ANM19 Working paper

Agenda item 9.2

Task Number 7

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Development of guidance on issues derived from revision of the MBS

# Summary

The new revised MBS 2010 retained its fundamental principles while it at the same time comprised a widening of scope by incorporating other aids to navigation.

Subsequently, for certain issues derived from the revision of the MBS there are a need for guidance.

In this paper guidance on these issues are discussed and proposals for guidance put forward for discussion at ANM 20.

It is established that the IALA NAVGUIDE shall be the vehicle for such guidance.

## Related documents

* IALA Maritime Buoyage System[[1]](#footnote-1)
* IALA Maritime Buoyage System Guidelines 1983
* The summary and conclusions of the MBS stakeholder survey
* List of outstanding marking issues identified in Task 7 in the ANM Committee task list
* Regulations of the IHO for international (INT) charts and chart specifications of the IHO and IHO paper based description of symbols for use on ECDIS

# Discussion

## Adverse effect of a proliferation in the use of Cardinal Marks

Statement:

“There has been a proliferation in the use of Cardinal Marks with consequent confusion or inability to distinguish the meaning of individual AtoNs.”

Discussion:

Cardinal marks require the mariner to interpret shapes and colours in daylight and complex light characters during night. What they see they have to relate to the true bearings NW – NE, NE – SE, SE – SW and SW – NW taken from the point of interest, and work out the appropriate course to steer from their position. This comprises rather complex thought processes.

In areas with a large tide the colour scheme intended for identification in daylight of a fixed North Cardinal mark can be disguised by high water. Similarly it can be difficult to detect the signals of floating North and South Cardinal Marks in waves during darkness.

Effects of these inherent properties of the Cardinal Marks are amplified where there are a relatively large number of Cardinal Marks in a limited area.

Guidance:

“Under various circumstances, especially when a number of Cardinal Marks are used near to each other, it can be difficult for mariners to interpret and use the navigational guidance given. Competent Authorities should bear this in mind and consider the use of other appropriate marks when planning the overall system of Aids to Navigation in a specific area.”

## A need for clearer guidance on the use of the Isolated Danger Mark

Statement:

“There is support that the Isolated Danger Mark should have clearer guidance on its use and that there should be means of indicating the extent of the hazard.”

Discussion:

The Isolated Danger Mark is as its name indicates a mark that is erected on, or moored on or above an isolated danger which has navigable water all around it. Even if the extent of the danger is limited, it is important that it should be possible for the mariner to recognize it. This could be resolved if the isolated danger is properly portrayed in the nautical chart.

Guidance:

“The Competent Authority should if possible make certain that Isolated Danger Marks are used only where there is navigable water all around the mark. The term navigable water does in this context describe where a ship with the maximum draft of a particular fairway can navigate safely. Thus the ship should be able to pass the Isolated Danger Mark at a similar distance as to any lateral marks in the fairway. If the extent of the danger is too great to allow safe navigation close to the Isolated Danger mark, the danger must be properly portrayed in the nautical chart.”

## The different uses of Special Marks

Statement:

“There has been a proliferation in the use of Special Marks as an ‘all-purpose’ aid; it is desirable to distinguish the different uses of Special Marks.”

Discussion:

Special Marks are no longer special as originally intended. The MBS defines a number of different uses of Special Marks for which it is convenient, and the proliferation of its use is consequently what can be expected. Its yellow colour is conspicuous at sea and contributes to its versatility.

Guidance:

“When Special Marks are used for different purposes adjacent to each other it may be difficult for mariners to distinguish between them. In such situations the use of other marks may be more appropriate. The use of Special Marks with pictograms could also be considered.”

## Re-defining the use of the Special Marks

Statement:

“There is support for re-defining Special Marks to allow its use as a navigational mark.”

Discussion:

It is not stated in the MBS that Special Marks are not navigational marks. However it is recommended not to use them, where other types are more appropriate and recognisable by the mariner.

For example when Special Marks are used to define a channel within a channel it might be appropriate to give guidance on the shape of the buoys. This is not discussed further here.

Guidance:

“Although Special Marks are not generally intended to mark channels or obstructions, these could be used where there is a specific need for navigational guidance and where other marks would not be suitable.

That is for example to define a channel within a channel, such as a channel for deep draught ships in a wider navigation channel marked by standard lateral buoys, or special purpose channels (e.g. for small craft)..”

## IHO symbols for paper or Electronic Navigational Charts / IALA Special Mark pictograms

Statement:

“There is support that Special Marks have additional IHO approved symbology attached to the buoy.”

Discussion:

Special Marks are portrayed in paper charts with their body/shape and the letter *Y* under. In addition there can be a legend to the mark representing its purpose. This legend can be from a standard set of international abbreviations or from national abbreviations.

Special Marks are portrayed in the Electronic Navigational Chart (ENC) either with simplified ENC symbols or the traditional chart symbols.

This means that there is IHO symbology for the portrayal of Special Marks, although the numbers of international abbreviated legends for paper charts are limited and do not exist for ENCs.

In the IALA MBS the use of pictograms is authorized, but their definition is left to the Competent Authority. Currently there is no IALA guidance on the design of pictograms.

It would be possible to use the IHO chart symbology regarding areas and limits to achieve pictogram symbols easily recognised by mariners. Examples of this are the ‘Entry Prohibited’ or ‘Anchorage’ symbols.

Also, the existing waterway signs designed by international or national bodies contain symbols which could possibly be adapted to use as pictograms. These are in many instances used at the same location and for the same purpose as Special Marks.

Special Marks with pictograms should ideally be portrayed in the nautical chart with its symbol and a legend providing the same information as the pictogram.

It is advised that IALA should develop a set of standard pictograms for the use with Special Marks, and discuss their portrayal in the nautical charts with IHO.

Guidance:

There is no specific guidance to be given at this time.

## Deployment of the EWMB

Statement:

“There is considerable support for the view that the EWMB when deployed should remain on station for as long as required.”

Guidance:

“The EWMB should be deployed without unnecessary delay upon decision to use it for the marking of an emergency danger. This can for example be met by the use of EWMBs that is stored onboard vessels ready for deployment.

The EWMB should preferably be equipped and of a size that facilitates its detection under all relevant atmospheric and oceanographic conditions. At the same time it should be taken into consideration that a smaller buoy may be more versatile than a large buoy with respect to its deployment.

The EWMB is meant for response to a new danger. It should consequently only be on station until the new danger is charted and the Competent Authority is satisfied that it is resolved. If the danger is expected to remain for the foreseeable future the Competent Authority should consider marking it with a regular marking scheme.”

## Re-designation of the EWMB

Statement:

“There is some support that the EWMB should be re-designated as an Emergency Danger Marking Buoy.”

Discussion:

It is not within the remit of this task to consider re-designating or renaming the EWMB.

Although the design of the EWMB was initiated following an incident comprising a manmade danger, it should be used to provide for the marking of any kind of new dangers.

Guidance:

“The term EWMB comprises a buoy to be used for the marking of all new dangers, where it is found to be appropriate by the Competent Authority.”

## Inclusion of reference to existing IALA guidance in the MBS document

Statement:

“It is desirable that the revised MBS document makes reference to existing IALA guidance on the efficient disposition and types of buoyage.”

Discussion:

Further guidance such as references to specific IALA Recommendations and Guidelines may be given in the IALA NAVGUIDE.

## Reference to innovations and integration of new technologies in the revised MBS booklet

Statement:

“The revised MBS booklet should also make reference to innovations and integration of new technologies (such as sequential and synchronised lights, blue lights, radio aids and AIS AtoN).”

Discussion:

It is not within the remit of this task to make changes to the revised MBS booklet. It should be noted that it this is adopted by IMO in its present form, as discussed above.

Integration of new technologies is still an option. New technologies are described in the IALA NAVGUIDE chapter 4. This may be developed further.

## Wide promulgation of the information contained in the MBS booklet

Statement:

“The information contained in the MBS booklet ought to be widely promulgated so that the mariner may use it in conjunction with the appropriate nautical chart or publication and other systems.”

Discussion:

As said in the statement the content of the MBS booklet should be widely promulgated. The booklet itself does not necessarily need to be circulated outside Aids to Navigation and similar authorities. Its promulgation as applied within their area of responsibility is within the remit of Competent Authorites.

Guidance:

The IALA MBS should be available for download from the IALA website as is the case with Recommendations and Guidelines. This is both to make it easily available to the Competent Authorities and to mariners or others that take a professional or special interest in it.

# Action requested of the Committee

The Committee is requested to note this Working Paper and decide as it deems necessary.

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1. Adopted by IMO (SN.1/Circ.297) [↑](#footnote-ref-1)