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| IALA Guideline |

1046

Response Plan for the Marking of New Wrecks

Edition 1.0

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

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| October 2016 | Revised guideline as a result of new mapping of existing documents. | Origin is Guideline 1046 which has been split into a this guideline and a new recommendation |
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# INTRODUCTION

Following an incident as a result of which a new and dangerous wreck occurs, certain measures will have to be taken by the competent authorities in order to avoid further incidents and to prevent loss of life and protect the marine environment.

## Scope

These Guidelines provide the basis for developing an Emergency Wreck Marking Plan (EWMP). The EWMP points out procedures to be observed, as well as considerations to be taken into account with respect to all necessary measures that should be taken by the competent authorities when confronted with a new dangerous wreck or an obstruction as a result of an incident within their area of responsibility.

These Guidelines identify the considerations, decision process and possible actions that competent authorities may take when responding to a requirement to mark a new and dangerous wreck or obstruction.

# CONSIDERATIONS

Competent authorities need to assess their areas of responsibility and response capability. This includes carrying out risk assessments, assessing response capabilities and resources and consideration of plans to deal with such situations.[[1]](#footnote-1) Aspects of such a risk assessment should include:

1. Analysis of response capability;
2. Indication of areas of responsibility;
3. Assessment of response required in specific areas;
4. Indication of response times;
5. Indication of intervention times;
6. Assessment of mobile resources e.g. pollution combating vessels, buoy tenders, emergency towing vessels, guardships, buoys, temporary VTS capability;
7. Assessment of electronic resources such as AIS and information systems.

A helpful tool for decision making with respect to the marking of wrecks that should be developed beforehand is a ‘marking requirements map’, indicating the different marking requirements in specific sea-areas. For each of these areas the marking requirements should be based on information and knowledge of the types and size of vessels in the area, traffic patterns and minimum under-keel clearance requirements.

# DECISIONS AND ACTIONS

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

1. Immediate broadcast of initial safety message (navigational warning) concerning the new dangerous wreck.
2. Obtain as much information as possible about the new wreck.
3. Consider deployment of a Guard ship on the location of the new wreck.
4. Consider whether temporary VTS measures are required for the new wreck.
5. Consider AIS applications.
6. Initial marking of the wreck position.
7. Survey the wreck.
8. Consider the permanent marking of the wreck.
9. Issue updates.
10. Consider whether continuation of temporary VTS measures are necessary.
11. Consider whether removal of the wreck is necessary.
12. Identify steps to take if the wreck is not to be removed.

## Immediate broadcast of an initial Safety message concerning the new dangerous wreck

Especially in busy waterways, a new dangerous 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 safety message (navigational warning), indicating the approximate position of the new wreck and any other relevant information, should be broadcast without delay on:

1. VHF\* (announced on digital selective calling (DSC))
2. MF\*(announced on DSC)
3. HF\*(announced on DSC)
4. AIS
5. NAVTEX\*
6. INMARSAT (EGC)
7. Any other communications means available (e.g. mobile phones, email)

\*In certain circumstances it might be necessary to issue an urgent navigational warning.

## Obtain as much information as possible about 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. The sooner the actual location of a wreck is known the better. This will save valuable time so as to be able to initially mark the wreck and issue navigational warnings. This will also reduce the risk of other vessels hitting the wreck whilst it is still unmarked.

## Consider Deployment of Guard Ship

A new wreck can still be dangerous for shipping, despite being marked. There are many documented incidents where marked wrecks have caused numerous problems resulting in damage, pollution and even loss of life.

When confronted with a new, possibly dangerous wreck, competent authorities should decide as soon as possible if it is necessary to send a ‘guard ship’ to the location of the wreck in order to ‘guard’ the location and inform ships navigating near the wreck position of the new danger. The guard ship should be well equipped for her task and should be able to stay on position in all weather conditions and sea states. The guard ship may be fitted with a racon, Morse code ‘D’.

## Consider Temporary VTS

In busy shipping areas such as Traffic Separation Schemes (TSS), precautionary areas, channels, harbour approaches, etc. the establishment of a guard ship may not be sufficient / appropriate. Action to establish temporary VTS measures for the wreck location should be considered.

## Consider AIS applications

AIS applications may be appropriate to physically mark the area of the wreck, promulgate information concerning the wreck or virtually mark the wreck (virtual AIS). This may be particularly relevant if the weather and sea state prevent ship deployment.

## Initial marking of the Wreck

Weather conditions, sea state and unknown facts about the new wreck can all 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 recognised 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.

The wreck buoy(s) should be maintained in position until the wreck is well known and has been promulgated in nautical publications, or until the wreck has been fully surveyed and exact details such as position and swept clearance above the wreck are known, and permanent marking of the wreck has been carried out.

## Survey of the wreck

A survey of the new wreck should be performed as soon as possible. Survey information and details should include, as a minimum, the:

* exact position of the wreck;
* stability of the wreck;
* wreck orientation or heading;
* swept depth above the wreck.

## Consider the permanent marking of the wreck

As soon as the wreck survey details are available, taking into account factors such as shipping routes and traffic density, the marking of the wreck should be reconsidered. When considering more permanent marking solutions, factors to take into account include:

* the use of the MBS:
* is the initial marking, as per MBS, sufficient?
* is there a requirement to reposition the marks?
* is additional marking needed?
* are there other solutions?
* danger indicators on the wreck;
* AIS and AtoN information.

## Issue Updates

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

As survey information and updates are received, mariners should be informed through Maritime Safety Information (MSI) systems such as EGC, NAVTEX, NtoM, etc.

## Consider whether continuation of VTS is necessary

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.

## Consider whether removal of the wreck is necessary

Based on risk assessment, taking into account traffic densities, traffic patterns, under-keel clearances, draft restrictions, 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.

## Identify steps to take if wreck is not to be removed

If it is decided not to remove the wreck, permanent marking requirements must be reconsidered (see section 3.8), and the wreck must be charted permanently through the Hydrographic Office.

# DEFINITIONS

The definition 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>.

# ACRONYMS

AIS Automatic Identification System

AtoN Aid(s) to Navigation

DSC Digital Selective Calling

EGC Enhanced Group Calling

ETV Emergency Towing Vessel

EWMB Emergency Wreck Marking Buoy

EWMP Emergency Wreck Marking Plan

HF High frequency (3 – 30 MHz)

INMARSAT International Maritime Satellite Organization

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)

NtoM 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 Services

2. FLOW CHART FOR EMERGENCY MARKING OF DANGEROUS WRECKS

HF

VHF

MF

Etc.

Yes

Incident resulting in new, dangerous wreck

Obtain information on new wreck / obstruction (3.2)

Immediate Broadcast/Transmission of initial safety message (3.1)

Is broadcast sufficient?

Issue updates / broadcast as required (3.9)

Determine Requirements:

- Marking (3.6) / including AIS (3.5)

- Guard ship (3.3)

- Temporary VTS (4.4)

No

Is Survey Required?

Conduct Survey (3.7)

* Position / stability
* Swept depth
* etc.

Review results of survey

* Amend Marking (3.8)
* Continue VTS (3.10)

Is removal of wreck necessary? (3.11)

No

Yes

No

Yes

Plan for removal of wreck

Review marking requirements (3.12)

1. IALA Guideline 1018 on Risk Management refers [↑](#footnote-ref-1)