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GUIDELINES ON THE TRAINING OF SAR SERVICE PERSONNEL WORKING IN MAJOR INCIDENTS

1 The Maritime Safety Committee, at its eighty-first session (10 to 19 May 2006), with a view to providing guidance on the training of search and rescue service personnel working in major incidents, approved the Guidelines on the training of SAR service personnel working in major incidents prepared by the Sub-Committee on Radiocommunications and Search and Rescue at its tenth session (6 to 10 March 2006), as set out in the annex.

2 Member Governments and international organizations are invited to bring the annexed guidelines to the attention of all parties concerned.

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ANNEX

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1 INTRODUCTION

1.1 Successful interaction and mutual understanding between those who will have to work closely together during a major emergency are of fundamental importance to its being handled successfully. The human element and relevant training for all who may be involved are key factors in this context.

1.2 Major incidents are, fortunately, rare. However, they must be planned and prepared for, and this preparation includes an additional element of training. SAR service personnel are generally used to handling relatively small-scale incidents; but the rarity of major incidents means that they cannot gain the same levels of direct experience in dealing with emergencies on this scale. The need for specific training therefore increases commensurately.

1.3 It is the purpose of these guidelines to highlight some of the considerations that should be borne in mind by those planning and delivering major incident training for SAR personnel.

1.4 These guidelines should be read in conjunction with the guidance on mass rescue operations in the IAMSAR Manual, Volume I, Section 6.5, and especially Volume II, Section 6.15.*

2 DEFINITIONS

2.1 In these guidelines the term 'major incident' means an incident which requires special arrangements to be put in place in order to deal with it. That is, the incident is above and beyond what may be regarded as routine SAR work.

2.2 'SAR service personnel' is taken here to include all those who provide, or may provide, a SAR service. This should be taken to include:

.1 SAR Co-ordinators (as defined in the IAMSAR Manual, Volume I);

.2 SAR Mission Co-ordinators;

.3 On Scene Co-ordinators;

.4 Aircraft Co-ordinators;

.5 SAR unit commanders and their crews; and

.6 ships' masters and their crews – because they may be involved as additional SAR facilities, or as On Scene Co-ordinators when no more suitable unit is present.

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* This guidance was added to the IAMSAR Manual by MSC/Circ.1173 and entered into force on 1 June 2006.

3 FUNDAMENTAL CONCERNS

Particular attention is drawn to the following aspects of major incident preparedness:

.1 the structure and synergy of the wider SAR 'team' – which, in a major incident, will include members who are not used to working together as part of the 'everyday' response;

.2 the crucial importance of effective communications at all levels;

.3 the additional pressures placed on SAR service personnel during major incidents, and particularly in mass rescue operations;

.4 the usefulness of major emergency exercises and simulations; and

.5 the usefulness of familiarization visits and exchanges, and joint training initiatives.

4 TRAINING NEEDS

4.1 There are a number of training needs associated with the additional challenges of major incident response. It is necessary to develop SAR personnel's knowledge of the special arrangements required to deal with the incident so that they will be implemented successfully. Training and exercise are vital to this development because very few SAR service personnel (even front-line SAR professionals) will accrue that knowledge by direct major incident experience.

4.2 The level of training required by different types of SAR service personnel will vary according to need. However, a measure of understanding of each of the items discussed below will be of use to all SAR personnel.

5 ASPECTS OF MAJOR INCIDENT TRAINING

5.1 A list of the aspects of emergency response which present additional challenges during major incidents is given below. The guidance on mass rescue operations in the IAMSAR Manual should also be referred to (see paragraph 1.4 above). Training in these aspects should be developed for SAR personnel according to individual need.

5.2 It should be noted that very few of the items listed are specific to major incident response. Most will occur in most SAR cases. While the response processes will remain broadly the same in major incidents, the difference is one of scale – and one of the most important concerns for training for SAR service personnel working in major incidents is that they should be enabled to respond effectively to the incident *despite* its scale.

5.3 The list of additional challenges in major incidents is provided below. Neither the list itself nor the outline notes against each item are exhaustive.

5.3.1 Recognizing that a major incident has, in fact, occurred

5.3.1.1 This is sometimes obvious (for example, when a known large passenger ship declares herself in distress and abandoning) but often is not. All SAR service personnel should be trained to

recognize a major incident and know how to respond appropriately. There is evidence of cases in which the response was delayed because those involved failed to recognize, or simply could not believe, that this was 'the big one'.

5.3.1.2 This understandable failing has to be overcome by training. SAR personnel should be clear on the procedure for major incident declaration: who is empowered to make the declaration; how the decision is promulgated; and what individual responses are required in consequence.

5.3.2 **Survival time**

5.3.2.1 Casualties will have limited survival time (because of lack of, or limited, life-saving appliances, for example, or on-scene conditions – particularly the cold) so their rescue has to be arranged within that time. However, what may be possible in cases where small numbers of people are at risk will become a much greater challenge with large numbers of people, even if all other parameters are the same. One helicopter, say, may be able to recover five people from the water within their expected survival time; but it will not recover five hundred.

5.3.2.2 This problem is exacerbated in mass rescue operations – particularly in passenger ship incidents – by the fact that many of those requiring rescue will not be particularly fit to begin with, regardless of any injuries they may have suffered during the incident. They will not be professional seafarers. They may include a large proportion of the elderly, the very young, the disabled, the unwell and/or the generally unfit. Passengers in general will be subject to the additional stress of having only the most basic idea of what to do in an emergency. All of these factors will tend to reduce survival time.

5.3.3 **SAR facility availability**

5.3.3.1 By definition, no SAR service has sufficient dedicated SAR facilities to be able to deal with a major incident: all will require additional facilities to undertake the task. These facilities have to be found.

5.3.3.2 Professional SAR service personnel, in particular the State's SAR Co-ordinator and the SAR Mission Co-ordinator (SMC) at the time of the incident, have to be able to address this problem. The SAR Co-ordinator should include it at the strategic planning stage; the SMC has to be able to think beyond the parameters which are sufficient for his/her everyday co-ordination work and has to be able to do this perhaps just once in his or her career.

5.3.4 **Working with strangers**

5.3.4.1 SAR service professionals in any particular area will be used to working together and will have built up, by training, exercise and incident experience, the necessary mutual awareness, knowledge and respect. Crucially, they will be able to communicate with each other efficiently.

5.3.4.2 But this will not be the whole picture when it comes to responding to a major incident. In addition to the usual team, there will be SAR units responding from further a field and there will be additional facilities (e.g. ships, etc.) responding to the emergency because they happen to be in the area. Many of the SAR service personnel thrown together by the incident will thus be unfamiliar with each other and they are likely to be even less familiar with the other agencies joining in as part of the response to the major incident ashore. This is unavoidable in practical terms – but suitable training will help to alleviate the problem.

5.3.5 **Mutual awareness**

5.3.5.1 As already noted, those SAR service personnel who work together on an everyday basis will already have the necessary awareness of each other's roles, responsibilities and capabilities, but the additional personnel joining in as part of the major incident response will not. This is particularly true of the masters and crews of ships and other additional facilities which just happen to be in the area at the time of the incident.

5.3.5.2 Again, practically, this is a problem which cannot be completely overcome. The SMC and each of the SAR facility commanders involved in a major incident cannot all know each other personally, despite the fact that this is so beneficial to effective communication, but it can be alleviated by training. Understanding the principles of SAR as set out in the IAMSAR Manual and participating together in SAR seminars and/or tabletop exercises are examples of improving mutual awareness.

5.3.6 **Co-ordination**

5.3.6.1 Co-ordinating the response, and being a part of a co-ordinated response, are, again, aspects of everyday SAR which are familiar to SAR professionals. But the challenge of efficient co-ordination of SAR efforts rises exponentially in a major incident, simply because there will be so much more to co-ordinate. Training to deal with this problem is essential. Expecting those involved to just 'move up a gear' when faced with a major incident is inadequate.

5.3.6.2 Training therefore begins with the SAR Co-ordinator, who needs to be able to assess major incident co-ordination requirements so as to ensure that the SMC has sufficient facilities available to enable him or her to carry out the task. The SMC too requires specific major incident training, especially as regards the much more complicated co-ordination task that he or she will be faced with.

5.3.7 **On scene co-ordination**

5.3.7.1 Similarly, although at a less extensive level than for the SMC, those who may have to take on the roles of On Scene Co-ordinator or Aircraft Co-ordinator in a major incident require training in preparation.

5.3.7.2 All those who may become involved, particularly as SAR facility commanders, require an understanding of the essential co-ordination structure so that they can more easily and efficiently take their place within it.

5.3.8 **Information/lack of information**

5.3.8.1 Information, especially in a major incident, is a two-edged sword. There will be a great deal of it to be sought, transmitted, received, assimilated, assessed and acted upon. The more complex the incident, the more the quantity and complexity of the information required. Those involved have to know what information they require (and what they don't) for their own particular part in the response; how to acquire it; how to prioritize and evaluate it; and what to do with it. 'Information overload' is a problem, and SAR service personnel should be trained in how to avoid it.

5.3.8.2 But the other edge of the sword is the *lack* of information. This problem is most obvious in the early stages of a major incident but is at least latent throughout. All responders will have information needs at the outset, and these needs will differ as the different responders' priorities differ. Provision of information (assuming that the information is available to be provided and is not fundamentally lacking because unobtainable) will itself have to be prioritized to avoid overloading individuals and communications facilities. Many are therefore likely to suffer an identifiable (and frustrating) lack of information as the response gets under way.

5.3.8.3 A more insidious risk as the incident develops is the lack of *updated* information. SAR facilities may be operating on old information which is no longer correct: they have, in effect, an unidentified lack of information. SAR personnel have to be trained to recognize these risks and in the procedures that will ease information flow.

5.3.9 **Communications**

5.3.9.1 Although 'buried' in this list, the task of ensuring efficient and effective communications is absolutely crucial to successful emergency response. The problem of inadequate communications in major incident response is widespread and well-recognized. What is less widespread is the training that will enable responders to overcome, or at least alleviate, the problem.

5.3.9.2 The problem is multifarious. There may be physical difficulties to overcome:– the lack of communications systems, for example, leaving SAR facilities unable to communicate directly with each other. Even if such systems are available, there may be insufficient numbers of trained, experienced people to operate them: the most sophisticated communications equipment is only of any use if there is someone available who: (a) knows how it works; and (b) knows what to say while using it. If there are both sufficient systems and people available, there will still be the problems of mutual awareness and information delivery discussed above, unless these problems too have been addressed and training provided in how to overcome or alleviate them. Having a state-of-the-art communications system and a mass of relevant information to hand is of limited use if you do not know who needs that information because you do not understand others' roles in the response network, or you cannot prioritize information delivery.

5.3.9.3 A good, clear, positive and effective communications plan is needed, to ensure control and efficiency. Everybody does not need to talk to everybody. The plan needs to be quick to implement and easy for all to understand. It therefore must be simple. It should cover the co-ordination of communications between those on scene and the RCC, using intermediaries such as the On Scene Co-ordinator and Aircraft Co-ordinator. It should also cover communications with and between shoreside emergency responders, with the RCC as the focal point.

5.3.9.4 Major incident communications planning is firstly the responsibility of the SAR Co-ordinator. Establishment of the plan is the responsibility of the SMC. All SAR service personnel have to understand their place within it.

5.3.10 **Language difficulties**

5.3.10.1 This problem may be subdivided in two: a lack of (sufficient) mutual understanding of a common language; and a lack of mutual understanding of technical jargon. Both can destroy effective communication.

5.3.10.2 Two SAR responders who cannot speak each other's language, or enough of a common third language, simply cannot communicate non-visually (and only in a limited way even if face-to-face: sign language has its limitations). Less obviously, technical jargon can impede communication even between two people who share a language: understanding the basic words doesn't necessarily equate with understanding their meaning. The person using the jargon thinks he is being understood; the person listening may, in fact, 'understand' something quite different.

5.3.10.3 SAR personnel need to be trained to recognize these problems and in the ways of overcoming them, whether as regards setting up systems at the SAR Co-ordinator level (the provision of interpreting services, for example) or in using those systems at the responder level.

5.3.11 **Planning and plans**

5.3.11.1 SAR professionals have (or should have) major incident plans to refer to. Because of the 'add-on' nature of major incident response, and in keeping with the principles of integrated emergency response, the content of such plans should build on procedures already in place, and in everyday use, for 'normal' incidents. However, the plans themselves are specific to the major incident response.

5.3.11.2 There are three common dangers to be acknowledged and avoided. The first is not to plan at all, or not to plan adequately. The second is to 'over-plan', producing a plan so complicated that its use in practice is difficult and, therefore, may not happen at all. The third is not to train in and exercise the plan sufficiently, with the result that the plan gathers dust on the shelf – remaining there even when the major incident occurs.

5.3.11.3 All SAR service personnel need appropriate training in this respect, whether in planning (usually at the SAR Co-ordinator level) or in implementing the plan as a leader (the SMC) or an operator (SAR facility commanders, for example).

5.3.12 **Prioritization**

5.3.12.1 We have already discussed prioritization of information flow, itself a skill requiring training, but there is also prioritization of action to consider: another skill to be developed. In a major incident particularly, there will be many responders with differing individual priorities – SAR, counter pollution, and salvage are obvious examples in the maritime context.

5.3.12.2 At a more detailed level, there will be other questions of priority. For example, as a SAR unit commander arriving at the scene, do you turn your attention immediately to recovering survivors in the liferafts you can see, or do you first search for people in the water who, currently, you can't? Do you recover the injured or disabled first, taking all the time that will involve, or the larger numbers of able-bodied? And so on. Decisions have to be made according to the circumstances on the day, but the essentials of the problem can be considered beforehand.

5.3.13 **Recovery**

5.3.13.1 The recovery of people from survival craft or from the water, or directly from the vessel in distress, can be a severe problem even with small numbers involved. The larger the number of those requiring recovery, the larger the problem. In a mass rescue operation, as discussed above, many of those requiring recovery may be less able to use recovery systems that require their active participation simply because of their general level of (un)fitness or their unfamiliarity with the

systems provided. A non-seafarer may be theoretically capable of climbing a rope ladder, to take a simple example, in terms of the physical strength necessary to the task, but, through lack of experience, may yet be unable to do so in practice.

5.3.13.2 SAR service personnel need systems capable of overcoming such problems and the training to enable them to use these systems.

5.3.14 **Counting**

5.3.14.1 It is a simple fact, observed from experience that counting those recovered is problematic (probably because it is not the rescuer's primary concern). Accounting for all involved in the incident therefore becomes the more difficult. In addition, those recovered are likely to be in many different places, and to be moved as the incident progresses.

5.3.14.2 Systems have to be developed to deal with these related problems and, again, SAR personnel have to know how to use such systems.

5.3.15 **Dealing with survivors**

Survivors brought aboard SAR facilities will have many needs which should, if possible, be attended to while en route to a place of safety. Such needs might include medical assessment and attention, shelter, warmth, clothing, food and drink, reassurance, etc. Survivors will have their own information needs (the whereabouts of other members of their party, for example, or what will happen to them next). They may also themselves hold information of use to the ongoing response operation. All of this requires careful handling (including prioritization of needs) which, in turn, requires training.

5.3.16 **Dealing with the injured**

Those injured during the emergency, together with those with pre-existing medical needs, form a special category of survivors whose needs must be carefully assessed and prioritized, using a simple triage process, for example, with further assistance being sought if necessary. Such assistance might take the form of airlifting priority cases from the surface unit which first recovered them, in order to expedite their arrival at suitable medical facilities; or, where possible, it might involve the transfer of medical teams to the recovering unit in order to assist the unit's crew. Triage is an additional skill, requiring training.

5.3.17 **Dealing with the dead**

5.3.17.1 If bodies are recovered, or people aboard SAR facilities die of their injuries, arrangements should be put in hand to ensure their appropriate handling, including consideration of the effects on survivors and others on board (possibly including relatives or friends of the deceased).

5.3.17.2 Information questions also arise. Even the dead may provide information of use to the response; and information about the dead will need to be relayed, as sensitively as possible.

5.3.18 **Places of safety**

5.3.18.1 Maritime SAR facilities, whether surface or air, will have to deliver those they have recovered (i.e. uninjured, injured and the dead) to a place of safety, usually ashore. Again this presents extra difficulties in a mass rescue operation. It is important to ensure that shoreside facilities are ready for them (i.e. reception centres for the uninjured, medical facilities for the injured, mortuary facilities for the dead) and that individual facilities are not overloaded.

5.3.18.2 The process of delivery to a place or places of safety must therefore be co-ordinated, both among the units bringing people to land, and with the shoreside authorities who will be taking over their care. As these authorities too are likely to be implementing major incident response plans, the SMC in particular must have a sound knowledge of communications procedures with them, and of any locally agreed arrangements (pre-planned landing sites, for example). Pre-planning is, of course, part of the SAR Co-ordinator's remit.

5.3.19 **News media interest**

5.3.19.1 Although the local news media are likely to be interested in any SAR 'story', news media interest will multiply exponentially in the event of a major incident and a mass rescue operation in particular. The media's response will be rapid, intense and unremitting. It is likely to be international, and around the clock.

5.3.19.2 The SAR service response to this interest should be positive, and must be sufficient to avoid interference with the response to the incident itself. Response to the news media should be co-ordinated with that of other organizations involved. While this responsibility should be removed from personnel directly involved in the SAR response to be handled by specialists (i.e. press officers, etc.), SAR personnel at all levels may encounter the news media and must know how to deal with their enquiries – even if only how to pass them on to the specialists.

5.3.20 **Friends and families**

5.3.20.1 Relatives and friends of those involved in the incident as casualties (as well as people who only *think* their loved ones may be involved) will naturally be seeking information and the earliest opportunity to be reunited.

5.3.20.2 This difficult and sensitive work tends to fall to shoreside authorities as regards making arrangements for the collation and dissemination of casualty information and setting up reception centres, etc. for people travelling to coastal areas near the scene or to landing sites. Nevertheless, SAR service personnel may be approached directly, especially by those seeking information, and must know how to deal correctly with such requests.

5.3.21 **Logistics**

5.3.21.1 The support required by those responding to a major incident is complex. It will include additional trained staff, back-up SAR facilities and maritime assistance resources, land transport, welfare provision, reception and emergency accommodation facilities, additional medical facilities, etc. The logistical task will also involve individuals and organizations planning and working together who do not normally do so in everyday incidents.

5.3.21.2 While only a part of this process relates to the SAR service, SAR personnel have to know their part and how it relates to the whole. The SAR Co-ordinator has to plan with equivalent authorities in the shoreside services. SAR commanders at the strategic level have to have a clear understanding of resource availability and deployment, and how to co-ordinate this activity. Other SAR service personnel have to know how logistical support can be arranged. All these are training issues.

5.3.22 **Politics: Who's in charge?**

5.3.22.1 This is a problem which tends to be specific to major incidents and is generated by the higher profile of such incidents as compared to everyday SAR work. Everyday SAR arrangements may be clear, but the high profile incident attracts the attention of senior people who are not normally involved.

5.3.22.2 The problem can take two broad forms: the actual engagement of political leaders who feel that they will be held responsible for the success or failure of the response operation; and/or inter-agency disagreement on co-ordination and, crucially, which organization should lead the response. The latter problem is exacerbated if, in fact, the incident is multi-faceted if, for example, it involves security and/or pollution responses as well as SAR.

5.3.22.3 Solutions to this particular problem should be found at the planning stage: at the time of the incident will be too late. The SAR Co-ordinator should be able to recognize the potential problems, and to plan with others to avoid them by ensuring that the response is undertaken only by those fully competent to do so, and that priorities are agreed across the board. The training of other SAR service personnel should include an understanding of these plans.

5.3.23 **Fatigue**

5.3.23.1 Major incidents are very likely to have a longer duration than the everyday SAR incident, and SAR personnel are likely to become fatigued in consequence. This problem is exacerbated by the extra stress generated by the scale of the incident, and the natural desire to continue to assist – especially if relief personnel are not clearly available. The problem extends from those on the front line of the SAR effort (i.e. SAR unit crews, the crews of assisting ships, etc.) to the SMC and his/her team and strategic support personnel. It is particularly prevalent in commanders: junior staff can be ordered to rest, but the ship's captain, the On Scene Co-ordinator, the SMC and strategic commanders may come to see themselves as irreplaceable, and will consequently work beyond efficient limits.

5.3.23.2 These risks have to be recognized, both at the planning and the action stages, organizationally and individually, and measures to counteract them built in and applied.

5.3.24 **Stress**

5.3.24.1 Related to, but different from, the question of fatigue is the problem of stress – or more particularly, the problem of individuals becoming over-stressed during the course of an incident, possibly because of emotional involvement or because they are otherwise unprepared to deal with the complexities of the case and the many competing priorities and demands made upon them.

5.3.24.2 The tendency to make mistakes under pressure must be recognized and managed. The signs of individuals becoming over-stressed must also be known and guarded against. The need for post-incident support for all those involved must also be recognized and provided for.

5.3.25 **Training and exercises**

5.3.25.1 Training in all the *additional* aspects of major incident response outlined above should be planned for and provided as appropriate for all SAR service personnel. While this may seem an onerous undertaking at first glance, it should be borne in mind that, for all concerned, major incident training is an extension of their basic training for the 'everyday' eventuality. This applies to ships' masters and their crews, whose training for on-board emergencies will underpin the additional training for their part in major incident response, as it does to SAR professionals at all levels.

5.3.25.2 Training methods of all types may be used to prepare for major incident response. This includes formal courses, seminars and workshops, published guidance and simulations. This training, as well as emergency plans and procedures, should be tested in exercises and exercises too can be of all types, depending on their aims and objectives. Full-scale live major incident exercises are complicated and costly to arrange, but provide the best overall tests of the system. Smaller-scale live exercises may be used to test specific segments of the response. 'Command post' or 'co-ordination' exercises test inter-communication and awareness without the added difficulties of resource deployment. 'Tabletop' exercises, whether discursive or using simulations, are similarly valuable.

5.3.26 **Lessons learned**

Major incidents are, fortunately, very rare. This has implications for the training necessary to prepare for them, as discussed. That training (not to mention emergency planning) will be improved by the collation and wide dissemination of lessons learned from major incident and major incident exercise experience. So this is the final training aspect in this outline list – the identification of lessons that can be learned, and of those to whom they will be of interest, is a skill in itself; and a process of disseminating the lessons learned effectively – within one's own organization and to partner organizations locally, regionally, nationally and internationally – should be established by managers and by the SAR Co-ordinator.