users of Volume III who might not be appropriately trained to deal with situations having to handle distressed people;
- .3 comprehensive guidance material in the format of an IMO circular could be first developed and, based on that, develop then the necessary amendments to the IAMSAR Manual providing limited contents only; and
- .4 if amendments to the IAMSAR Manual were to be developed, further work would be required to focus on the guidance to the management level in Volume I, and limit the guidance in Volumes II and III to a very minimum intended for tactical level personnel.

4.3.4 After discussion, the JWG agreed to re-establish an ad hoc correspondence group, under the coordination of the member from Chile², to further refine the draft amendment to the Manual and report to JWG 32, with the possibility of developing a draft IMO circular, subject to consideration and agreement by the NCSR Sub-Committee. The JWG also agreed that the group should focus the guidance to the management level, as appropriate, limiting the volume of content to introduce general key elements in the IAMSAR Manual.

5 SAR SYSTEM ADMINISTRATION, ORGANIZATION AND IMPLEMENTATION METHODS

5.1 Assisting States in implementing improvements in SAR service quality, capacity and capability.

5.1.1 The JWG recalled that JWG 28 had discussed "Developing ideas on how to assist States in implementing improvements in SAR service quality, capacity and capability", and JWG 30 had noted existing initiatives such as the IMO International SAR Trust Fund and ICAO regional SAR working groups and task forces, and had encouraged members to share examples and ideas at JWG 31.

5.1.2 In this context, the JWG considered the information provided by the United States (**WP.7**) building upon discussion on this matter in JWG 30 under agenda item 5 and included new information and events since then, and inviting participants to share examples and ideas on how to assist States in implementing improvements in SAR service quality, capacity and capability.

5.1.3 In the context of discussions on regional cooperation, the JWG also noted the following information documents:

- .1 **IP.9** (Singapore) regarding the work carried out by the ICAO Asia-Pacific Regional SAR Work Group (AP SAR/WG), in particular that the APAC SAR Plan would be updated to include a major amendment regarding entry into a State's territory for SAR, as proposed during JWG 30. The AP SAR/WG had noted that, according to the results of USOAP CMA audits, there remained weaknesses in the region in areas of SAR pertaining to SAR

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agreements, implementation of training plans, effective regulatory surveillance oversight of SAR operation and mechanisms to eliminate SAR regulatory deficiencies;

- .2 **IP.10** (Serbia and Singapore) regarding the ICAO EUR/APAC SAR Workshop 2024, the main focus of which was the implementation of GADSS and autonomous distress tracking;
- .3 **IP.11** (Serbia) regarding the ICAO EUR SAR Workshop with SAREX 2023; and
- .4 **IP.13** (Serbia) regarding the work of the ICAO EUR SAR TF to develop regional guidance material related to developing and enhancing State SAR operations system regulatory frameworks.

5.1.4 Recalling the information provided in WP.1, paragraphs 2.9 to 2.11 on maritime SAR capacity building and training, the JWG noted the information provided by the IMO Secretariat on planned technical cooperation activities to assist States implementing SAR related IMO instruments. Although not Regional Offices, IMO maintained five (5) Regional Presence Offices (RPOs), at much smaller scale than ICAO, located in Abidjan, Côte d'Ivoire, for West and Central Africa (Francophone); Accra, Ghana, for West and Central Africa (Anglophone); Nairobi, Kenya, for Eastern and Southern Africa; Manila, the Philippines, for East Asia; and Port of Spain, Trinidad and Tobago for the Caribbean. In addition, a project was ongoing to open the sixth RPO in Suva, Fiji, to facilitate the delivery of IMO's technical assistance programme in the Pacific region.

5.1.5 The JWG also noted that the IMO Secretariat was exploring options to collaborate with the Pacific region, including ongoing discussions with the Pacific Search and Rescue Steering Committee (PACSAR). In addition, although the scope of the work was still under consideration, the IMO Secretariat was in the process of developing standard basic presentation materials, taking into account IMO model courses on SAR 3.13, .14 and .15, that could be used for the delivery of different SAR workshops. JWG experts were invited to consider collaborating with the Secretariat on this work, noting the existing contribution from the member nominated by the United Kingdom. Interested SAR experts were also invited to consider collaborating with the delivery of IMO technical cooperation activities and registering their interest and expertise on the IMO roster of consultants (<https://www.imo.org/en/About/Careers/Pages/Consultancies-at-IMO.aspx>).

5.1.6 The JWG was invited to share any ideas/suggestions on how ICAO and IMO could enhance collaboration on technical cooperation programmes, and what kind of activities could be implemented to assist States in implementing improvements in SAR service quality, capacity and capability. In this regard, the following views were expressed:

- .1 funding could often be an issue, nevertheless the IMO International SAR Trust Fund was available, and IMO had invited Member States to consider funding to assist;
- .2 the ICAO and IMO Secretariats should collaborate to investigate methods by which technical cooperation activities could be enhanced; and

- .3 the contents of document COMSAR 8/18 from 2004 outlined, in annex 9, an agreement between ICAO, IMO and the ILF (now the IMRF) to establish a Global SAR Development Advisory Group (GSDAG).

5.1.7 The JWG encouraged members and observers to consider sharing ideas for assistance to States and submit such proposals to JWG 32. The JWG also invited the ICAO and IMO Secretariats to explore further opportunities for collaboration and enhancement of the technical assistance provided to Member States to further develop the Global SAR Plan and implement instruments relevant to SAR.

5.2 Strategic outlook of the JWG

5.2.1 The JWG considered the information provided by Australia (**WP.8**) proposing the addition of a new JWG agenda item and mechanism to assist the JWG with the establishment and maintenance of a strategic outlook on new and emerging issues that might impact the global aeronautical and maritime SAR system operating environment.

5.2.2 During the ensuing discussion, the following views were expressed, that:

- .1 the JWG, as a competent technical body, had a duty to raise concerns to higher bodies, in particular those with a high-level strategic focus which had the responsibility to determine the direction of the Organizations;
- .2 the title could be interpreted as the JWG establishing strategic planning, thus other alternatives such as “horizon scan” or “general overview of SAR issues” could be considered;
- .3 the JWG was established on the basis of terms of reference, including participation as individual experts rather than State representatives;
- .4 a comprehensive list of issues maintained internally within the JWG, or among its members, could assist in guiding future considerations;
- .5 drafting, updating and prioritization exercises could be time consuming;
- .6 the work could be undertaken triennially, to complement the IAMSAR Manual amendment cycle; and
- .7 maintenance of the outlook document would likely require a dedicated rapporteur from a member.

5.2.3 During consideration, the JWG was reminded that for maritime matters, MSC-MEPC.1/Circ.5/Rev.5 on *Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* applied and thus the JWG shall not undertake work on outputs or expand the scope of outputs unless directed or authorized to do so by its parent organ.

5.2.4 After consideration, the JWG agreed to include additional text to the sub-paragraph in agenda item 5 referring to strategic outlook for the global SAR operating environment in the proposed provisional agenda for JWG 32, as reflected in **appendix 5**.

5.2.5 With regard to the proposed strategic outlook document, the JWG agreed that further consideration would be necessary and noted the intention of Australia to refine the format and title of the document, and report to JWG 32.

5.3 Guidance on regulatory provisions for rescue boats

5.3.1 The JWG noted the information provided by Ireland (**IP.7**) regarding the development of guidance on regulatory provisions for rescue boats - Rescue Boat Operational Guidelines.

6 RCC/RSC EQUIPMENT AND FACILITY DESIGNATIONS AND STANDARDS

6.1 Optimizing homing operations for 406 MHz distress beacon and automatic identification system (AIS) signals

6.1.1 The JWG considered the information presented by Australia (**WP.9**) regarding optimizing homing operations for 406 MHz distress beacon and AIS signals, which might assist RCCs and SAR agencies to optimize the deployment of SAR units capable of receiving and interpreting 406 MHz distress beacon transmissions. The document also provided general considerations regarding homing operations for maritime radio equipment which transmit an AIS signal with freeform number identities.

6.1.2 During the ensuing discussion, the following views were expressed, that:

- .1 the information provided in the document was extensive and useful and should be shared among both aeronautical and maritime SAR communities outside the JWG, and once refined, the IAMSAR Manual would offer suitable means to provide such guidance; and
- .2 the SAR system would benefit from the dissemination of this information prior to the next cycle of amendment to the IAMSAR Manual, for example, through regional workshops or updates to the Cospas-Sarsat RCC Handbook.

6.1.3 After discussion, the JWG established an ad-hoc correspondence group, under the coordination of the United States³ to develop proposed amendments to the IAMSAR Manual regarding procedures and training for RCCs and SAR units equipped with a 406 MHz homing capability and/or AIS receiver, as appropriate, and report to JWG 32.

6.1.4 The JWG also invited the participants to consider whether:

- .1 their SAR units with 406 MHz homing equipment were capable of receiving and interpreting all currently allocated 406 MHz beacon channels, where practicable, including the newly allocated Channel S (406.076 MHz) from 1 January 2025 for first-generation beacons, noting that second-generation beacons would soon become operational and transmit a 406 MHz signal with different characteristics; and

³ Mr. Edwin Thiedeman, edwin.b.thiedeman@gmail.com

- .2 their other SAR units should be equipped with a 406 MHz homing capability and AIS receiver, or where that was not practicable, have arrangements in place for the deployment of SAR units with such capabilities from a neighbouring State through appropriate SAR arrangements.

6.2 Antarctic SAR Flight Trial

6.2.1 The JWG noted the information provided by Australia (**IP.2**) regarding a trial flight by one of its Challenger CL-604 SAR aircraft to execute an in-flight SAR stores delivery to the French Antarctic Station at Dumont d'Urville from Hobart, Tasmania, Australia. The flight mission marked the inaugural implementation of high-level depressurized operational procedures developed to permit the Challenger to safely extend its normal operating range.

7 SAR COMMUNICATIONS

7.1 COMSAR/Circ.3 on Relations between NAVAREA Coordinators and Rescue Coordination Centres

7.1.1 The JWG considered the information presented by New Zealand (**WP.15**) proposing the revocation of COMSAR/Circ.3 on *Relations between NAVAREA Coordinators and Rescue Coordination Centres*, as the content was considered to be superseded by the recent guidance provided by MSC.1/Circ.1659.

7.1.2 After consideration, the JWG agreed to recommend the NCSR Sub-Committee to consider revoking COMSAR/Circ.3.

7.2 406 MHz beacon two-way messaging

7.2.1 The JWG noted the information from the United States (**IP.8**) concerning an update on 406 MHz two-way communications question and answer datasets.

7.2.2 The JWG noted that due to the messages being transmitted as a code rather than text, selection of a different language by each user in the message exchange was expected.

7.3 International Cospas-Sarsat Programme

7.3.1 The JWG noted the information provided by Cospas-Sarsat (**IP.12**) on the status of the International Cospas-Sarsat Programme as of August 2024.

7.3.2 The JWG expressed its appreciation for the continuous work undertaken by Cospas-Sarsat. It was noted with concern that there was a concentration of no- or low-response rate countries, in particular, around the equator in Africa, and thus receiving the updated information on the continued SPOC testing remained relevant.

7.3.3 During the consideration of MCC-SPOC agreements, the JWG noted that the title of the agreement could be altered from the template, for example as "protocol" or "arrangement", as required by the signatories. Similar consideration could be given to the text of such.

7.3.4 The JWG noted that Cospas-Sarsat planned to more fully report on ELT(DT) matters (including beacon population, registration rate, and real and inadvertent activations) that occurred in 2024 at the next JWG meeting, if such data was reported by participants.

7.3.5 The JWG participants were invited to liaise with the Cospas-Sarsat Secretariat⁴ to provide details of any existing MCC-SPOC agreements/arrangements, and proposals for improving MCC-SPOC communications during tests and real alerts. They were also invited to consider participating in the development of two-way communication capability for 406 MHz beacons by joining the relevant correspondence working group.

7.4 ELT(DT) equipage on aircraft

7.4.1 The JWG noted the presentation provided by International Coordinating Council of Aerospace Industries Associations regarding ELT(DT) equipage on aircraft, including measures being taken to mitigate inadvertent activation.

8 SAR PERSONNEL STAFFING AND TRAINING

8.1 Establishing Search and Rescue as a profession

8.1.1 The JWG noted the information provided by the United States (**IP.3**) regarding establishing SAR mission coordinator as a profession.

8.2 Rescue craft operators training guidance

8.2.1 The JWG considered the information provided by IMRF (**IP.6**) regarding the IMRF rescue craft operators training guidance project update.

9 ANY OTHER BUSINESS

9.1 Submarines and passenger submersible craft and related SAR issues

9.1.1 The JWG considered the report from an ad hoc correspondence group coordinated by Chile (**WP.14**) regarding SAR issues related to submarines and passenger submersible craft.

9.1.2 Regarding the accident of the commercial exploration submersible craft **Titan**, the JWG noted that three investigations were still ongoing and their reports were still pending publication. Accordingly, no official information on the cause of the accident of the commercial exploration submersible craft **Titan** had been made available.

9.1.3 The JWG recalled the views expressed at JWG 30 that there should not be expectations for coastal States to provide specialized deepwater rescue capability for civilian deepwater submersible craft accidents. The JWG was still of the same view and any commercial operators themselves of such deepwater exploration operation should be responsible for making rescue capability available. Notwithstanding the above, expanding the existing guidance in the IAMSAR Manual Volume II regarding underwater SAR to also include limited guidance of deepwater submersible craft rescue could be explored, including references made to available rescue capabilities among military institutions.

9.1.4 The JWG noted the work progressed by the correspondence group, however, in absence of details of the accident it was unable to consider possible amendments to the IAMSAR Manual further at this stage. Nevertheless, the JWG was of the view that the

⁴ mail@406.org

intersessional work could be progressed if new information was released before JWG 32 and reestablished an ad hoc correspondence group, under the coordination of Chile⁵, to further consider the matter and report to JWG 32.

9.2 Proposal for hosting of SAR related guidance and information material by the IMRF website

9.2.1 The JWG considered the information presented by IMRF (**WP.10**) regarding the proposal for hosting of SAR related guidance and information material by the International Maritime Rescue Federation (IMRF) website.

9.2.2 While appreciating the initiative and offer of IMRF, it was noted that issues of liability might exist with publication of guidance materials which have not been endorsed formally by the JWG.

9.2.3 After discussion, the JWG agreed that the challenges with the hosting and maintaining of a SAR library prevented further consideration. The JWG also noted the initiative of IMRF to continue publishing relevant SAR materials sourced from their own membership.

9.3 IMRF report on a feasibility study for a global SAR unit safety reporting system

9.3.1 The JWG noted the information provided by IMRF (**IP.4**) regarding the IMRF report on a feasibility study for a global SAR unit safety reporting system.

9.3.2 The JWG noted the advice of the ICAO Secretariat that the ICAO ADREP system and associated provisions in Annex 13 — *Aircraft Accident and Incident Investigation*, Doc 9756, *Manual of Aircraft Accident and Incident Investigation* and Doc 10053, *Manual on Protection of Safety Information* might provide valuable insight into the design, operational requirements, and promotion of such a system. Further provisions which might be relevant, in this case addressing the identification and reporting of hazards which existed and contributed to events, so as to avoid said events happening, could be found in Chapter 5 of *Annex 19 – Safety Management*. Further, ICAO would shortly publish the *Safety Intelligence Manual*, which could be made available to those working on the reporting system, if interested.

9.4 IMRF report on impacts of climate change on SAR organizations

9.4.1 The JWG noted the information provided by IMRF (**IP.5**) regarding the IMRF report on impacts of climate change on SAR organizations.

9.5 Timing and venue of JWG 32

9.5.1 The JWG noted the offer from Australia to host JWG 32 in Sydney provisionally planned to be held from 3 to 7 November 2025.

9.6 List of pending and new action items

9.6.1 The JWG updated the list of pending and new action items for the JWG, as set out in **appendix 2**.

⁵ Mr. Norman Ahumada, n_ahumada_g@hotmail.com

10 PROVISIONAL AGENDA FOR JWG 32

10.1 The JWG recommended the provisional agenda for JWG 32, as set out in **appendix 5**.

11 REPORTS TO ICAO AND THE NCSR SUB-COMMITTEE

11.1 Action requested of ICAO

11.1.1 The JWG invited ICAO to note the report in general, and in particular:

- .1 note the work to be progressed intersessionally, as described in the updated list of pending and new action items for the JWG (paragraph 9.6.1 and **appendix 2**);
- .2 note the offer of Australia to host JWG 32 provisionally planned from 3 to 7 November 2025 (paragraph 9.5.1); and
- .3 approve the draft provisional agenda for JWG 32 (paragraph 10.1 and **appendix 5**).

11.2 Action requested of the NCSR Sub-Committee

11.2.1 The JWG invited the NCSR Sub-Committee to note the report in general, and consider any necessary actions, in particular, in relation to:

- .1 the work on the preparation of amendments to the IAMSAR Manual for its 2028 edition (paragraphs 3.1.3 and 3.2.2 and **appendices 3 and 4**);
- .2 radar SART and the draft amendments agreed for inclusion in the 2028 edition of the Manual (paragraph 4.1.5 and **appendix 4**);
- .3 remotely piloted aircraft (RPA) and other autonomous craft, including confirmation of the understandings that SAR services are not required to conduct searches for craft with no persons on board, and that distress beacons should not be used for alerting on craft with no persons on board (paragraph 4.2.3);
- .4 psychology of emergency and, in particular, the work to be carried out intersessionally to further refine the text of draft amendments to the IAMSAR Manual, including the possibility of developing a draft circular on this subject (paragraph 4.3.4);
- .5 assisting States in implementing improvements in SAR service quality, capacity and capability (section 5.1);
- .6 the development of a strategic outlook for the global SAR operating environment, including State and industry SAR system initiatives, identification of new and emerging issues, global SAR system implementation status and SAR system data and trends (section 5.2);
- .7 optimizing homing operations for 406 MHz distress beacon and automatic identification system (AIS) signals and the work to be carried out

intersessionally to develop a necessary guidance for potential inclusion in the IAMSAR Manual (section 6.1);

- .8 the revocation of COMSAR/Circ.3 on *Relations between NAVAREA Coordinators and Rescue Coordination Centres*, as the content was considered to be superseded by the recent guidance provided by MSC.1/Circ.1659 (paragraph 7.1.2);
- .9 submarines and passenger submersible craft and related SAR issues and, in particular, the work to be carried out intersessionally (section 9.1);
- .8 the offer of Australia to host JWG 32 in Sydney provisionally planned from 3 to 7 November 2025 (paragraph 9.5.1);
- .10 the list of pending and new action items for the JWG (paragraph 9.6.1 and **appendix 2**); and
- .11 approval of the draft provisional agenda for JWG 32 (paragraph 10.1 and **appendix 5**).

12 EXPRESSION OF APPRECIATION

12.1 In closing, the Chair thanked all participants for continuing with positive professional efforts in making the best use of the time available. Once again, members and observers all had key roles in this success, and this was a direct result of serving as SAR experts.

12.2 On behalf of the entire JWG, the Chair expressed deep appreciation and sincere thanks for the arrangements made by the Department of Transport, and in particular Irish Coastguard, for hosting JWG 31. In particular, the Chair highlighted the progress in technical cooperation activities, psychological first aid and strategic outlook. The Chair looked forward to future meetings continuing to be face-to-face with more time to discuss issues and proposals, as well as for SAR experts to interact with each other. The JWG had set the stage for a very productive JWG 32 in 2025.

12.3 On behalf of the entire JWG, the Chair expressed deep appreciation to both the ICAO and IMO Secretariats.

13 CLOSURE OF THE MEETING

13.1 The Chair closed the thirty-first meeting of the Joint Working Group and wished all participants all the best for continued good health and good times.

Appendix 1

LIST OF PARTICIPANTS

M(a) = Aeronautical Member

M(m) = Maritime Member

O = Observer

No.	COUNTRY	NAME	STATUS
1	Australia	Scott Constable	M(a)
2	Brazil	Sergio Dos Santos Silva	O
3		José Nelson Nonato De Oliveira Coutinho	O
4	Canada	Jonathan Nelles	M(a)
5		Elisabeth Fraser	O
6	Chile	Norman Ahumada	M(m)
7	China	Xinbo Ban	O
8		Guangzhou Lian	O
9		Shili Lyu	O
10	Estonia	Diana Krotova	O
11	Finland	Mika Runsten	M(a)
12		Samu Hiljanen	O
13	France	Patrice Ropars	M(a)
14		Arnaud Philippe	O
15		Hortense Latron	O
16	Greece	Georgios Kraounakis	O
17	Indonesia	Abdul Achadi	O
18		Didi Hamzar	O
19		Otty Rusinarsetyo	O
20	Ireland	Eugene Clonan	M(m)
21		Niall Ferns	O
22		Ronan Verling	O
23	Japan	Jun Kawai	O
24		Nanami Takemoto	O
25	Kuwait	Fahad Al Fouzan	O
26		Mohammad Al Rasheed	O
27		Abdallah Alhenaiyan	O
28		Faisal Bouttain	O
29	New Zealand	Neville Blakemore	M(m)
30	Norway	Andreas Bull	O
31		Ørjan Delbekk	O
32	Russian	Yury Malyshev	O
33	Federation	Alexander Evladov	O
34	Saudi Arabia	Fahad Alharbi	O

No.	COUNTRY	NAME	STATUS
35		Nasser Albugami	O
36		Mohammed T Alkhaldi	O
37	Serbia	Nikola Sarancic	O
38		Aleksandar Zekic	O
39	Singapore	Kit Tai	M(a) (Vice Chair)
40	South Africa	Gregory Critchley	O
41	Sweden	Johan Mårtensson	M(m)
42	United Arab Emirates	Saeed hamed ayed Alahbabi	O
43		Mohammed Musabbeh Alkaabi	O
44		Jasim Mohamed Ahmed Almhrezi	O
45	United Kingdom	Phil Bostock	M(m)
46		Chris Hopkins	O
47		Robert Scotland	O
48		Nicholas Scott Simmons	O
49	United States	David Fuhrmann	M(a)
50		David Edwards	M(m) (Chair)
51		Edwin Thiedeman	O
52		Ryan Sealy	O
53		Todd Behney	O
54	Viet Nam	Duy Khanh Dinh	O
55		Thanh Binh Nguyen	O
56		Dung Nguyen Van	O
57		Tinh Nguyen Van	O

No.	ORGANIZATIONS	NAME	M(a)/M(m)/O
58	Cospas-Sarsat	Arnaud Sindou	O
59		Cheryl Bertoia	O
60	CEPT	Aidan Jennings	O
61	CIRM	Mark Lawson	O
62	ICCAIA	Peter Walther	O
63	IMRF	Roland McKie	O

No.	SECRETARIAT	NAME
64	ICAO	John Welton (ICAO Secretary)
65		Chris Dalton
66	IMO	Javier Yasnikowski
67		Osamu Marumoto (IMO Secretary)

Appendix 2

LIST OF PENDING AND NEW ACTION ITEMS FOR THE JWG

THIRTY-FIRST MEETING

Topic	Background	Action	Comments
IAMSAR Specific:			
1. Update on the implementation of GADSS functions	Report JWG 24, para. 3.49 Report JWG 25, section 7.1 Report JWG 26, paras 3.1.19, 4.1.6 and 5.1.4 Report JWG 27, section 3.1.7 Report JWG 28, section 3.4.1 WP.2 Report JWG 29, section 3.2.10 Report JWG 30, section 3.9, WP.10 Report JWG 31, section 2.3.3, WP.12	ICAO Secretariat	WP at JWG 32
2. Revision of chapter 4 (Search planning) of Volume II	Report JWG 26, section 3.2 Report JWG 27, section 3.1.12 Report JWG 28, section 6.1.6	New Zealand, supported by others	WP at JWG 32
3. Psychology of emergency	Report JWG 27, section 4.3.2 Report JWG 28, section 4.3.3 Report JWG 30, section 4.1, WP.21 Report JWG 31, section 4.3, WP.13	Chile supported by others	WP at JWG 32
4. Editorial improvements to all volumes of IAMSAR Manual	Report JWG 27, sections 3.1.4 and 9.2. Report JWG 28, section 3.1.9 WP.10 Report JWG 29, sections 3.1.5 and 3.1.10 Report JWG 30, section 3.5, WP.31	Correspondence Group coordinated by the United Kingdom	WP as appropriate
5. Sweep width	Report JWG 31, section 3.1.3, WP.2	United States	WP at JWG 32
6. 406 MHz homing	Report JWG 31, section 6.1, WP.9	United States supported by others	WP at JWG 32
7. RPA and craft with no persons on board	Report JWG 31, section 4.2, WP.6	United States	WP at JWG 32
Other:			
8. Remotely piloted aircraft systems – Gap analysis	Report JWG 28, section 3.3	Sweden supported by others	WP at JWG 32
9. Developing ideas on how to assist States in implementing	Report JWG 27, section 3.2.3.2.2 Report JWG 28, section 5.1	Members and Secretariat	Continuous through WP and IP

Topic	Background	Action	Comments
improvements in SAR service quality, capacity and capability	Report JWG 30, section 5.1, WP.20		
10. Make available delimitation of maritime SRRs and arrangement for EGC broadcast in the Global SAR Plan module of GISIS	Report JWG 27, section 7.3.6 Report JWG 28, section 3.4.3 Report JWG 29, section 2.3.7.8 Report JWG 30, section 3.11, WP.7 Report JWG 31, section 2.2, WP.1	All IMO Member States (who have not provided)	Continuous
11. Submarines and related SAR issues	Report JWG 30, section 4.2, WP.22 Report JWG 31, section 9.1, WP.14	Chile supported by others	WP at JWG 32
12. Refinement of strategic outlook document and agenda item	Report JWG 30, section 9.5, WP.32 Report JWG 31, section 5.2, WP.8	Australia supported by others	WP at JWG 32
ITEMS CLOSED IN 2024:			
(Listing with original numbers with a "c")			
c5. Collation of more detailed documentation to gather effective SAR prevention initiatives	Report JWG 25, section 5.6, WP.14 Report JWG 29, section 5.2.3	New Zealand supported by others	Closed
c6. Consideration of data standards for SAR	Report JWG 25, section 5.5	New Zealand supported by Canada	Closed
c7. Development of a performance-based standard to accurately determine the location of the end of flight	Report JWG 26, section 3.4 Report JWG 28, section 2.2.5, WP.2	ICAO Secretariat supported by others	Complete
c9. Inform the ICAO Secretariat in order to fill the SAR calendar with relevant information on meetings, conferences, seminars, workshops, etc.	Report JWG 26, para. 2.1.2 Report JWG 27, para. 2.1.2 Report JWG 28, section 2.2.2 Report JWG 29, section 2.2.3 Report JWG 30, section 9.2, WPs.16 and 17	Members	Closed
c13. Naming conventions of SRRs	Report JWG 30, section 5.2, WP.29	France supported by others	Closed

Appendix 3**PROPOSED AMENDMENTS TO IAMSAR MANUAL VOLUME I
ARISING FROM JWG 31**

The text of the amendment is arranged to show deleted text with a line through it and new text highlighted with grey shading, as shown below:

- | | |
|--|-----------------------------------|
| a) Text to be deleted is shown with a line through it. | text to be deleted |
| b) New text to be inserted is highlighted with grey shading. | new text to be inserted |
| c) Text to be deleted is shown with a line through it followed by the replacement text which is highlighted with grey shading. | new text to replace existing text |

IAMSAR Manual Volume I

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Chapter 2

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2.3 Rescue coordination centres

2.3.1 The RCC is an operational facility responsible for promoting efficient organization of SAR services and for coordinating the conduct of SAR operations within an SRR. An RCC coordinates, but does not necessarily provide, SAR facilities throughout the internationally recognized SRR described in either the Regional Air Navigation Plans (RANPs) of ICAO or the Global SAR Plan of IMO. Aeronautical SAR responsibility may be met by means of an aeronautical RCC (ARCC). Coastal States with the added responsibility for maritime SAR incidents can meet this with a maritime RCC (MRCC). When practicable, States should consider co-locating or combining their maritime and aeronautical RCCs into a joint RCC (JRCC).

Note: The term RCC will be used within this Manual to apply to either aeronautical or maritime centres; ARCC or MRCC will be used as the context warrants.

Note: A JRCC may be established either by physical co-location or by the integration of communications, information and computer technology between an ARCC and an MRCC to achieve full search and rescue coordination functionality.

2.3.2 RCCs should be named geographically, based on the name of cities or ports, or where there is only one RCC in a State, such an RCC could be named after the State. The type of RCC facility should be identified as ARCC (aeronautical rescue coordination centre), MRCC (maritime rescue coordination centre), or JRCC (joint rescue coordination centre), as appropriate. The format should be type of facility followed by geographical name (city or port or State), e.g. MRCC Buenos Aires or JRCC Australia.

2.3.23 SAR managers should ensure that the RCC is familiar with the capabilities of all of the facilities available for SAR in its SRR. Collectively, these facilities are the means by which the RCC conducts its operations. Some of these facilities will be immediately suitable for use; others may have to be enhanced by changing organizational relationships or supplying extra equipment and training. If the facilities available in certain parts of an SRR cannot provide adequate assistance, arrangements should be made to provide additional facilities.

Editorial Note.— Renumber subsequent paragraphs

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Chapter 2

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2.4 Rescue sub-centres

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2.4.3 An aeronautical RSC (ARSC) can be established for aeronautical SAR incidents, and a maritime RSC (MRSC) for maritime SAR incidents.

Note: The term RSC will be used within this Manual except where it applies only to aeronautical or maritime; then ARSC or MRSC will be used.

2.4.4 RSCs should be named using the same principle as RCCs.

Appendix 4

PROPOSED AMENDMENTS TO IAMSAR MANUAL VOLUME III ARISING FROM JWG 31

The text of the amendment is arranged to show deleted text with a line through it and new text highlighted with grey shading, as shown below:

- a) ~~Text to be deleted is shown with a line through it.~~ text to be deleted
- b) **New text to be inserted is highlighted with grey shading.** new text to be inserted
- c) ~~Text to be deleted is shown with a line through it~~ followed by the replacement text which is highlighted with grey shading. new text to replace existing text

Section 8

On-scene communications

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Survival and emergency radio equipment

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- SOLAS ships should have a SART to interact with 9 GHz vessel or aircraft radars for locating survival craft (SART responses show up as a distinctive line of about 20 equally-spaced blips on compatible radar displays, providing a bearing and range to the SART)
 - Ship and aircraft radar signal processing and other functions may have to be disabled or adjusted to detect a radar SART. Doing so may degrade the radar's performance in detecting other targets. Consult the radar operating manual or radar's manufacturer.
- AIS-SART is an alternative to survival craft radar transponders. AIS-SART is a transmitter which sends a signal to the AIS. It is programmed with a unique identity code and receives its position via an internal GNSS. The AIS-SART is detected on both class A and B and AIS receivers. The AIS target will be shown on ECDIS or chart plotters as a red circle with a cross inside.

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Appendix 5

PROVISIONAL AGENDA FOR THE THIRTY-SECOND MEETING OF THE ICAO/IMO JOINT WORKING GROUP ON HARMONIZATION OF AERONAUTICAL AND MARITIME SEARCH AND RESCUE

- 1 Adoption of the agenda**
- 2 Decisions of ICAO and IMO bodies related to the Joint Working Group work, for instance:**
 - *Briefing on the outcome of ICAO activities; and*
 - *Briefing on the outcome of IMO activities.*
- 3 Conventions, plans, manuals and other documents affecting SAR, for instance:**
 - *amendments to the IAMSAR Manual, including changes to facilitate use by training institutions;*
 - *Status of the Maritime SAR Convention and Annex 12 to the Convention on International Civil Aviation;*
 - *Alignment of the IMO Area SAR Plans, GMDSS Master Plan and ICAO Regional Air Navigation Plans; and*
 - *Progress report on work by the ANC and provisions pertaining to airborne carriage of crash alert and signalling equipment.*
- 4 SAR operational principles, procedures and techniques, for instance:**
 - *Development of operational guidelines for safe and effective search and rescue operations, taking account of experience gained from past SAR events;*
 - *Mass rescue operations, taking account of experiences gained;*
 - *Medical assistance in the context of SAR services;*
 - *Effects of measures to enhance maritime and aeronautical security on SAR services, including the implementation of the long-range identification and tracking (LRIT) system;*
 - *Development of new and revised procedural strategies for the practical provision of SAR services; and*
 - *Development of a structured process to review SAR alerting procedures between ATC services and SAR authorities.*
- 5 SAR system administration, organization and implementation methods, for instance:**
 - *Regional SAR development, including SAR committees and task forces;*
 - *Development of guidance on regulatory provisions and other guidelines for State and subregional SAR organizations;*
 - *Quality assurance, systems improvement, needs assessment, risk management, safety management and resource allocation;*

- *Evaluating the effect of various technical cooperation projects in conjunction with relevant governments, organizations and agencies with a view to assessing their impact on implementing and maintenance of effective SAR services; and*
- *Strategic outlook for the global SAR operating environment, including State and industry SAR system initiatives, identification of new and emerging issues, global SAR system implementation status and SAR system data and trends.*

6 RCC/RSC and SAR equipment and facility designations and standards, for instance:

- *Establishment of RCCs and in particular JRCCs;*
- *Status of AIS, ADS-B and shore/land-based facilities and systems in aeronautical and maritime SAR; and*
- *Search and Rescue equipment, including information technology.*

7 SAR communications, for instance:

- *Status, elements and procedures of maritime communication systems for distress and SAR, including the GMDSS;*
- *Status, elements and procedures of aeronautical communications systems for distress and SAR, including GADSS;*
- *Status of the Cospas-Sarsat system, including MEOSAR and development of second generation beacons; and*
- *Monitor trends in SAR communications and provide advice on emerging technologies.*

8 SAR personnel staffing and training, for instance:

- *Development of RCC Staff qualifications and standards; and*
- *Development of joint SAR training courses based on the IAMSAR Manual.*

9 Any other business

10 Provisional agenda for JWG 33

11 Reports to ICAO and the NCSR Sub-Committee
