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COMSAR.1/Circ.57
24 June 2013

**GUIDANCE ON THE USE OF THE GRAPH AT FIGURE N.14,
AS CONTAINED IN APPENDIX N OF IAMSAR MANUAL, VOLUME II**

1 The Maritime Safety Committee, at its ninety-second session (12 to 21 June 2013), noted that concerns were raised about the graph, approved by MSC 90 (MSC.1/Circ.1415, annex, page 47) as a replacement for figure N.14 contained in appendix N of the IAMSAR Manual, Volume II. The Committee further noted that the Sub-Committee on Radiocommunications and Search and Rescue (COMSAR), at its seventeenth session (21 to 25 January 2013), had reconsidered the issue and developed Guidance on the use of the graph in figure N.14, as contained in appendix N of IAMSAR Manual, Volume II.

2 The Committee noted that concern had been expressed that, compared to the graph being replaced, significantly increased search times were being recommended, particularly at low-water temperatures, without sufficient justification for such a change being included in the updated text of chapter 3 of IAMSAR Manual, Volume II. This circular had been prepared to provide the necessary additional explanation, which would finally be incorporated in the 2016 edition of the IAMSAR Manual.

3 Member Governments are invited to bring the information to the attention of all parties concerned.

ANNEX

GUIDANCE ON THE USE OF THE GRAPH AT FIGURE N.14, AS CONTAINED IN APPENDIX N OF IAMSAR MANUAL, VOLUME II

1 The 2013 edition of the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual incorporates amendments to the "General Considerations for the SMC" in chapter 3 of Volume II and in appendix N to that volume. The particular amendments in paragraph 3.8.6 and in the associated figure N.14, provide updated advice on survivor life expectancy; advice based on expert medical opinion and the latest scientific data.

2 Figure N-14, as amended, shows a "Realistic upper limit of survival time for people in the water wearing normal clothing, from time of entry into the water". Some concern has been expressed that, compared to the graph being replaced, significantly increased search times are being recommended, particularly at low water temperatures, without sufficient justification for such a change being included in the chapter 3 text. This circular is published to provide the necessary additional explanation, which will be incorporated in the IAMSAR Manual itself in its 2016 edition.

3 It is important to note that the two graphs – figure N.14 in the 2010 edition of IAMSAR, and figure N.14 as now revised for the 2013 edition – do not show the same things. In particular, the figure in the 2010 edition shows an "average" survival time, not a "realistic upper limit".

4 However, the line in the new figure in the 2013 edition is based on the maximum survival time obtained from surveys of the United Kingdom and the United States immersion incidents across a range of water temperatures and conditions. Coincidentally, the line equates to the 50 per cent survival time curve used in previous editions of IAMSAR Manual and many other survival manuals, multiplied by a "safety factor" of three. Generally, the recommendation has been to multiply the 50 per cent survival time curve by such a factor to cover individual variation in survival time. Thus the line in revised figure N-14, obtained from actual immersion incidents and supported by the latest experimental data, supports the previous approach of multiplying the 50 per cent survival curve by the "safety factor" of three.

5 When using these data to help determine a search time, it is important to note the full supporting guidance given at paragraph 3.8.6 of IAMSAR Manual Volume II, as well as the full title of figure N.14. The graph shows a "realistic upper limit of survival time for people in the water wearing normal clothing" (that is, clothing which may be considered as normal wear in the particular circumstances). The graph shows a reasonable upper limit for search duration in these circumstances. But it does not apply directly to people in additional protective clothing, nor to people who may have managed to get themselves wholly or partly out of the water: both might survive for *longer* times than the graph indicates. Neither should figure N.14 be taken to imply that people in the water wearing normal clothing will survive for the time shown on the graph. Other factors, described in paragraph 3.8.6 of IAMSAR Volume II, should be taken into account. Particularly at lower temperatures, many people in the water in normal clothing will only survive for significantly shorter periods than the maxima shown in new figure N.14.

6 It should also be noted that the graph in figure N.14 only extends to a maximum water temperature of 20°C/68°F. Above this temperature survival depends even more on individual circumstances and a "realistic upper limit of survival time" cannot be usefully determined.

7 The full guidance given in IAMSAR Volume II, and amplified in this circular, should be carefully considered by the search planner. In particular, the line in figure N.14 should not be used alone to determine a search time. In the great majority of cases, particularly at low temperatures, survival times for people in the water in normal clothing will be significantly less than the upper limit shown in the figure, due to rapidly evoked responses ("cold shock") that result in early drowning or cardiac problems. Conversely, if there is a possibility that the search target may not be in the water, and/or may be equipped with additional protective clothing, survival is possible over longer time periods. These basic facts have clear implications for the speed at which a search should be conducted as well as for its overall duration.