



# IALA GUIDELINE

## G1046 RESPONSE PLAN FOR THE MARKING OF NEW WRECKS

### **Edition 2.1**

June 2019

**urn:mrn:iala:pub:g1046:ed2.1**

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Association Internationale de Signalisation Maritime



# DOCUMENT REVISION

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Revisions to this document are to be noted in the table prior to the issue of a revised document.

Date	Details	Approval
June 2005	1 <sup>st</sup> issue	Council 36
June 2019	Revised Guideline as a result of new mapping of existing documents. Origin is Guideline 1046, which has been divided into this Guideline and a new recommendation	Council 69
July 2022	Edition 2.1 Editorial corrections.	



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## 1. INTRODUCTION

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The *Nairobi International Convention on the Removal of Wrecks 2007* (the Convention) requires that an affected State should take all reasonable steps to ensure a wreck that constitutes a hazard is appropriately marked. When it is determined that a hazardous wreck exists, certain measures must be taken by the competent authorities in order to avoid further incidents, prevent loss of life or property, and ensure the protection of the marine environment.

### 1.1. SCOPE

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This Guideline provides the basis for developing an Emergency Wreck Marking Plan (EWMP) for marking a wreck as defined in the Convention. The EWMP provides guidance on the procedures for marking wrecks as required by the Convention.

This Guideline identifies the considerations and possible actions that affected States may take when responding to a requirement to mark a hazardous wreck.

## 2. CONSIDERATIONS

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The competent authority of the affected State should carry out a risk assessment to consider response capabilities, resources and solutions to deal with a wreck situation. The risk assessment should consider, but not be limited to:

- Analysis of response capability
- Indication of areas of responsibility
- Assessment of response required in specific areas
- Expected response times
- Expected intervention times
- Environmental and meteorological considerations
- Assessment of mobile resources, e.g., pollution combating vessels, buoy tenders, emergency towing vessels, guard ships, buoys, temporary VTS capability
- Assessment of electronic resources such as AIS and information systems

In assessing the risk associated with a wreck, the Guideline *G1018 Risk Management* provides useful guidance on conducting an effective risk assessment and analysis of the situation.

## 3. DECISIONS AND ACTIONS

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Competent authorities should consider their response in the following order of priority (see the flow diagram at ANNEX A):

- Immediate promulgation of Maritime Safety Information (MSI) concerning the hazardous wreck
- Obtain as much information as possible about the new wreck
- Consider deployment of a guard ship on the location of the new wreck
- Consider whether temporary VTS measures are required for the new wreck
- Consider AIS applications



- Initial marking of the wreck position
- Survey the wreck
- Consider the permanent marking of the wreck
- Issue updates
- Consider whether continuation of temporary VTS measures is necessary
- Consider whether removal of the wreck is necessary
- Identify steps to take if the wreck is not to be removed

### **3.1. IMMEDIATE PROMULGATION OF AN INITIAL SAFETY MESSAGE CONCERNING THE NEW DANGEROUS WRECK**

Especially in busy waterways, a new hazardous wreck or obstruction has the capability to cause loss of life, environmental damage and economic impact. Although in most incidents, detailed information is not directly available, it is extremely important that information on a new wreck or an obstruction is immediately made known to shipping.

An initial MSI message (navigational warning), indicating the approximate position of the new wreck and any other relevant information, should be broadcasted without delay on:

- VHF (announced on digital selective calling (DSC) and/or voice)
- MF (announced on DSC and/or voice)
- HF (announced on DSC and/or voice)
- AIS
- NAVTEX
- IMO recognized mobile-satellite communication service
- Any other communication means available

### **3.2. OBTAIN AS MUCH INFORMATION AS POSSIBLE ABOUT THE WRECK**

Information about a new wreck should be gathered as soon as possible. In certain situations, this process might well start even before a wreck is actually a fact. For example, after a collision, as a result of which a vessel is slowly drifting and sinking, any relevant information as to the status of the damaged vessel should be monitored, including its size, the nature and quantity of its cargo and also the amount and types of oil on board. The sooner the actual location of a wreck is known, accurate MSI can be promulgated, and marking can take place if appropriate. This will also reduce the risk of other vessels hitting the wreck whilst it is still unmarked.

### **3.3. CONSIDER DEPLOYMENT OF GUARD SHIP**

A new wreck may still be hazardous to shipping, even when it has been appropriately marked. The competent authority should consider the deployment of a “guard ship” to enhance safety. The guard ship may fill the following duties:

- Warn mariners of the presence of a danger to navigation
- Monitor the movement and condition of a drifting wreck
- Provide an immediate pollution response
- Monitor the effectiveness of marking arrangements
- Transmit racon (Morse “D”) to warn mariners of the hazard



- Assist in surveying the wreck and situation
- Assist in the removal of debris

### **3.4. CONSIDER TEMPORARY VTS**

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In busy shipping areas such as Traffic Separation Schemes (TSS), precautionary areas, channels, fairways and harbour approaches, it may be necessary to closely monitor and organize traffic. The establishment of temporary VTS measures should be considered to reduce the risk of an incident related to the wreck.

### **3.5. INITIAL MARKING OF THE WRECK**

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Weather conditions, sea state and unknown facts about the new wreck can hamper timely marking. Irrespective of these circumstances it is of great importance that the wreck location is marked as soon as possible and can be readily recognized by ships as a new wreck location. The IALA MBS provides a means of marking new dangers through the use of appropriate cardinal, lateral or emergency wreck marking buoy (EWMB) marks. In addition, new dangers may be marked by a racon with Morse code “D”.

If used, the EWMB should be placed as close to the wreck as possible and within any other marks that may be deployed. The characteristics and location of the buoy should be promulgated to the mariner by all available means. When more than one EWMB are used, the lights should be synchronized.

The wreck marking system should remain in place until the competent authority has assessed that information concerning the new danger has been sufficiently promulgated or there is no longer a risk to safety of navigation.

### **3.6. MARKING OF DRIFTING HAZARDOUS WRECKAGE**

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When broadcasting MSI, competent authorities need to take special care with position monitoring and integrity as it pertains to drifting hazards and obstructions.

### **3.7. CONSIDER AIS APPLICATIONS**

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The use of AIS can help to enhance the awareness of the wreck and its location.

AIS can be used to:

- Rapidly deploy a virtual AIS AtoN to mark the location of a wreck if deemed relevant by the competent authority.
- Promulgate information concerning the wreck.
- Provide automated AIS messaging to vessels in the area.
- Enhance the detection of a wreck.
- Monitor the drift direction and speed.

The use of virtual AIS AtoN may be particularly relevant if the weather and sea state prevent the deployment of a physical AtoN or guard ship.

### **3.8. SURVEY OF THE WRECK**

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The wreck should be surveyed as soon as practicable to determine the associated risk to safety of navigation. As a minimum, the survey of a wreck should include:



- Exact position of the wreck
- An assessment of the stability of the wreck
- Wreck orientation
- Location of debris
- Minimum depth above the wreck

### **3.9. CONSIDER THE PERMANENT MARKING OF THE WRECK**

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If a wreck cannot be removed and remains a risk to the safety of navigation, the competent authority should consider a permanent AtoN system to warn mariners of the dangers. Accurate survey of the wreck will assist in assessing the requirements for a permanent marking system. When permanently marking a wreck, the following actions should be considered:

- The use of accurate survey to determine the exact location and dangers associated with the wreck.
- Ensure the wreck is accurately charted and safety information is promulgated, including AIS and AtoN information.
- Appropriate marking in accordance with the IALA Maritime Buoyage System (MBS).

### **3.10. PROMULGATION OF UPDATED SAFETY MESSAGES CONCERNING THE DANGEROUS WRECK**

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As soon as further survey details and information concerning the wreck become available, shipping and relevant authorities should be informed immediately.

As information and updates are received, mariners should be informed through MSI systems on

- VHF (announced on digital selective calling (DSC) and/or voice)
- MF (announced on DSC and/or voice)
- HF (announced on DSC and/or voice)
- AIS
- NAVTEX
- IMO recognized mobile-satellite communication service
- Any other communications means available

### **3.11. CONSIDER WHETHER CONTINUATION OF VTS IS NECESSARY**

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Irrespective of all measures taken earlier (navigational warnings, marking, etc.) it may be necessary to decide to continue VTS measure for the wreck location. In case of an extremely dangerous wreck, for instance in the middle of a busy shipping route or shipping lane, a VTS service for the location may be considered essential to avoid collision. As an ongoing aspect of the EWMP, pilot stations, VTS and other allied services in the area should notify mariners of the dangerous wreck.

### **3.12. CONSIDER WHETHER REMOVAL OF THE WRECK IS NECESSARY**

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Based on risk assessment, taking into account traffic densities, traffic patterns, under-keel clearances, draft restrictions, tidal range and currents in the area, proximity to shore, etc., authorities should consider whether the removal of the wreck is necessary.

If the decision is made to remove the wreck, a comprehensive salvage plan must be developed. It should again assess the risk and consider all aspects of the operation.



## 4. DEFINITIONS

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The definitions of terms used in this Guideline can be found in the *International Dictionary of Marine Aids to Navigation* (IALA Dictionary) at <http://www.iala-aism.org/wiki/dictionary> and were checked as correct at the time of going to print. Where conflict arises, the IALA Dictionary should be considered as the authoritative source of definitions used in IALA documents.

## 5. ABBREVIATIONS

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AIS	Automatic Identification System
AtoN	Marine Aid(s) to Navigation
DSC	Digital Selective Calling
EWMB	Emergency Wreck Marking Buoy
EWMP	Emergency Wreck Marking Plan
HF	High frequency (3 – 30 MHz)
IMO	International Maritime Organization
MAtoN	Mobile Marine Aid to Navigation
MBS	IALA Maritime Buoyage System
MF	Medium Frequency (300 kHz to 3 MHz)
MSI	Marine Safety Information
NAVTEX	Navigational Telex (a data transmission MSI service operating on 500 kHz)
NtM	Notices to Mariners
Racon	Radar transponder beacon
TSS	Traffic Separation Scheme(s) (IMO)
VHF	Very High Frequency (30 MHz to 300 MHz)
VTS	Vessel traffic service

## 6. REFERENCES

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- [1] IALA Guideline G1018 Risk Management
- [2] IALA Recommendation R1016 Mobile Marine Aids to Navigation
- [3] IALA Recommendation R1015 Marking of Hazardous Wrecks





# ANNEX A FLOW CHART FOR EMERGENCY MARKING OF DANGEROUS WRECKS

