# Contents

1 Introduction 3

2 Operational guideline development process 4

3 Operational guidelines and their background 6

3.1 Operational guideline - assessing the safety status of a vessel (Vessel Triage) 8

3.1.1 Background of the operational guideline 8

3.1.2 MIRG operational guideline 1 - assessing the safety status of a vessel (Vessel Triage) 9

3.2 Operational guideline - requesting assistance 13

3.2.1 Background of the operational guideline 13

3.2.2 MIRG operational guideline 2 - requesting assistance 14

3.3 Operational guideline - communications 18

3.3.1 Background of the operational guideline 18

3.3.2 MIRG operational guideline 3 - communications 19

3.4 Operational guideline - fire liaison officer 22

3.4.1 Background of the operational guideline 22

3.4.2 MIRG operational guideline 4 - fire liaison officer 23

3.5 Operational guideline - MIRG operation commander 25

3.5.1 Background of the operational guideline 25

3.5.2 MIRG operational guideline 5 - MIRG operation commander 26

3.6 Operational guideline - occupational safety 30

3.6.1 Background of the operational guideline 30

3.6.2 MIRG operational guideline 6 - occupational safety during a MIRG operation 31

3.7 Operational guideline - distress vessel 33

3.7.1 Background of the operational guideline 33

3.7.2 MIRG operational guideline 7 - distress vessel 34

4 Summary and recommendations 39

Appendixes 41

Checklists 42

MIRG Tasking Form 54
**1 INTRODUCTION**

“During the project, it was found that no single coastal state in the Baltic Sea region has the capacity or preparedness to handle a large-scale maritime incident completely alone – assistance would be required from neighbouring countries to some extent.”

**Baltic Sea Maritime Incident Survey – Final Report 2014**

When a large-scale maritime incident occurs, many different actors initiate rescue and prevention measures on both sea and shore. Generally, a single authority does not have the capabilities to handle such an incident on its own, as response often entails dealing with issues concerning maritime search and rescue (SAR), oil spill clean-up, port of refuge decisions and possible further actions to deal with evacuees.

It is also highly likely that search and rescue measures in a large-scale maritime incident will involve authorities from several countries. For instance, if a ship fire of long duration occurs at sea and resources are very limited, numerous firefighting and rescue teams might have to be dispatched from several countries. In situations involving authorities from several countries, it is extremely important to maximise efficiency in the use of the limited resources available. Common operating procedures play a key role in efficient joint operations.

To date, very few projects have focused on developing operational rescue cooperation in incidents involving international collaboration between authorities. The Baltic Sea Maritime Incident Response Group (Baltic Sea MIRG) project, led by the Finnish Border Guard, has sought to create tools for such cooperation by developing a joint coordination model and operational guidelines for international maritime incident response group (MIRG) operations (for more information on the project, see www.raja.fi/MIRG).

This report presents the operational guidelines developed in the Baltic Sea MIRG project, their background and their development process. The project developed the following operational guidelines:

- MIRG Operational Guideline 1 - Assessing the Safety Status of a Vessel (Vessel Triage)
- MIRG Operational Guideline 2 - Requesting Assistance
- MIRG Operational Guideline 3 - Communications
- MIRG Operational Guideline 4 - Fire Liaison Officer
- MIRG Operational Guideline 5 - MIRG Operation Commander
- MIRG Operational Guideline 6 - Occupational Safety During a MIRG Operation
- MIRG Operational Guideline 7 - Distress Vessel

The primary purpose of these operational guidelines is to harmonise the general principles of MIRG operations and coordination in different countries to ensure efficient international MIRG cooperation. The results of the project can be utilised by, for instance, introducing the principles of these operational guidelines into national operating instructions or by adopting them as is for national use. Shipping companies can incorporate Operational Guideline 7, which is intended for them, into their general operating principles under the ISM Code.

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**KEY MIRG TERMS**

**Fire Liaison Officer (FLO)** – A Fire and Rescue Services (FRS) expert stationed at the Rescue Co-ordination Centre (RCC). Works under and supports the Search and Rescue Mission Co-ordinator (SMC). The Fire Liaison Officer can be called to the Rescue Co-ordination Centre simply to assess the situation as a consultant without alerting or using MIRG or other rescue units.

**Maritime Incident Response Group (MIRG)** is a term used in international seafaring for a special team that is trained and equipped to operate in special maritime SAR situations to support the rescue measures carried out by the crew of a vessel. Typically, these operations focus on ship fires, but may also involve a range of damage-prevention tasks, help with evacuation and first aid. Most MIRG teams are special units maintained by fire and rescue services. Their members are trained to work with support from SAR helicopters.

**MIRG Operation Commander (MIRG OC)** leads the external firefighting and rescue personnel on the vessel. The MIRG OC works under the coordination of the Rescue Co-ordination Centre (RCC), but while on the ship supports the master of the vessel and firemaster.
2 OPERATIONAL GUIDELINE DEVELOPMENT PROCESS

The development process focused on creating operational guidelines suitable for international MIRG operations in cooperation with maritime SAR authorities, representatives of fire and rescue services (FRS), and other MIRG project experts in the Baltic Sea region and elsewhere in Europe. The development work aimed to clarify command hierarchies and how they are established between FRS, maritime SAR authorities and distress vessel officers. In addition, operational guidelines were developed to ensure the rapid and efficient use of limited MIRG resources while taking the occupational safety of personnel into account.

The development process had three phases: analysis, operational guidelines development and reporting. In the first phase, all standard operating procedures (SOPs) gathered for review were analysed – SOPs from three Norwegian fire and rescue services, Finnish national SOPs (FIN MIRG SOP) and the SOPs included in the Operations Policy Manual of the joint MIRG EU project of France, England, Belgium and the Netherlands. On the basis of the analysis results, it can be concluded that the current SOPs quite extensively cover the national and regional requirements of MIRG operations. The analysed SOPs can also be applied in international MIRG operations, but they do not include coordination models for such operations. Furthermore, in some of these SOPs, cooperation between SAR and FRS was described only partially or not at all.

The development of operational guidelines began at the Baltic Sea MIRG seminar held from 2 to 3 February 2016 in Helsinki. On the first day of the seminar, current MIRG issues were reviewed, along with the results of the analysis phase of WP 3. The analysis results laid the foundation for workshops on the second day of the seminar, where the challenges of harmonising international MIRG operations were discussed and solutions for the coordination model of international MIRG operations were examined. On the basis of the discussions, the participants formed a shared vision of the principles for deciding who will lead an international MIRG operation on a distress vessel. The discussions also bolstered the shared view that, in addition to national SOPs, international MIRG operational guidelines are required for shared use by SAR, FRS and the distress vessel to ensure cooperation and occupational safety.

On the basis of the analysis results and seminar workshops, a proposal for international operational guidelines was drafted. These operational guidelines are intended to facilitate maintaining shared situational awareness, improve the response times of MIRG teams, and enhance coordination efficiency by clarifying communications, command hierarchy, the tasks of key roles and responsibilities with respect to occupational safety. Another aim was to draft an operational guideline for those receiving assistance to help them support and harmonise their own operations with MIRG actors to ensure that operations on board the distress vessel are as efficient as possible.

The seminar summary and proposal on international operational guidelines were reviewed during the first videoconference at the beginning of March 2016. This videoconference fine-tuned the policies behind the operational guidelines and presented a more detailed schedule for the development work and the methods to be used. After this, the development of the operational guidelines continued with videoconferences, emails and targeted surveys (such as a survey of shipping companies).

The development of operational guidelines was guided by the idea that the guidelines created during the project would not replace national SOPs, but rather that these national SOPs would be supplemented with operational guidelines created through international cooperation that would be suitable for incidents involving actors from several nations. Thus it was considered appropriate to define the operating models being created as operational guidelines instead of the standard operating procedures, as they are not intended to replace national SOPs. It was also noted that incidents vary greatly; thus it was considered that more flexible guidelines would be better suited to this purpose. In future, the operational guidelines can be changed into country-specific SOPs if necessary and if the national operating methods and SOPs permit standardisation.
3 OPERATIONAL GUIDELINES AND THEIR BACKGROUND

Before the development of the operational guidelines, the Baltic Sea MIRG project analysed seven past ship fires in Europe. The progress of these incidents was examined in terms of three phases: (1) “start and alert phase”, (2) “MIRG team on the way” and (3) “operations on scene”. All these phases were also analysed from the perspective of three actors: the distress vessel, Rescue Co-ordination Centre (RCC, incl. JRCC, MRCC, MRSC) and FRS (incl. MIRG or equivalent).

On the basis of the key findings of the analysis, it was clear that external firefighting assistance was necessary and useful in the analysed cases. The analyses also indicated that national SOPs seemed to work well, partly because external assistance reached the distress vessels quickly. The response time of external assistance was influenced not only by the location of the distress vessel, but also by the fact that in all the analysed cases the operation was national, that is, the firefighting assistance was provided by actors from the same country as the leading SAR authority. National resources were sufficient in situations such as where the distress vessel was in a port or in its close proximity, which meant that it could be reached without special transportation arrangements, or the fire was limited in intensity, due to which large-scale firefighting resources were not required.

However, the fact is that national resources are not always sufficient for dealing with large-scale maritime incidents; in such cases, the assistance of RCCs and fire and rescue authorities from other countries is required. For this reason, these actors have been added to Figure 2 as two additional levels. When the number of actors participating in incident response grows, this also poses additional challenges in MIRG team mobilisation, operational command, coordination and joint operations.

The developed operational guidelines are intended to meet these challenges of international MIRG operations. The next section presents the operational guidelines developed for international operations and their background.

1 Report “Ship fire incident analysis” available through: www.raja.fi/MIRG
3.1 OPERATIONAL GUIDELINE – ASSESSING THE SAFETY STATUS OF A VESSEL (VESSEL TRIAGE)

“MIRG Operational Guideline 1 – Assessing the Safety Status of a Vessel (Vessel TRIAGE)” was developed for assessing the safety status of a vessel in MIRG operations. The background of the guideline is presented below, followed in subsection 3.1.2 by a description of the guideline itself.

3.1.1 BACKGROUND OF THE OPERATIONAL GUIDELINE

One of the challenges involved in an international SAR operation is to establish consistent situational awareness for all the actors participating in the operation. For instance, it may be challenging to monitor and communicate the conditions on board the distress vessel due to the different backgrounds of the actors.

Vessel TRIAGE, which was designed for use by maritime emergency responders and the distress vessel, can be used to facilitate monitoring and communicating the safety status of the vessel. Vessel TRIAGE is a method for assessing and communicating the safety status of vessels in maritime accidents and incidents. The method is used to form a rough understanding of the nature of the incident or accident and thereby determine the safety status of the vessel. The focus of the method is on the safety of the people aboard the subject vessel, determined on the basis of predefined threats.

As Vessel TRIAGE has been created for use by all those involved in maritime SAR, it would be useful for MIRG teams to also be familiar with the method and know how to use it when required. As can be seen from the Vessel TRIAGE operational guideline (see chapter 3.1.2.), the method assesses the safety status of the vessel on a broader scale, rather than merely on the basis of its direct interface with the MIRG operation, taking into account the main factors impacting on the safety status of the vessel.

Vessel TRIAGE categorisation is carried out by the master of the vessel and the RCC, but the MIRG officer leading the operation on board the distress vessel, the MIRG Operational Commander (MIRG OC), also plays a role in determining the Vessel TRIAGE category. The tasks of the MIRG Operation Commander may include communicating situational information and, when necessary, confirming information for the distress vessel master and the RCC so that they have a shared basis for assessing the threats and determining the safety status of the distress vessel while taking all the risk factors into account.

Even though the Vessel TRIAGE method is used to assess the safety status of the vessel, it does not in itself replace task-specific risk assessments carried out in the MIRG operation, but mainly supplements them. For MIRG operations, the undisputable benefits of Vessel TRIAGE come to the fore in, for instance, maintaining situational awareness for rescue tasks requiring broad-ranging cooperation and in situations where the safety status category of the distress vessel changes. In these situations, it is easy and fast to communicate about changes in circumstances using the Vessel TRIAGE method. For instance, when the master of the vessel or the RCC reports that the safety status category has changed from yellow to red, the MIRG teams know that the ship is being evacuated and the RCC reserves a separate rescue unit for the emergency evacuation of MIRG teams. Likewise, when the category changes from red to black, all the operation participants know that the vessel has been lost and can no longer be saved.

3.1.2 MIRG OPERATIONAL GUIDELINE 1 – ASSESSING THE SAFETY STATUS OF A VESSEL (VESSEL TRIAGE)

PURPOSE OF OPERATIONAL GUIDELINE

The purpose of this Operational Guideline is to assess the safety status of the distress vessel using the Vessel TRIAGE method in order to establish shared situational awareness between the vessel and maritime emergency responders. The consistent definition of the safety status of the distress vessel facilitates communications between different actors, increases occupational safety and assists in alerting suitable units for the mission and assigning tasks to them.

RESPONSIBILITY AREAS AND TASKS

The Vessel TRIAGE method is used by the RCC and the master of the vessel together. The Vessel TRIAGE method can also be used by the master of the vessel independently, but in those cases the situation on board and the result of the Vessel TRIAGE categorisation must be discussed with the RCC, as the RCC confirms the Vessel TRIAGE category to be used to all rescue units.

The role of the leading MIRG officer on the distress vessel, the MIRG Operation Commander, is to help maintain the Vessel TRIAGE assessments up to date by relaying situational information. If necessary, the MIRG Operation Commander also participates in conducting Vessel TRIAGE assessments.

VESSEL TRIAGE METHOD

The Vessel TRIAGE method is used to identify predefined threats to the vessel and assess their severity using the Threat Factor Matrix (Appendix 1). The method describes the safety status of the vessel with four categories: green, yellow, red or black. The safety status of a vessel is least compromised when its Vessel TRIAGE category is green. Black represents the most unsafe conditions.

Assessments are repeated as necessary depending on the duration of the incident. Changes in the threats, their severity and the Vessel TRIAGE category of the vessel indicate how the situation is developing and thus provide important information for all those participating in the operation.

VESSEL TRIAGE AS PART OF ACCIDENT RESPONSE

1. In the event of an accident or incident, the distress vessel sends an alert to the (Maritime) Rescue Coordination Centre (RCC), which alerts the required units in accordance with the relevant procedures. (If it is appropriate to do so, the alert may be postponed.)

2. The RCC and the master of the vessel together assess the safety status of the vessel using the Vessel TRIAGE method.

During the development of the operational guidelines, discussions were held on the suitability of the Vessel TRIAGE method in the MIRG Operational Guideline. It was considered that Vessel TRIAGE is challenging because the method is still being tested and is thus not yet being used by all seafarers. In addition, there was some scepticism about the usability of Vessel TRIAGE in MIRG operations, until the intended purpose of the method became clear. As stated above, Vessel TRIAGE does not replace risk assessments carried out during a MIRG operation; instead, as is apparent from its name, the method assesses the safety status of the vessel, enabling the authorities and the distress vessel crew to communicate about the safety status of the distress vessel in a way that serves to improve occupational safety.

1 The Vessel TRIAGE method is not an official IMO method, but IMO/NCSR 3 has supported the testing and using of the method.
a. Assessing materialised threat factors
The first stage of the method involves assessing which of the threat factors listed below have materialised during the accident. The threat factors are reviewed one by one and the following question is answered: “Has this threat factor materialised in this accident or incident?”

- Flooding
- Listing, decrease of stability
- Decrease of manoeuvrability
- Black out
- Fire, explosion
- Danger posed by hazardous substances

b. Assessing the severity of the materialised threat factors
At the second stage, the severity of the materialised threat factors is assessed. This is done by comparing the available information on the situation aboard with the severity descriptions of the materialised threat factors included in the threat factor matrix (Annex 1), and choosing the alternative that best describes the situation.

If the severity of a certain threat is assessed to fall between two severity categories, it is important to be cautious; that is, the higher severity category should be selected, so that the severity of the threat factor is not underestimated.

c. Assessing the effects of crew capabilities and weather conditions
At the third stage of the method, it is assessed whether any impairment in crew capabilities or the weather conditions affect the vessel’s safety status negatively. It is also assessed if any other risks have materialised in the accident that should be taken into account when assessing the safety status of the vessel.

d. Determining the Vessel TRIAGE category
The Vessel TRIAGE category describing the safety status of the vessel is then determined. The basic rule in determining the Vessel TRIAGE category is that it shall correspond to the category of the most severe threat factor. For instance, if an accident results in the materialisation of two threats, one of which is assessed as being green in severity and the other as yellow, according to this basic rule the Vessel TRIAGE category of the vessel is set at yellow.

According to an evaluation by the method user, the Vessel TRIAGE category can also be set to be higher than the severity of the most severe threat factor. This may be the case when crew capabilities and/or weather conditions worsen the vessel’s safety or if there are other reasonable grounds for doing so.

e. Communicating the results of the assessment
After determining the Vessel TRIAGE category, the result of the risk assessment is communicated to the key actors. The RCC confirms the Vessel TRIAGE category to be used to all rescue units.

The aim is that the RCC can inform the MIRG teams of the severity of the identified threats and the Vessel TRIAGE category of the distress vessel before the units depart.

3. Once the emergency responders have reached the accident site, the MIRG operation commander or the OSC must confirm to the RCC whether the Vessel TRIAGE assessment is appropriate according to their evaluation.

4. Identified threats must be actively monitored, and the key players must be notified immediately of any changes in them (including improvements).

The MIRG team must always be ready to abort the mission and especially in case the threats become too severe or the safety status of the distress vessel rises to Red (or Black).

If the safety status of the distress vessel is Red, the RCC must have at least one rescue unit on scene for the emergency evacuation of the MIRG team. If the safety status of the distress vessel is Black, no work should be done on the vessel (excluding special operations separately planned in advance).

The Vessel TRIAGE categories:

- Green: Vessel is safe and can be assumed to remain so
- Yellow: Vessel is currently safe, but there is a risk that the situation will get worse
- Red: Level of safety has significantly worsened or will worsen and external actions are required to ensure the safety of the people aboard
- Black: Vessel is no longer safe and has been lost
3.2 OPERATIONAL GUIDELINE - REQUESTING ASSISTANCE

“MIRG Operational Guideline 2 - Requesting Assistance” was developed to facilitate requesting international assistance and speed up response in MIRG operations. The background of the guideline is presented below, followed in subsection 3.2.2 by a description of the guideline itself.

3.2.1 BACKGROUND OF THE OPERATIONAL GUIDELINE

Most countries have organised their maritime SAR operations in accordance with the requirements of the International Convention on Maritime Search and Rescue (SAR Convention). Almost all European countries have made bilateral agreements with their neighbouring countries to ensure sufficient SAR resources, whose content is largely defined in the SAR Convention. These bilateral agreements are intended to ensure sufficient exchange of information and cooperation in rescue situations, so that every nation can request their neighbouring country/countries to provide assistance in dealing with an incident if necessary and can trust that the required assistance is accepted.

If a MIRG operation is carried out as part of a maritime SAR mission (e.g. during a ship fire), it is likely that it would be appropriate to employ several MIRG teams in the response. Alerting these teams should be as smooth as possible so that the distress vessel receives the assistance it requires quickly. SAR authorities have instructions and SOPs for rapidly mobilising national MIRG resources. In many respects, national SOPs can also be used in international tasks, but it would be appropriate to supplement them with respect to requesting international assistance. A joint operational guideline drafted for such situations supports seamless cooperation in international MIRG tasks. The aim of the operational guideline is to provide the RCC with tools for gathering and disseminating sufficient information about the incident when foreign MIRG teams request assistance.

The main idea behind the development of the operational guideline for requesting assistance is to use limited MIRG resources as efficiently as possible by streamlining the process of requesting assistance and enabling the use of the MIRG teams of neighbouring countries in maritime SAR tasks. Another main idea has been to focus the RCC’s information gathering process on incident information that is essential for the MIRG teams. For efficient MIRG operations, it is important to ensure that the MIRG teams receive the appropriate information from the RCC at the right time. Even before being dispatched, the MIRG teams require information about their mission and the related risks so that they can prepare themselves and equip themselves appropriately.

The operational guideline for requesting assistance recommends the use of the MIRG Tasking Form in information collection. The tasking form of the Operations Policy Manual developed by the MIRG EU project was utilised in drafting this MIRG Tasking Form. The information to be collected has been listed and prioritised on the MIRG Tasking Form. In practice, this means that, on the basis of the preliminary information collected, the country responding to the request for assistance can start the alert process, whose first phases include planning and preparing the mobilisation of MIRG teams (such as packing equipment, transfer, etc.). Once the alert process has been initiated, additional information is collected, making it possible to supplement the situational description of the incident site and thereby help the MIRG teams to plan their operations.

During the development of the operational guideline for requesting assistance, it became evident that procedures for requesting additional assistance for maritime SAR tasks
vary greatly from country to country. Due to these differences in national procedures, the process for requesting assistance set out in the operational guideline may have to be adapted in accordance with practices in these countries. In such situations where the guideline must be adapted, it is nonetheless recommended to use the MIRG Tasking Form, which is intended to guide the collection and prioritisation of information about the incident in international joint operations.

The same kind of information about the incident is collected regardless of which country’s MIRG team is involved. For this reason, it was possible to use the content of the MIRG EU Tasking Form without alterations for the MIRG Tasking Form with respect to collecting key and additional information and information about hazardous materials, as MIRG teams in all countries require the same kind of information. In addition to these subareas, the MIRG Tasking Form accounts for information on transportation, organisation and communication slightly more broadly than the MIRG EU Tasking Form, as it was considered that this information is emphasised in international joint operations.

3.2.2 MIRG OPERATIONAL GUIDELINE 2 - REQUESTING ASSISTANCE

PURPOSE OF OPERATIONAL GUIDELINE
This Operational Guideline is intended to shorten the response times of MIRG teams and ensure that information flows are correctly targeted and that they include the content required to enable efficient international MIRG operations. An international MIRG operation may have to be started when it is evaluated that national resources must be supplemented with additional international resources in order to deal with the incident, or in situations where the most suitable MIRG teams, in terms of response time, are based in different countries.

RESPONSIBILITY AREAS AND TASKS
The decision to start a national and international MIRG operation in a SAR situation is made by the SMC. After the decision has been made, requests for assistance are sent to the RCCs of other countries to the extent necessary.

The RCC receiving the request for assistance or alert relays it to the FRS in accordance with national operating procedures. When the MIRG teams receive the alert or request for assistance, they inform the RCC (or the RCC supporting operations, etc.) of their own country that they have received the task and report on the available resources. The RCC relays the information to the leading RCC.

Figure 1 depicts an example of alerting international assistance.

**GROUND FOR INITIATING AN INTERNATIONAL MIRG OPERATION**
There are grounds for initiating an international MIRG operation in cases such as the following:

- National resources are insufficient with respect to:
  - Size of the distress vessel
  - Number of people to be saved
  - Scope and/or severity of the incident
  - Required specialist expertise

Location of the distress vessel
- The closest MIRG teams (on the basis of response time) come from different countries
Baltic Sea Maritime Incident Response Group Project

**MIRG TASKING FORM**

In incidents where foreign MIRG teams need to be alerted to assist with the response, the RCC uses the MIRG Tasking Form as a tool (Appendix: MIRG Tasking Form). The Tasking Form is intended to serve as a checklist for the RCC, guiding the collection of information that is significant for MIRG operations. The use of the MIRG Tasking Form ensures that the FRS representatives and MIRG teams are provided with information that is as comprehensive as possible, enabling them to assess the preconditions for MIRG operations and the related risks.

The collection of the information required for the MIRG Tasking Form in the early phase of the incident must not delay the alerting of the MIRG teams; as a rule, the MIRG alert can be sent when the basic information on the incident has been determined.

**INFORMATION FLOWS IN DIFFERENT STAGES OF THE ALERT PROCESS**

1. **Receiving the alert and collecting information**
   
   (operations before alert/request for assistance)

   To ensure efficiency in MIRG operations, it is vital to have sufficient preliminary information on the incident and distress vessel. The RCC must collect key information on the distress vessel, its location, type of incident and where it occurred on the vessel, the condition of the vessel, the actions initiated on board the vessel and the number of persons at risk, ensuring that this information is as accurate as possible, and relay it to the MIRG teams participating in the operation. This information is to be filled out in the form under: Key Information On Distress Vessel (MIRG Tasking Form part 1).

   MIRG teams can be alerted to the task once the key information has been collected. However, the RCC must continue to collect additional information, at the latest after alerting the MIRG teams, as the more comprehensive and detailed information specified in part 2 of the MIRG Tasking Form enables more effective planning of MIRG operations. This information is to be filled out in the form under: Supporting Information On Distress Vessel (MIRG Tasking Form part 2).

   In addition, the RCC must analyse the available resources as soon as possible and, as the leading authority, make decisions on the rescue organisation, communications in the organisation and the transportation of rescue and MIRG teams to the distress vessel. After these decisions have been taken, the operation participants must be informed about the above information to the extent necessary. This information is to be filled out in the form under: Transportation, Organisation and Communication Information (MIRG Tasking Form part 3).

   If the incident involves hazardous materials, the RCC must collect not only the key information but also the information included on the Tasking Form regarding the hazardous material in question: the category of incident, name of the chemical, UN number, class of dangerous goods, nature of substance, colour, quantity, type of reaction and any specialist advice details. This information is to be filled out under: Hazardous Materials Information (MIRG Tasking Form part 4).

   Collecting and updating information is a continuous process throughout the entire operation. In this task, the RCC is supported by the FLO, one of whose tasks is to assist the RCC in collecting supplementary information.

2. **Requesting assistance from another RCC and alerting MIRG team(s)**

   Means of requesting assistance from another RCC vary from one country to another. The most important consideration in requesting assistance is to use the fastest and most appropriate means. Preliminary information on the incident can be provided by telephone, for instance, after which the request for assistance can be supplemented by emailing the MIRG Tasking Form information.

   In connection with the request for assistance and alert, in addition to sending the MIRG Tasking Form information, the nature of the additional assistance required from supporting countries should be defined more accurately to the extent possible.

3. **Receiving requests for assistance (RCC) and alerts (MIRG teams)**

   It is important for the recipient to acknowledge the receipt of the request for assistance and alert as quickly as possible. At this time it should be verified how accurate and up to date the information received is. In addition, the MIRG teams must provide, at the earliest stage possible, preliminary information on the available resources, contact information and estimated schedule, so that the leading RCC can estimate the potential need for transportation and additional resources.
3.3 OPERATIONAL GUIDELINE - COMMUNICATIONS

“MIRG Operational Guideline 3 – Communications” was developed to clarify communications in international MIRG operations. The background of the guideline is presented below, followed in subsection 3.3.2 by a description of the guideline itself.

3.3.1 BACKGROUND OF THE OPERATIONAL GUIDELINE

Organising communications is vital and it is also one of the most challenging aspects of rescue operations. In maritime SAR, the RCC is responsible for organising effective communications links between all the parties involved in the operation. The RCC must organise these communications links such that it can reach all actors using shared channels to provide important instructions and updates. Communications are hindered by the fact that MIRG teams do not use the same communications equipment, and other such factors.

Maritime SAR services in different countries as a rule have at least two Maritime VHF channels at their disposal and monitor them around the clock. In addition, MF-HF frequencies and satellite-based data transmission can be used for maintaining communications. According to international regulations, emergency communications between the vessel and SAR are to be carried out primarily on VHF16, the emergency and hailing channel reserved for this purpose, unless the RCC designates another frequency or means of communications to reduce communications traffic on that channel. In addition to maritime frequencies, in many countries the public authority radio network (such as TETRA) can be employed for communications between the authorities. The use of different communications equipment and channels is intended to reduce communications traffic on emergency and hailing channels/frequencies so that the participating units can communicate without distractions on their own frequencies while also being able to monitor other communications traffic as necessary.

In addition to communications equipment and frequencies, it is also necessary to organise communications in international MIRG operations. For instance, a MIRG team mobilised for an international mission from a neighbouring country must know in each phase of the operation under whose command it is and its primary communications contact. In accordance with the general principles of communications, a key purpose of the operational guideline for communications is to define in which phase the primary communications of the MIRG team shift from the RCC of its own country to the MIRG Operation Commander on board the distress vessel. In practice, this means that once the MIRG team has transferred onto the distress vessel, information on the status and operations of the team is communicated by the MIRG team to the MIRG Operation Commander and Fire Liaison Officer and from them to the Fire Liaison Officer or RCC of the MIRG team’s own country. From this point onwards, communications follow national SOPs and practices.

Even in the early phase of the development of the operational guideline, it became apparent that it was necessary to define the phase in which the primary communications of the MIRG teams are transferred under the MIRG Operation Commander leading the MIRG operation. During the development work, it was noted that there is a need to direct official communications in the operation in order to ensure that official communications flow in accordance with the rescue organisation set for the operation. The communications guideline seeks to ensure that the leading RCC is able to coordinate the internal communications of the operation and also that it has all the information it needs for communicating about the incident, for instance. In addition, the operational guideline seeks to lighten the communications responsibilities of the MIRG team leaders so that they can concentrate on carrying out the operation.

3.3.2 MIRG OPERATIONAL GUIDELINE 3 - COMMUNICATIONS

PURPOSE OF OPERATIONAL GUIDELINE

The purpose of this Operational Guideline is to help all those participating in rescue operations and dealing with an incident to understand the general principles of communications. Organising effective communications between the RCC, distress vessel and rescue units is an integral part of rescue operations, and is the responsibility of the SAR authority coordinating the situation.

RESPONSIBILITY AREAS AND TASKS

RCC drafts a communications diagram for the incident in question and states which communications channels are to be used.

In communications during an international MIRG operation, it must be ensured that all rescue operation-related communications from the incident area go through the coordinating RCC before being relayed to other actors and countries. The rescue units must not bypass the RCC when reporting on their operations; otherwise the RCC’s coordination-related situational awareness and decision-making may be based on incomplete information. Other authorities and participating countries may turn to the RCC for information about the current situation or they might station a representative of their own at the RCC to maintain contact with their organisation or country.

The exception to this is the distress vessel communications with its own shipping company, commercial tugs, interest organisations (e.g. insurance company) or experts. If these communications shed light on information that has a bearing on the rescue operation or people’s safety, the master of the vessel is obligated to inform the RCC about them.

COMMUNICATIONS TOOLS

The vessel’s primary means of communications is Maritime VHF. In addition, contact with the vessel can be maintained with MF-HF radio, satellite phone, GSM or Inmarsat C. In long-distance communications, such as when outside the range of VHF, it may be necessary to use MF-HF frequencies or air/surface craft to relay communications.

The main communications tools used by the RCC and rescue units are Maritime VHF radios, the public authority radio network (such as Tetra radio), GSM, satellite phones and other technical devices that are suitable for transmitting situation reports and electronic messages (email, certain surveillance devices, fax, etc.).

If the distress vessel is located far away, the external help/MIRG Operation Commander may have to rely on the vessel’s communications equipment to maintain contact with land. In such cases, communications from the vessel are carried out under the supervision and with the support of the vessel’s own crew.

MIRG teams/external rescue units on board the vessel principally use their own communications devices (VHF, UHF, Tetra radio). If communications on board the distress vessel are prevented for structural or other reasons, the crew should reserve communications equipment for the MIRG teams insofar as this is possible.
1. Alerting phase
The MIRG teams of countries supporting MIRG operations have been alerted and a decision to participate in the operation has been made, but the MIRG teams have not as yet reached the distress vessel. In the alerting phase, each MIRG team communicates with the operation leader through the RCC/FLO of its own country. The RCC/FLO of a country supporting the operation relays the necessary preliminary and situational information to the MIRG team and provides the leading RCC with status information on the MIRG team until the team reports to the MIRG OC on the distress vessel.

2. Operational phase
MIRG teams have reached the distress vessel and reported to the MIRG OC. Once the MIRG team has reported to the MIRG OC on the distress vessel, the official communications of the team are conducted in accordance with the rescue organisation (as shown in the diagram below). The task of the RCC leading the operation is to report the necessary information on the actions and status of foreign MIRG teams to their home countries during the operation.

**KEY ABBREVIATIONS AND CALL SIGNS**
- RCC: Rescue Coordination Centre (named)
- OSC: On Scene Coordinator
- ACO: Aircraft Coordinator
- SRU: Search and Rescue Unit
- MIRG: Maritime Incident Response Group
- MIRG OC: MIRG Operation Commander
- MIRG Team: MIRG Team (sector / country)
- HELO: Rescue helicopter (country and/or aircraft call sign)
- FLO: Fire Liaison Officer
- FO: Fire Officer (local)
- FRS: Fire and Rescue Service
3.4 OPERATIONAL GUIDELINE - FIRE LIAISON OFFICER

“MIRG Operational Guideline 4 - Fire Liaison Officer” was developed to clarify the role, tasks and responsibilities of Fire Liaison Officers (FLOs) in international MIRG operations. The background of the guideline is presented below, followed in subsection 3.4.2 by a description of the guideline itself.

3.4.1 BACKGROUND OF THE OPERATIONAL GUIDELINE

Close cooperation between all actors participating in maritime SAR is vital for the success of an international MIRG operation. The RCC’s role as the party responsible for coordinating the maritime SAR mission is emphasized when harmonising the operations of the SAR authorities, FRS, emergency medical care and other maritime SAR actors, shipping companies and, if applicable, harbours.

In many national MIRG SOPs, the RCC is supported in the challenging coordination task by stationing a fire and rescue expert, the Fire Liaison Officer, at the RCC for the duration of the operation. The task of the FLO is to facilitate the cooperation of the RCC and MIRG teams by relaying necessary information between them. In addition, the FLO assists the RCC in collecting incident and situational information related to the MIRG operation and maintaining situational awareness.

The RCC can draw on the FLO’s expertise in fire and rescue operations during the mission, but also with a focus on achieving results when the actual MIRG operation has not as yet been initiated. Such situations include incidents on board the vessel that do not currently jeopardise the vessel or personal safety (Vessel TRIAGE: green or yellow), but it remains uncertain how the situation will develop. Preparing a risk assessment together makes it possible to draw on the FLO’s expertise in determining the need for external assistance, the response time and other such issues.

The tasks of the FLO are very similar in both national and international MIRG operations. The major changes in their designated tasks are related to communications and expanding functions to ensure additional resources. In international MIRG tasks, it is appropriate for the FLO to support the operations of the RCC by maintaining close contact with the FLOs of countries assisting with the MIRG operation. Close cooperation makes it possible to efficiently evaluate, allocate and mobilise the additional resources required in the MIRG operation, thereby safeguarding the continuity of the MIRG operation.

The drafting of the operational guideline for FLOs was complicated by the procedures used in different countries. In some countries, the FLO transfers to the RCC, whereas in others contact is maintained by telephone. In addition, there are no agreements on detailed cooperation practices in some countries. Particularly due to these differences in the procedures of different countries, it was appropriate for the operational guidelines to ensure that cooperation in international incidents would be as efficient and smooth as possible.

3.4.2 MIRG OPERATIONAL GUIDELINE 4 - FIRE LIAISON OFFICER

PURPOSE OF OPERATIONAL GUIDELINE

The purpose of this operational guideline is to describe the key tasks and responsibilities of the Fire Liaison Officer (FLO) during the different phases of an operation.

ROLE OF THE FIRE LIAISON OFFICER

A Fire and Rescue Services (FRS) expert acts as a Fire Liaison Officer at the Rescue Coordination Centre (RCC) in the event of an accident where FRS expertise is needed. The Fire Liaison Officer works under and supports the Search and Rescue Mission Coordinator (SMC).

The task of the Fire Liaison Officer is to ensure efficient cooperation with the authorities by supporting the operation commanders in communication and command support functions. These support functions may involve, for instance, ensuring the continuity of operations, assessing the availability of additional resources, organising logistics, etc.

The Fire Liaison Officer can also be called to the RCC simply to assess the situation as a consultant without alerting or using MIRG or other rescue units.

NB! In situations where the Fire Liaison Officer is unable to arrive at the RCC due to geographical location or some other reason, effective communication links must be arranged between the Fire Liaison Officer and RCC to ensure that open communication lines are maintained at all times.

DUTIES OF THE FIRE LIAISON OFFICER

- If necessary, the FLO acts as a link to the MIRG Operation Commander (MIRG OC) and RCC.
- The FLO ensures that all parties involved in the operation are kept fully informed of the MIRG teams’ actions.
- The FLO relays information between the RCC and participating countries’ FLOs if needed, keeping the MIRG teams in the incident area fully informed.
- The FLO plans the continuity of MIRG operations in cooperation with the MIRG OC and SMC.

DEPLOYMENT OF THE FIRE LIAISON OFFICER

1. Actions in a mobilisation phase

After receiving the mission, the FLO must inform the other parties of his/her participation in the operation to the extent necessary (RCC, MIRG OC, FRSs, Emergency Centre (if needed), etc.) and transfer to the RCC as soon as possible.

2. Actions on arrival at the RCC

After having reported in to the SMC at the RCC, the FLO goes to his/her assigned workstation to test the functionality of the available equipment. If there are any defects, then replacements must be requested as soon as possible.

Once the FLO has received updated situational information, he/she reports the checked and supplemented information on the incident as well as information on the rescue organisation (e.g. key personnel and their contact information and the agreed communications arrangements) to those participating in the operation to the extent necessary (MIRG teams, FRS contact persons, etc.).
After updating the information on the incident and rescue organisation, the FLO checks and supplements the contact information for the MIRG teams participating in the operation and the number and operational capabilities of personnel, and confirms the transport units at the disposal of the MIRG teams, their transport capacities, agreed/possible embarkation points and schedules. At this time, it must also be determined which actions have already been agreed, and the situational/status information on the resources alerted to the operation must be verified (on scene, en route, mission received but not yet en route, etc.).

3. Ongoing actions
The FLO continues to update and supplement information on the incident at the same time as he/she maintains situational awareness of the MIRG operation. The FLO plays a key role in ensuring that the SMC and MIRG OC have the correct and up-to-date situational information on the incident, the resources that are in use and any additional resources that might be required. The FLO must also see to it that all parties involved in the operation are kept fully informed of the MIRG team actions.

3.5 OPERATIONAL GUIDELINE - MIRG OPERATION COMMANDER

“MIRG Operational Guideline 5 - MIRG Operation Commander” was drafted to clarify the role, tasks and responsibilities of the MIRG Operation Commander in international MIRG operations. The background of the guideline is presented below, followed in subsection 3.5.2 by a description of the guideline itself.

3.5.1 BACKGROUND OF THE OPERATIONAL GUIDELINE

Many aspects of the aforementioned operational guidelines aim to ensure that the resources necessary to carry out the operation arrive at the distress vessel as quickly as possible. However, in addition to sufficient resources, the success of the MIRG operation is influenced by the organisation of operations on the distress vessel, as even sufficient resources will guarantee success on their own if they are not coordinated efficiently. Efficient coordination requires not only sufficient professional skill, but also that everyone knows the tasks and responsibility areas.

The coordination of an international MIRG operation might in fact involve a positive problem when several MIRG officers with the capability to serve as MIRG Operation Commander on the distress vessel participate in it. According to the operational guideline, responsibility for leading the MIRG operation on the distress vessel and establishing the command team is assumed by the MIRG officer who arrives first on the distress vessel and thus serves as MIRG Operation Commander. This guideline is based on the idea that the officer who is first in contact with the master of the vessel will head up the MIRG operation. The aim is to clarify command issues in situations where there are several officers of the same rank on board from different countries.

It is also the task of the MIRG Operation Commander to set up a command team, whose size and structure are affected by factors such as the nature and scope of the incident, the opportunities for communication between the MIRG teams, and the varying operational capabilities of the MIRG teams, which hinge on differences in their equipment and educational backgrounds. The MIRG command team primarily consists of MIRG officers, that is, the leaders of MIRG teams from different countries. Subofficers may also be appointed if necessary.

As a rule, the command team on board the distress vessel includes the MIRG Operation Commander, command support and the necessary number of sector commanders. The primary duty of command support is to assist the MIRG Operation Commander to the extent required in communications and maintaining the situation log. Sector commanders focus on coordinating the sectors designated by the MIRG Operation Commander. Coordination includes commanding and controlling the allocated resources, the tactical planning of operations in the sector and drafting a risk assessment.

The development of the operational guideline for the MIRG Operation Commander included subareas in which it was easy to establish a common understanding and subareas in which no common ground could be found due to differences in national SOPs. However, for the operational guideline, it was important to be able to establish the principle (first on scene) for designating the MIRG Operation Commander on board the distress vessel. During the development work, it was agreed that the operation is carried out under the RCC.

This operational guideline excludes manoeuvres concerning the command hierarchy between the MIRG OC and his/her FRS supervisor as the relevant SOPs varied greatly in
different countries. In addition, the guideline does not include specific instructions on the structure of the MIRG command team, as the composition of this team is affected not only by the available resources and the nature and scope of the incident, but also by opportunities for communication between the teams. When setting up the command team, it must be taken into consideration that its task is to communicate to the MIRG teams of its own country if there are limitations with respect to the communications equipment or shared language.

3.5.2 MIRG OPERATIONAL GUIDELINE 5 - MIRG OPERATION COMMANDER

PURPOSE OF OPERATIONAL GUIDELINE

The purpose of this operational guideline is to describe the key tasks and responsibilities of a MIRG Operation Commander (MIRG OC) during the different phases of an operation.

ROLE OF THE MIRG OPERATION COMMANDER

In international MIRG operations, the leader of the first MIRG team to arrive on scene works as a MIRG Operation Commander who leads MIRG teams (and other FRS teams) in rescue operations on the distress vessel. The MIRG Operation Commander works under the Search and Rescue Mission Coordinator (SMC).

The MIRG Operation Commander should liaise with the master of the vessel, carry out risk assessments, establish a Command Point, provide a tactical plan inclusive of further resource requirements and communicate regular situation reports to the Rescue Coordination Centre (RCC) and other authorities if needed.

The MIRG Operational Commander’s primary focus should be to prevent the need for evacuation and save lives. Rescuing property and preventing any threats of environmental damage is a secondary task.

DUTIES OF THE MIRG OPERATION COMMANDER

- The MIRG OC acts as a consultant and support in fire and rescue and chemical incidents to the master of the distress vessel.
- The MIRG OC serves as the leader of the MIRG command team on the vessel. He/she is responsible for assembling the command team on the vessel and for assigning tasks and responsibility areas to the command team members.
- The MIRG OC makes the tactical and operational decisions required to stabilise and contain the incident on board the distress vessel in cooperation with the master of the vessel.
- The MIRG OC is responsible for occupational safety during the mission. (See MIRG OG 6)
- The MIRG OC ensures that the RCC and master of the distress vessel are kept fully informed of the MIRG teams’ actions.

DEPLOYMENT OF THE MIRG OPERATION COMMANDER

1. Actions in a mobilisation phase

After receiving the mission, the MIRG OC must inform the other parties of his/her participation in the operation to the extent necessary (RCC, FRSs, Emergency Centre if needed), etc.). The MIRG OC contacts the RCC and together with the SMC reviews the preliminary information on the incident and the distress vessel.

In addition, the MIRG OC informs the RCC of the contact information of his/her MIRG team, the number of personnel and their operational capabilities with respect to the mission. The MIRG OC and RCC agree on the transport units that will be at the disposal of the MIRG team as well as the embarkation point and schedule. The MIRG OC and RCC together review the MIRG resources alerted to the operation and assess their adequacy and any additional resource requirements with a focus on achieving results.

2. Actions on arrival at the distress vessel

Upon his/her arrival at the distress vessel, the MIRG OC designates the boarding control point and reports it to the RCC. The RCC records this information and forwards it to the other MIRG teams.

After designating and reporting the boarding control point, the MIRG OC contacts the master of the distress vessel to verify whether the vessel still requires external assistance. The MIRG OC and master together update the situational information on the vessel, incident and rescue organisation. The aim is to enable the MIRG OC to establish a more detailed view of the incident status, the risks involved, the actions the crew of the vessel has taken to deal with the incident and the effectiveness of these actions.

The MIRG OC also informs the master of the distress vessel about the number of MIRG teams arriving, their operational capabilities, operational uses and any support measures required (guidance, communications devices, etc.). After updating the situational information, the MIRG OC makes the required tactical and operational decisions on stabilising the incident together with the master and agrees on where and how to set up the MIRG operation on-scene command point.

After these actions, the MIRG OC informs the RCC of the situation on board, the tactical and operational decisions, and the location of the MIRG operation on-scene command point.

The MIRG OC forms a MIRG command team on the distress vessel in cooperation with the leaders/officers of the other MIRG teams. The size and composition of the command team will vary depending on the ship and type of incident in question. The cooperation opportunities and limitations of the MIRG teams – with respect to communications devices, personnel training levels and protective gear, for instance – also influence how the MIRG operation is organised and thereby also the composition of the required command team. Regardless of the composition of the command team, the essential consideration is to ensure that the MIRG OC receives sufficient operational command support.

In addition to the MIRG OC, the MIRG command team must always include a MIRG officer, who serves as Command Support, and a suitable number of sector commanders. The primary duty of Command Support is to assist the MIRG Operation Commander in communications and maintaining the situation log. Sector commanders focus on coordinating the sectors designated by the MIRG Operation Commander. Coordination includes commanding and controlling the allocated resources, the tactical planning of operations in the sector and drafting a risk assessment.
The diagram depicts the MIRG operations in the Maritime SAR coordination and command hierarchy.

**MIRG command team structure (example)**

When setting up the command team, one must take into consideration not only the incident and operating environment, but also the available resources and opportunities for cooperation between them. To ensure efficient coordination of the operation, it is extremely important to safeguard the communications of the MIRG organisation under all circumstances; if necessary, the structure of the MIRG command team must take this into account.

3. **Ongoing actions**

In addition to taking the required tactical and operational decisions, the MIRG OC ensures, with respect to MIRG operations, that occupational safety is maximised, operational continuity is safeguarded and information is disseminated. The MIRG OC ensures that the safety status of the vessel is monitored continuously and that occupational safety is upheld in all phases of the operation (see MIRG Operational Guideline 1 and MIRG Operational Guideline 6). In addition, the MIRG OC assesses the adequacy of the available resources and informs the RCC of any additional resource requirements with a focus on achieving results and safeguarding the continuity of MIRG operations. The MIRG OC is also responsible for ensuring that all cooperating parties are aware of the MIRG operations and their impact. It is especially important to ensure that the master of the vessel, the leading RCC and the MIRG teams on board are informed of the tactical and operational guidelines of the MIRG operations, etc.

4. **Completion of operation**

The MIRG OC participates in taking the decision to complete MIRG operations. The decision to conclude MIRG operations is primarily made jointly by the master of the vessel, the MIRG OC and the SMC (or other authority in command). The decision may also be taken by a single party (master of the vessel, MIRG OC or SMC) if there is a weighty and justified reason to do so. However, in such cases, all parties involved must be informed about the completion of operations and the reasons for this.

When the decision on the completion of the MIRG operation is made, the MIRG OC provides a situation report to the master of the vessel and the SMC concerning the measures that have been performed, the results achieved, any damage, and recommendations on further actions. In addition, together with the SMC, the MIRG OC ensures that the decision to conclude MIRG operations and the reasons for this are recorded and entered in the RCC situation log.
3.6 OPERATIONAL GUIDELINE - OCCUPATIONAL SAFETY

“MIRG Operational Guideline 6 - Occupational safety” was drafted to clarify responsibilities related to occupational safety and identify critical safety factors. The background of the guideline is presented below, followed in subsection 3.6.2 by a description of the guideline itself.

3.6.1 BACKGROUND OF THE OPERATIONAL GUIDELINE

According to international practice, the Search and Rescue Mission Co-ordinator (SMC) of the search and rescue region (SRR) in which the incident occurs is responsible for coordinating the operation. On the basis of this coordination responsibility, the SMC is responsible for general occupational safety in the operation such as by making guideline decisions on whether to send rescue personnel to the distress vessel. When making this decision, the SMC consults other relevant cooperation parties as necessary.

The MIRG Operation Commander is responsible for general occupational safety on the distress vessel during the MIRG operation. When attending to occupational safety, the MIRG Operation Commander must take into account not only the exceptional operating environment but also the fact that neither reserve personnel nor technical equipment are available to the same extent as on land. Due to limited resources, MIRG operations often have to deviate from the (national) safety practices set for operations on land. For this reason, there is a heightened need to ensure the safety of one’s own operations in operational/tactical decision-making and risk assessment in MIRG operations.

Even though the MIRG Operation Commander is responsible for general occupational safety on the distress vessel during the MIRG operation, this does not mean that the MIRG officers are not responsible for the occupational safety of their own subordinates. Each MIRG team leader is responsible for ensuring the occupational safety of his/her team. Harmonising the operations of international MIRG teams may involve challenges due to their different training backgrounds and the equipment they use. If a MIRG team cannot carry out its assigned task due to inadequate training or equipment, the MIRG team leader must inform the MIRG Operation Commander of these limitations as early as possible with a focus on achieving results. Teams participating in the operation comply with the national occupational safety practices and regulations of their own country and inform the MIRG Operation Commander of any limitations these may impose.

Differences in the operating methods, SOPs and the tasks carried out by MIRG teams from different countries posed a challenge in drafting the operational guideline for occupational safety during a MIRG operation. For this reason, the drafted operational guideline is not an exact match with the operational safety practices set for operations on land. For this reason, there is a heightened need to ensure the safety of one’s own operations in operational/tactical decision-making and risk assessment in MIRG operations.

3.6.2 MIRG OPERATIONAL GUIDELINE 6 - OCCUPATIONAL SAFETY DURING A MIRG OPERATION

PURPOSE OF OPERATIONAL GUIDELINE

This Operational Guideline defines the division of responsibilities with respect to occupational safety during a MIRG operation and the most critical issues that must be ensured during the operation and which should be monitored constantly in order to maintain occupational safety at a sufficient level. In addition, the Operational Guideline describes how to halt the operation and evacuate the MIRG team, from the distress vessel in the event of a sudden emergency.

RESPONSIBILITY AREAS AND TASKS

In accordance with international practice, SAR operations are coordinated by the SMC of the search and rescue region in which the incident occurs. The SMC is responsible for general occupational safety during the operation; that is, he or she makes guideline decisions about whether or not to transport rescue personnel to the scene of the incident.

On the distress vessel, the MIRG OC has overall responsibility for assessing the risks involved in carrying out the operation. However, primary responsibility for the occupational safety of MIRG personnel is held by each MIRG Team Leader. That is, once the operation has begun, the occupational safety of personnel on location is always the responsibility of the closest supervisor in their own organisation. The same applies to all working teams on the distress vessel. For instance, if members of the distress vessel’s crew are to carry out rescue work, the master of the vessel is responsible for their occupational safety.

In a multinational joint operation, each team complies with its country’s occupational safety practices and regulations and operations are adapted accordingly. If the vessel must be abandoned in the event of an emergency, the procedures set forth in these joint MIRG Operational Guidelines are followed to the extent allowed by national practices and regulations.

PREVENTION TACTICS AND OCCUPATIONAL SAFETY

MIRG operations emphasise the importance of ensuring safety in one’s own activities. In every incident, the greater the potential benefit of fire and rescue actions, the greater the risk that is accepted by commanders and firefighters. Activities that present a high risk to safety are limited to those that have the potential to save life or to prevent rapid and significant escalation of the incident.

MIRG operational tactics are often defensive, seeking to limit damage and in order to gain additional time for saving people, unlike the offensive tactics generally employed on land. However, when circumstances are favourable, offensive tactics may also be employed:

- Defensive - This mode may apply to a sector and/or the entire incident. The MIRG teams tackling the operation do not work within or are not exposed to the hazard area. The identified risks outweigh the potential benefits; no matter how many additional control measures are put into place, the risks are too great.
- Offensive - This mode may apply to a sector and/or the entire incident. The MIRG teams tackling the operation work within or are exposed to the hazard area. The level of risk to crews is justifiable in terms of risk and potential benefits.
KEY ACTION TO ENSURE OCCUPATIONAL SAFETY DURING A MIRG MISSION

- The final decision on whether to board the distress vessel is made by the MIRG OC after the location has been reconnoitred. In all situations, both when transferring and working on board, the ability to independently ensure safety during operations must be continuously taken into consideration.
- The basis for ensuring the safety of MIRG operations is to set up a boarding control point at the scene of the incident. The entry point is often established on the upper deck, where it is not exposed to smoke and other hazards, close to a location where the helicopter can operate. The boarding control point must enable unhindered evacuation.
- MIRG Team Leaders must remain constantly aware of where their team members are and keep a log of their whereabouts.
- The RCC must remain constantly aware of how many people have been sent to the distress vessel and boarded to participate in rescue operations. When a decision is made to dispatch a MIRG team to the location, it must always be ensured that the team can be evacuated.
- The primary means of evacuation is a helicopter, the secondary a surface vessel in the incident area. It must be taken into consideration that on the open sea it is often very difficult or even impossible to transfer to another surface vessel or smaller support boat. An extreme emergency measure is to abandon the vessel by descending a rope into the sea or onto the ice.

SITUATION PREVENTING MIRG ACTION

MIRG teams are generally not dispatched to locations where the operating conditions would not enable them to work efficiently and safely.

In a ship fire incident, this could mean, for instance:

- The wind direction is variable. A whirling wind or lack of wind may cause a situation in which there is no “clean-air area” on the distress vessel. In such cases, it is not possible to work on the vessel, as this would require the continuous use of a breathing apparatus, which is not possible in practice.
- The fire extinguisher systems of the vessel might not be functional. In such cases, either the firefighting water piping on the distress vessel has to be pressurised using the systems of another ship or firefighting operations have to rely entirely on the fire hydrant system of the other ship.
- The distress vessel has listed significantly or the water used for firefighting causes further listing.
- The seas are too rough for smoke diving and moving about on the distress vessel.
- The situation on board the distress vessel is so unstable that it is apparent that the incident may escalate in an unpredictable and uncontrollable manner, such as due to materials/chemicals carried as cargo on the vessel.
- If there are indications that the incident could have been caused by an act of terrorism, it is not safe to work on board the vessel until the situation has been assessed (bomb +1 principle).

3.7 OPERATIONAL GUIDELINE – DISTRESS VESSEL

“MIRG Operational Guideline 7 - Distress Vessel” was drafted to clarify cooperation and command hierarchy between the MIRG teams and the distress vessel. The background of the guideline is presented below, followed in subsection 3.7.2 by a description of the guideline itself.

3.7.1 BACKGROUND OF THE OPERATIONAL GUIDELINE

The success of MIRG operations is impacted not only by cooperation between authorities from different countries, but also by how effectively the MIRG teams and the distress vessel crew work together. In order to ensure successful cooperation, it is important for all the parties involved to understand what kind of assistance the MIRG teams can provide, what types of support and cooperation the MIRG teams require during an operation, and how command responsibility and tasks are divided during a MIRG operation.

As stated in the operational guideline, the decision on dispatching MIRG teams to the distress vessel is always made in cooperation between the RCC and the master of the distress vessel. On the distress vessel, the MIRG operation is headed up by the first MIRG team leader who arrives on board, the MIRG Operation Commander. The MIRG Operation Commander works under the SAR authority (RCC/OSC) and leads the operation in cooperation with the distress vessel master. In practice, this means that operational and tactical decisions are made with the authorisation or approval of the distress vessel master, as the master is always responsible for operations on his/her ship. Efficient cooperation and a shared situational awareness between the master of the distress vessel and the MIRG Operation Commander are vital for the success of the MIRG operation.

The need to draft an operational guideline for distress vessels was identified on the basis of a shipping company survey carried out in December 2015 to January 2016 as part of the Baltic Sea MIRG project. The survey was sent to shipping companies operating passenger traffic (incl. ropax) in the Baltic Sea and English Channel and cruise ships in Northern Europe. Seventeen shipping companies responded to the survey. On the basis of the survey results, almost all shipping companies expected to receive external firefighting assistance in the event of a challenging ship fire. In spite of this, many of the respondents were not familiar with MIRG operations.

During the development of the operational guideline, the key issues that can boost the efficiency of cooperation on the distress vessel in MIRG operations were defined. Shipping companies had the opportunity to comment on a draft version of the operational guideline in a survey from April to May 2016. Eight shipping companies responded. The feedback from the shipping companies was taken into account in the scope and content of the final operational guideline.
3.7.2 MIRG OPERATIONAL GUIDELINE 7 - DISTRESS VESSEL

PURPOSE OF OPERATIONAL GUIDELINE
This Operational Guideline is intended to help the distress vessel to properly prepare to receive external help (MIRG teams), especially in the case of a ship fire, and to understand what other kinds of assistance and support MIRG teams can provide to the vessel in different types of incidents. In addition, the Operational Guideline is intended to clarify the division of command responsibilities and duties between the vessel and authorities during MIRG operations.

RESPONSIBILITY AREAS AND TASKS
The decision on sending MIRG teams to the vessel is always made in cooperation with SAR services (Rescue Coordination Centre, RCC) and the master of the vessel. The RCC leads and coordinates cooperation between the authorities, and is responsible for rescue operations outside the distress vessel during the SAR mission. On the distress vessel, its master is responsible for rescue operations. On the distress vessel, the MIRG Operation Commander, operating under the SAR authority (RCC/OCC) heads up the MIRG operation. The MIRG Operation Commander makes operational and tactical decisions with the authorisation or approval of the distress vessel master.

OBJECTIVES OF THE MIRG OPERATION AND PRECONDITIONS FOR SUCCESS
The basic tactical idea behind MIRG operations is to slow down the escalation of the incident so that it remains under control, such as by limiting the fire in order to gain time to save people. Once a fire has escalated beyond a certain point, it becomes impossible in practice to extinguish it while the ship is at sea. For this reason, operations must be rapid and focused on achieving results. The key is to start up the vessel’s own firefighting efforts rapidly and efficiently.

In addition, in order to ensure that the MIRG teams can provide the most efficient assistance to the distress vessel, it is assumed that the officers of the distress vessel will take responsibility for preparing certain cooperation-related matters as well as open and prompt exchange of information between the RCC and the units participating in the rescue operation. Effective cooperation between the master of the vessel and the leader of the MIRG operation is a precondition for successful MIRG operations on the vessel.

KEY ACTIONS TO ENSURE COOPERATION
After detecting the incident or dangerous situation, the crew of the distress vessel must handle and prepare for the following actions:

1. The vessel must inform the RCC of the incident and any need for help without delay. The alert should primarily be made via GMDSS (e.g. VHF ch 16).

2. The distress vessel must prepare a situational assessment and start its own rescue measures (firefighting/damage prevention/evacuation/abandoning the ship, etc.) to the extent necessary.

3. In cooperation with the RCC, the master of the distress vessel must assess the general safety level of the vessel (using the Vessel TRIAGE method and its threat factor matrix).

4. If the vessel requires other special equipment, such additional equipment should be requested from the RCC as early as possible.

5. The distress vessel must inform the RCC of all hazards identified that may impinge on the transfer of MIRG teams to the vessel; for example, smoke plumes, heavy rolling, etc. The distress vessel must also inform the RCC of the locations where the distress vessel can be boarded or a helicopter can land/winch a MIRG team.

6. Preparations must be made on board the distress vessel to receive the MIRG team brought in by a surface craft or a helicopter
   • The distress vessel should ready the helicopter landing/winching location or alternatively prepare to receive the MIRG team from a boat as set out in IAMSAR Manual Volume III.
   • The distress vessel should allocate guides or contact persons to each MIRG team to ensure safe and effective mobility, and communications on board the vessel.
   • MIRG teams principally use their own communications devices, but the crew of the distress vessel should be able to provide them with devices for internal communications on the vessel if necessary.

7. Once the MIRG team has arrived on the vessel, the vessel crew should take care of certain issues regarding cooperation.
   • When the MIRG Operation Commander arrives on the bridge, the master of the vessel should provide a sufficiently detailed review of the situation on board, the actions that have been initiated and any threat assessments made and agree on joint operations and the rescue actions that will be performed.
   • The crew of the distress vessel should ensure that the MIRG Operation Commander and, if possible, the teams also have copies of the Ship Safety Plan.
   • The master of the vessel, in cooperation with the MIRG Operation Commander, must continuously monitor the Vessel TRIAGE status of the vessel as the incident develops and report on it to the RCC. The assessment of the situation should be done at not more than 20-minute intervals.
   • The master of the vessel must also take the MIRG team into account in preparations for abandoning the vessel and indicate which rescue station and equipment the team should use in such an eventuality.

OPERATIONAL CAPABILITIES OF THE MIRG TEAMS
The composition of MIRG teams varies slightly, but is usually about six persons. The deployment preparedness of MIRG teams varies from immediate to about 60 minutes, depending on the country in question.

MIRG team members are equipped with immersion suits suitable for maritime SAR, automatic life jackets (SOLAS), helmets, and personal locator beacons (PLB). Some countries’ teams are also using emergency egress devices (HEED). A team’s equipment is packed in bags or cases designed for helicopter transport. The bags/cases primarily contain personal equipment and breathing apparatus, but they can also include hoses, spray pipes, adaptors, and other such equipment that may be required during a ship fire.
The MIRG system can support the vessel in the following types of incidents:

**Primary task:** (Can be performed by all teams)
- Limiting the spread of the fire and extinguishing it
- Locating and rescuing people in smoke-filled spaces

**Secondary tasks:** (Can be performed by some of the teams)
- Technical rescue, such as saving injured people from difficult-to-reach locations or those who have been pinned down
- Hazardous substances (“limited capability”): investigating and assessing the substance and measures to combat it, and plugging up small leaks, depending on the circumstances
- Evacuation
- Primary medical triage, that is, initial patient categorisation when there are many patients

The MIRG Operation Commander, MIRG team or parts thereof can also be used solely in the capacity of experts providing support for the vessel’s own crew.

**CONCLUDING THE MISSION, HALTING OPERATIONS AND ABANDONING THE VESSEL**

Once the mission has been concluded in a controlled manner or if it must be halted without the need to abandon the vessel, the MIRG unit is evacuated with the most suitable surface or air unit, as indicated by the RCC. The decision to leave the distress vessel is made jointly by the RCC, master of the vessel and the MIRG Operation Commander.

In addition, if the safety of the MIRG teams on board the vessel is jeopardised, or if there are other justified grounds for doing so, the operations of the MIRG team can be halted by a decision of the RCC or MIRG Operation Commander. The master of the vessel must always be notified of the decision to halt the mission and abandon the vessel.

If the mission must be aborted because the vessel is abandoned, the MIRG team primarily exits the vessel using the ship’s own rescue equipment or the unit indicated by the RCC. In addition to the primary alternatives, the MIRG team must be prepared to abandon ship using its own equipment (such as ropes) to descend into the sea.

The master of the vessel should always be prepared for the eventuality that the MIRG team will use the rescue equipment of the vessel to abandon it. For this reason, when the MIRG team has come on board the distress vessel, the master of the vessel must always also take the MIRG team into account in preparations for abandoning the vessel and indicate which rescue station and equipment the team should use in such an eventuality.

**COMMUNICATIONS**

According to international regulations, emergency communications between the vessels and maritime SAR are to be carried out on VHF16 (or MF/HF if needed), the emergency and call channel reserved for this purpose, unless the RCC designates another frequency or means of communications to reduce communications traffic on that channel.

When the distress vessel is located outside the range of VHF radio, a unit (aircraft) can be used to relay communications between the distress vessel, rescue units and RCC.

MIRG teams/external rescue units on board the vessel principally use their own communications devices (VHF, UHF, Tetra radio). However, during the MIRG operation, there may be situations where MIRG teams will have to rely on the vessel’s communications equipment, for example:
- If the distress vessel is located far away, the MIRG team may have to rely on the vessel’s communications equipment to maintain contact with land. In such cases, communications from the distress vessel are carried out under the supervision and with the support of the vessel’s own crew.
- If MIRG team communications on board the distress vessel are prevented by vessel structural or other reasons, the crew should reserve communications equipment for the MIRG teams insofar as this is possible.

Even though the MIRG Operation Commander also communicates situation updates from the vessel to the RCC to the extent necessary, the master of the distress vessel has the actual responsibility for communicating information from the distress vessel to the RCC.

**BASIC COMMAND STRUCTURE IN SAR OPERATIONS**

The diagram depicts the MIRG operations in the Maritime SAR coordination and command hierarchy.
4 SUMMARY AND RECOMMENDATIONS

Search and rescue measures in a large-scale maritime incident involve the authorities of several countries. It is very probable that when a ship fire of long duration occurs at sea, for instance, numerous firefighting and rescue teams will be dispatched from several countries. In such incidents, it is extremely important to maximise efficiency in the use of the available resources. In order to use resources efficiently, the actors participating in the operation must have a shared vision of the situation and the nature and objective of operations as well as the ability to cooperate with other groups.

National and regional MIRG SOPs currently provide quite extensive support for MIRG operations at the national level. These national SOPs can also be applied in international MIRG operations, but they do not solve the special issues involved in the coordination models and operational guidelines of international operations, such as who has command responsibility, the division of responsibility for occupational safety and how communications in an international operation are to be handled.

The Baltic Sea MIRG project developed seven operational guidelines that are specifically intended to ensure international cooperation in MIRG operations. The guidelines seek to facilitate maintaining shared situational awareness, improve the response times of MIRG teams, and enhance coordination efficiency by clarifying communications, command hierarchy, the tasks of key roles and responsibilities with respect to occupational safety. In order to increase efficiency in operations, an operational guideline was also drafted for those receiving assistance to help them support and harmonise their own operations with MIRG actors for maximum operational efficiency on board the distress vessel.

1. MIRG Operational Guidelines should be harmonised with national SOPs and adopted.

The operational guidelines created in the project should be adopted Europe-wide either as is for use as national SOPs or alternatively incorporated into existing national SOPs for cooperation. This would enhance efficiency in the use of external assistance in different incidents.

In addition, each country should take steps to ensure that the operational guidelines are adopted for national use in both maritime SAR and rescue operations (fire and rescue services) so that the guidelines can also be employed in international operations.

2. Training should be organised on cooperation between SAR, MIRG units and shipping companies

Maritime SAR, MIRG units and shipping companies should hold joint rescue exercises in which these operational guidelines can be applied and thereby develop the preconditions for cooperation.

3. Each European coastal state should agree on the opportunities of its SAR authority to use FLO if necessary.

The FLO plays a key role in ensuring seamless cooperation between authorities. The FLO has a substantial role in national operations and the significance of its role is further emphasised in international operations as the amount of resources and number of communications links increases.

GLOSSARY

**Maritime Search and Rescue** (Maritime SAR) involves saving and safeguarding people in distress and danger at sea. Maritime SAR can be considered to include many kinds of tasks, such as assisting ships and boats in maritime distress, preventing accidents, searching for persons and vessels lost at sea, consultation with physicians and medical transportation. The principles for the performance of these tasks are laid down in IAMSAR Manual Volume III and in some cases also in national laws and decrees. Salvaging assets, such as ships or boats, does not constitute SAR, but is a commercial or contractual activity.

**On-scene coordinator** (OSC) – A person designated to coordinate search and rescue operations within a specified area.

**Search and Rescue Unit** (SRU) – A vessel or aircraft with a crew trained and equipped for maritime search and rescue (SAR) operations.

**Maritime Incident Response Group** (MIRG) is a specially trained and equipped rescue team. A MIRG team generally consists of its Operations Commander and four to six members.

**MIRG Operation Commander** (MIRG OC) leads the external firefighting and rescue personnel on the vessel. The MIRG OC works under the coordination of the Rescue Coordination Centre (RCC), but while on the ship supports the master of the vessel and firemaster.

**Fire Liaison Officer** (FLO) – A Fire and Rescue Services (FRS) expert stationed at the Rescue Coordination Centre (RCC). Works under and supports the Search and Rescue Mission Coordinator (SMC). The Fire Liaison Officer can be called to the Rescue Coordination Centre simply to assess the situation as a consultant without alerting or using MIRG or other rescue units.
For this reason, the maritime SAR and rescue responders (fire and rescue services) of each country should agree on how FLO support is organised for the RCC in ship fire incidents, other MIRG tasks and when otherwise needed.

4. **MIRG Operational Guidelines should be disseminated as widely as possible so that they can be used by all the parties that need them.**

The operational guidelines developed together in this project should be disseminated openly to all those that need them. In the case of maritime SAR, for instance, the IMRF could help by distributing this information to its members. Information could be provided to shipping companies through shipping company organisations; for instance, these organisations could provide instructions to their members as an attachment to shipping company safety instructions.

In future, the EMSA and IMO should also be informed of the developed operational guidelines. Information to the IMO could be provided through the NCSR subcommittee, for instance. The IMO and its member states could then assess the inclusion of the new operational guidelines to the extent required in instructions and recommendations issued by the IMO or in national regulations.

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**APPENDIXES**

**Checklists**

- Checklist of MIRG Operational Guideline 1 - Assessing the Safety Status of a Vessel (Vessel Triage)
- Checklist of MIRG Operational Guideline 2 - Requesting Assistance
- Checklist of MIRG Operational Guideline 3 - Communications
- Checklist of MIRG Operational Guideline 4 - Fire Liaison Officer
- Checklist of MIRG Operational Guideline 5 - MIRG Operation Commander
- Checklist of MIRG Operational Guideline 6 - Occupational Safety during a MIRG Operation
- Checklist of MIRG Operational Guideline 7 - Distress Vessel

MIRG Tasking Form
1. The distress vessel sends an alert to the Rescue Coordination Centre (RCC).

2. Assessing the safety status of the vessel.

   a. Assess materialised threat factors:
      - Flooding
      - Listing, decrease of stability
      - Decrease of manoeuvrability
      - Black out
      - Fire, explosion
      - Danger posed by hazardous substances

   b. Assess the severity of the materialised threat factors:
      - Compare the available information on the situation aboard with the descriptions of situations of different severity in the threat factor matrix.
      - Select the alternative (or alternatives if more than one threat factor is identified) that best matches the situation aboard.

   c. Assess the effects of crew capabilities and weather conditions:
      - Assess if the crew capabilities, adverse weather conditions or any other materialised risks are affecting the vessel’s safety status negatively.

   d. Determine the Vessel TRIAGE category:
      - As a minimum, the Vessel TRIAGE category must be equal to the severity of the most severe identified threat factor.
      - The Vessel TRIAGE category can also be set to be higher if crew capabilities and/or weather conditions worsen the vessel’s safety or if there are other reasonable grounds for doing so.

   e. Communicate the result of the risk assessment to the key actors:
      - The RCC confirms the Vessel TRIAGE category to be used to all rescue units.

3. Confirming Vessel TRIAGE assessment

   Once the accident site is reached, the first authority on the distress vessel/in the incident area (e.g. MIRG OC or OSC) must confirm to the RCC whether the Vessel TRIAGE assessment is appropriate.

4. Monitoring identified threats

   Identified threats must be actively monitored, and the key actors notified immediately of any changes in them.

   If the safety status of the distress vessel is Red (or Black), the MIRG team must be ready to abort the mission and the RCC must have at least one rescue unit on scene for the emergency evacuation of the MIRG team.
CHECKLIST OF MIRG OPERATIONAL GUIDELINE 2 - REQUESTING ASSISTANCE

1. Receiving an alert and collecting information (operations before alert/request for assistance)
   - The collection of the information required for the MIRG Tasking Form in the early phase of the incident should not delay the alerting of the MIRG teams.
   - The MIRG alert can be sent when the first part of the form has been filled out (MIRG Tasking Form part 1).
   - If the incident involves hazardous substances, the information required for part 4 of the form must be collected and forwarded to the MIRG teams before they are mobilised (MIRG Tasking Form part 4).
   - After the MIRG teams have been alerted, continue filling out the MIRG Tasking Form (MIRG Tasking Form part 2).

NB! If the MIRG Tasking Form is sent by email, receipt of the email must always be confirmed via radio or telephone.

   - Planning and deciding how to transport the MIRG teams.
     - Available transport fleet
     - Transport capacity (no. of persons and max. weight)
     - Embarkation points
     - Preliminary schedule (when ready to be picked up; when at the location)
   - Organising SAR and arranging communications during the operation
     - Specify the required key leaders and note the following communication connections (MIRG Tasking Form part 3).

2. Requesting assistance from another RCC and alerting MIRG team(s)
   - Use the fastest and most appropriate means to request assistance.
   - In addition to relaying the MIRG Tasking Form information, specify what kind of additional assistance is required from the countries supporting the operation.
   - Supplement the request for assistance later if necessary.

3. Receiving requests for assistance (RCC) and alerts (MIRG teams)
   - The recipient must acknowledge receipt of the alert and request for assistance.
   - Verify that the received information is accurate and up to date.
   - The RCC and MIRG teams of a country supporting the operation must report preliminary information on the available:
     - Resources
     - Contact information
     - ETA at embarkation point and distress vessel.
RCC drafts a communications diagram for the incident in question and states which communications channels are to be used.

Note the following communication connections!

1. **Alerting phase.**

   The MIRG teams of countries supporting MIRG operations have been alerted.
   - The MIRG teams’ communications with the operation leader and vice versa are carried out via the RCC/FLO of the supporting countries.
   - The RCC/FLO of a country supporting the operation relays:
     - The necessary information on the incident and status to the MIRG team.
     - The MIRG team’s resource and status information to the leading RCC (until the team reports to the MIRG OC on the distress vessel).

2. **Operational phase.**

   MIRG teams have reached the distress vessel and reported to the MIRG OC.
   - The official communications of the MIRG team are conducted in accordance with the rescue organisation.
   - The leading RCC reports on the actions and status of foreign MIRG teams to their home countries during the operation.

Key abbreviations and call signs:

- **RCC**  Rescue Coordination Centre (named)
- **OSC**  On Scene Coordinator
- **ACO**  Aircraft Coordinator
- **SRU**  Search and Rescue Unit
- **MIRG** Maritime Incident Response Group
- **MIRG OC** MIRG Operation Commander
- **MIRG Team** MIRG Team (sector/country)
- **HELO** Rescue helicopter (country and/or aircraft call sign)
- **FLO**  Fire Liaison Officer
- **FO**  Fire Officer (local)
- **FRS**  Fire and Rescue Service
CHECKLIST OF MIRG OPERATIONAL GUIDELINE 4 - FIRE LIAISON OFFICER

FLO'S DUTIES DURING THE MIRG OPERATION

1. Actions in the mobilisation phase
   • Report on participation in the operation to a sufficient extent.
     - RCC
     - MIRG OC
     - Incident Commander
     - Emergency Centre (if needed), etc.
     - Transfer to the RCC.

2. Actions on arrival at the RCC
   • Go through the preliminary information with the RCC
     - MIRG Tasking Form
     - Information about MIRG teams
       - Strength and capabilities (resources)
       - Contact information
       - ETA at embarkation point and distress vessel
   • Forward the confirmed and updated information to the MIRG teams.

3. Ongoing actions
   • Continue to obtain further information with reference to the MIRG Tasking Form
   • Act as a link between the MIRG Operation Commander and RCC
   • Forward the situation information, requests, instructions, etc. issued by the MIRG OC to the extent necessary.
   • Support the MIRG OC in ensuring uninterrupted operations.
     - Keep a log of:
       - Resources on the vessel
       - Resources en route
       - Additional resources requested
     - Assess the availability of additional resources with a focus on achieving results (Which? From where? When?).
   • Keep a log of all key events and when they occur
     - For your own operations (FLO)
     - For MIRG operations
   • Keep in contact
     - MIRG OC
     - MIRG teams that have not as yet arrived at the distress vessel
     - FLO/RCC of participating countries
     - Participating FRSs

CHECKLIST OF MIRG OPERATIONAL GUIDELINE 5 - MIRG OPERATION COMMANDER

MIRG OPERATION COMMANDER'S (MIRG OC) DUTIES DURING THE OPERATION

1. Actions in a mobilisation phase
   • Report on receipt of the alert
   • Go through the preliminary information with the RCC (FLO if available)
     - MIRG Tasking Form
     - Part 1 Key Information On Distress Vessel
     - Part 2 Supporting Information On Distress Vessel
     - Part 3 Transportation, Organisation And Communication Information
     - Part 4 Hazardous Materials Information
     - MIRG team info
       - Strength and capabilities
       - Contact information
       - ETA at embarkation point

2. Actions on arrival at the distress vessel
   • Test communications links with RCC
     - (FRS) radio, Maritime VHF, GSM, SATPHONE
     - Notification of arrival on distress vessel
   • Establish
     - Boarding control point
     - Evacuation point
     - Command point
   • Contact the master of the vessel, and ascertain that the preliminary information is correct
     - That MIRG assistance is required
     - The actual situation and all risks
     - Any measures that have been carried out
     - What assistance is desired
     - Any resources the vessel can offer
     - The vessel's technical situation
   • With the master of the vessel
     - Agree a tactical/operational plan and decisions required to stabilise and contain the incident on board the distress vessel.
     - Contact the RCC, and
     - Communicate the situation and confirm their safety level assessment and relevant threat factors (by using the Vessel TRIAGE method),
     - Determine resource requirements
   • Prepare to receive incoming teams and establish a MIRG command team.
3. Ongoing actions
- Ensure occupational safety (see MIRG Operational Guideline 6)
  - The vessel’s safety status (see MIRG Operational Guideline 1)
- Ongoing risk assessment
- Ensure uninterrupted operations
  - Evaluate the sufficiency of resources and the possible need for additional resources.
- Inform the RCC of resources needed
- Keep a log of all key events and when they occur
- Keep in contact, at intervals of not more than 20 minutes, with
  - MIRG teams
  - RCC
- Utilise the vessel’s crew
  - Expertise
  - Local knowledge

4. Completion of operation
- Provide a situation report to the distress vessel master, RCC and the party to which the responsibility for the incident will be transferred.
  - The measures that have been performed
  - The results achieved
  - The current situation
  - Any damage
- Recommendations on further actions.
- Together with the RCC, ensure that the decision to conclude MIRG operations and the reasons for this are recorded and entered in the RCC situation log.
  - Reasons for transferring responsibility or aborting the operation
  - To whom (the name of person and organisation) responsibility will be transferred
  - Whether responsibility will be or has been transferred
  - Matters agreed regarding communications and related responsibilities
- Ensure that you have the information necessary to draft a final report on the operation.
  - Information on the vessel, etc.
  - Measures performed and their results
  - Contact information for the contact persons
- Initiate preparations for the return trip.
  - Agree on transport arrangements with the RCC
  - Attend to assembling personnel and equipment
  - Ensure that equipment and tools provided by the vessel are returned (e.g. hand radios, Fire Control & Safety Plans, etc.)

CHECKLIST OF MIRG OPERATIONAL GUIDELINE 6 - OCCUPATIONAL SAFETY DURING A MIRG OPERATION

1. Occupational safety responsibilities
- The SMC is responsible for general occupational safety during the operation.
- The MIRG OC has overall responsibility for assessing the risks involved in carrying out the operation. However, primary responsibility for the occupational safety of MIRG personnel is held by each MIRG Team Leader.
- Responsibility for the occupational safety of the distress vessel’s crew is always held by the master of the vessel.

NB! Each MIRG team complies with its country’s occupational safety practices and regulations, and operations are adapted accordingly.

2. Assessing the operational preconditions and appropriateness of the MIRG operation
When approaching the location and while at the location, assess the following issues that affect occupational safety on the basis of preliminary information and aerial reconnaissance:
- Risks vs. achievable benefits.
- It is too dangerous to use winching or other means to board the distress vessel?
- Have any of the following factors that would weaken occupational safety and/or threaten the success of the operation on board the distress vessel been realised?
  - General working conditions on board have weakened, primarily due to strong waves, the extent of the fire, spread of smoke/circulation of smoke in the winching zone, etc.
  - There are no opportunities for retreat/departure (helicopter, another vessel, abandoning ship, etc.). One means of retreat/departure must always be available.
  - Serious listing = immediate danger of the vessel overturning. Visual observation or consult the vessel’s crew. Rule of thumb: the vessel’s technical systems should work up to a tilt of 22 degrees, but moving aboard ship would then be very difficult or impossible.
  - The firefighting water supply no longer works.
  - The vessel’s pumping systems no longer work.
  - A complete blackout in which backup lighting does not work.
  - The vessel is sinking or clearly about to sink and pumping will not help.
  - Any other direct threat to personnel.
  - Terrorism or the threat there of (+1 theory).
- When your resources are insufficient to complete the mission and no more are on their way (personnel, equipment).

On the basis of your observations, make the final decision on whether to start or cancel the operation. Consider what can be achieved with the current resources.
3. Emergency situation - halting the mission due to sudden changes in safety circumstances
   • Notify the master of the vessel and RCC that the mission is being halted and request the emergency evacuation of the team/teams.
   • Move to the most protected location (from smoke) from which to abandon ship or be fetched by helicopter, if a helicopter is able to do so.
   • If a helicopter cannot pick up the team/teams, seriously consider abandoning the distress vessel if the risks in the list above are being realised. Notify the SMC that the ship is being abandoned and test contact with the RCC using emergency channel 16 on the Maritime VHF radio.
   • Abandoning ship:
     • Put on rescue suits
     • Muster the entire team at the assembly station
     • Check the personal rescue equipment
     • Leave the ship using the safest available method, on the safest side, in the manner instructed in national MIRG training.

CHECKLIST OF MIRG OPERATIONAL GUIDELINE 7 - DISTRESS VESSEL

1. In the event of an incident, contact the RCC primarily via GMDSS (e.g. VHF ch 16) or using some other means of communication
   • Go through the situation with the RCC
     • Explain what has occurred
     • State what assistance the vessel requires
     • What actions have been started/completed on the distress vessel

2. Receiving assistance on board the distress vessel
   • Ready the helicopter landing/winching location or alternatively prepare to receive the MIRG team.
   • The distress vessel must always seek to allocate guides or contact persons to each MIRG team to ensure safe and effective mobility, and communications on board the vessel.
   • MIRG teams are as a general rule equipped with their own team communications devices, but if possible the distress vessel should reserve communications devices for the MIRG teams to enable communication on board the distress vessel.
   • When the MIRG Operation Commander arrives on the bridge, provide a sufficiently detailed review of the situation on board, the actions that have been initiated and any threat assessments made. Agree on joint operations and the rescue actions that will be performed.
   • Ensure that the MIRG Operation Commander and, if possible, the teams also have copies of the Ship Safety Plan.

3. Concluding the mission, halting operations and abandoning the vessel
   • When the MIRG team has come on board the distress vessel, the master of the vessel must also take the MIRG team into account in preparations for abandoning the vessel and indicate which rescue station and equipment the team should use in such an eventuality.
   • If the mission must be aborted because the vessel is abandoned, the MIRG team primarily exits the vessel using the ship’s own rescue equipment or the unit indicated by the RCC.
   • Once the mission has been concluded in a controlled manner or if it must be halted without the need to abandon the vessel, the external assistance or MIRG unit is evacuated with the most suitable surface or air unit, as indicated by the RCC. The decision to leave the distress vessel is made jointly by the RCC, master of the vessel and the MIRG Operation Commander.
   • The master of the vessel must always be notified of the decision to halt the mission and abandon the vessel.
The MIRG Tasking Form is intended to shorten the response times of MIRG teams and pave the way for efficient international MIRG operations. Use of the form ensures that when FRS representatives and MIRG teams are alerted, they will be provided with information that is as comprehensive as possible, enabling them to assess the preconditions for MIRG operations and related risks.

The MIRG Tasking Form is divided into four parts of one page each:

- Part 1 – Key Information on Distress Vessel.
- Part 2 – Supporting Information on Distress Vessel.
- Part 3 – Transportation, Organisation and Communication Information.
- Part 4 – Hazardous Materials Information.

The collection of the information required for the MIRG Tasking Form in the early phase of the incident should not delay the alerting of the MIRG teams. The MIRG alert can be sent when the first part of the form has been filled out.

After the teams have been alerted, continue filling out the form. As soon as possible, the RCC must plan and decide how to transport the MIRG teams, organise SAR and arrange communications during the operation (part 3), and inform the MIRG teams of its decisions.

If the incident involves hazardous substances, the information required for part 4 of the form must be collected and forwarded to the MIRG teams before they are mobilised.

NB! If the MIRG Tasking Form is sent by email, receipt of the email must always be confirmed via radio or telephone.
MIRG TASKING FORM

DATE   TIME   (local)
RCC   Telephone Number
Email

PART 2 SUPPORTING INFORMATION ON DISTRESS VESSEL

2.1 Ship Security Alert System (SSAS)

NO  If an SSAS alert has not been received, the process for mobilising the MIRG Teams will continue.

YES The MIRG Teams will NOT be mobilised to an incident where the SSAS has operated until the relevant clearances have been provided.

In the event of a confirmed SSAS the RCC should endeavour to obtain further details in relation to the alert and liaise with the MIRG Teams who will provide a standby response.

2.2 Vessel Size

2.3 Cargo

2.4 Type and Condition of Fixed Installations

2.5 Communications Including any Communication Difficulties

2.6 Details of Hazards That Could Affect MIRG Operations

2.7 Further Details of Actions being Taken on Board and Persons at Risk

2.8 Contact Details of Designated Person Ashore (Owners, Operators or Agents)

MIRG TASKING FORM

DATE   TIME   (local)
RCC   Telephone Number
Email

PART 3 TRANSPORTATION, ORGANISATION AND COMMUNICATION INFORMATION

Airborne Response

3.1 Number of Helicopters Tasked & Landing Sites

3.2 Load Capacity in Prevailing Conditions

3.3 Estimated Time of Arrival for Rendezvous with MIRG Team(s)

Seaborne Response

3.4 Surface Units Available & Boarding Sites

3.5 Estimated Time of Arrival for Rendezvous with MIRG Team(s)

Organisation and Communication

3.6 RCC (name and contact information)  3.7 OSC (name and contact information)

3.8 MIRG OC (name and contact information)  3.9 FLO (name and contact information)

3.10 Participating MIRG teams (Team Leader and contact information) and FLOs
## PART 4 HAZARDOUS MATERIALS INFORMATION

<table>
<thead>
<tr>
<th>4.1 Category of Incident</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2 Name of the Chemical</td>
</tr>
<tr>
<td>4.3 UN Number</td>
</tr>
<tr>
<td>4.4 Classes of Dangerous Goods</td>
</tr>
<tr>
<td>- Class 1 Explosives</td>
</tr>
<tr>
<td>- Class 2 Gases</td>
</tr>
<tr>
<td>- Class 3 Flammable Liquids</td>
</tr>
<tr>
<td>- Class 4.1 Flammable Solids</td>
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<tr>
<td>- Class 4.2 Substances Liable To Spontaneous Combustion</td>
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<tr>
<td>- Class 4.3 Substances Which Emit Flammable Gases When In Contact With Water</td>
</tr>
<tr>
<td>- Class 5.1 Oxidising Substances</td>
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<tr>
<td>- Class 5.2 Organic Peroxides</td>
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<tr>
<td>- Class 6.1 Toxic Substances</td>
</tr>
<tr>
<td>- Class 6.2 Infectious Substances</td>
</tr>
<tr>
<td>- Class 7 Radioactive Material</td>
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<tr>
<td>- Class 8 Corrosives</td>
</tr>
<tr>
<td>- Class 9 Miscellaneous Dangerous Goods</td>
</tr>
<tr>
<td>4.5 Nature of Substance (Liquid, Powder, Crystals)</td>
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<tr>
<td>4.6 Colour of Substance</td>
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<tr>
<td>4.7 Quantity of Substance</td>
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<tr>
<td>4.8 Type of Reaction</td>
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<tr>
<td>4.9 Specialist Advice Details</td>
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</tbody>
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