Input paper: [[1]](#footnote-1) ARM6-11.2.1

Input paper for the following Committee(s): check as appropriate Purpose of paper:

X ARM **□** ENG **□** PAP **X** Input

**□** ENAV **□** VTS **□** Information

Agenda item [[2]](#footnote-2) 11.2

Technical Domain / Task Number 2 …………………………………

Author(s) / Submitter(s) Mr. BAE JunKi

Proposal for 2018-2022 new working item “Guideline on light colour of AtoN for breakwater and submerged breakwater” in ARM

# Summary

To protect port and coastal facilities from outer condition such as strong current or waves, breakwater and submerged breakwater installation has been on the rise. For such a reason, ports breakwater boundaries are becoming increasingly complex especially for small port or fishing facilities.

The breakwater protects ports and coastal facilities, however, it can be an obstacle for vessels to entering and sailing near the ports. Consequently, on the end and edge of the structure, AtoN must be situated in order to secure safety passing space for vessels.

Characteristic of AtoN (including light colour) is recommended on IALA MBS, but complexed port structure area can make confusion to define which characteristic should be used for AtoN installed on the breakwater.

## Purpose of the document

To make specific guideline on light colour of AtoN for breakwater and submerged breakwater and new working item in during 2018-2022, ARM committee season.

## Related documents

This task is related with NAVGUIDE, Maritime Buoyage System and Recommendation O-139 (The Marking of Man-Made Offshore Structures).

# Background

According to IALA MBS chapter 8.7 Port or Harbour Marks, “Mariners should be careful to take account of any local marking measures that maybe in place and will often be covered by Local Regulations or by-laws.” Therefore, Port and Harbour light colour of AtoN can be decided by competent authority themselves.

Usually, light colour complies with IALA MBS. However, if many structures are located on the way of harbour entry, competent authorities or constructors will be struggling to define which light colour will be appropriate for the AtoN located on the breakwater.

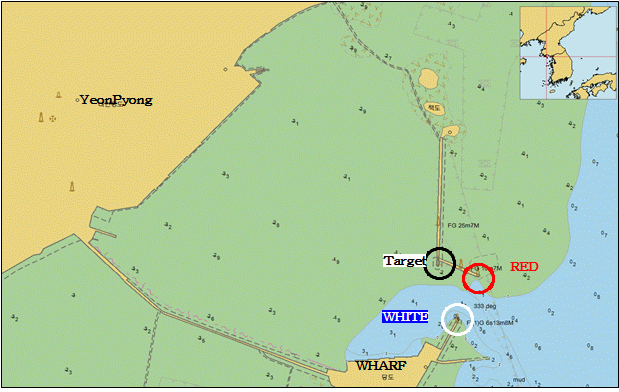
To save time and effort, this input paper proposes new guideline. This guideline can give (provide) more specific criteria about determination of light colour to local competent authorities. So, to reduce mariner’s confusion and competence authority’s concern.

To improve understanding and explanation, please see the Chapter 3. Discussion materials.

# Discussion

Here are some discussion materials as follows (Examples are from Republic of Korea which follows IALA MBS Region B). ;

## Yeon-Pyong Island port



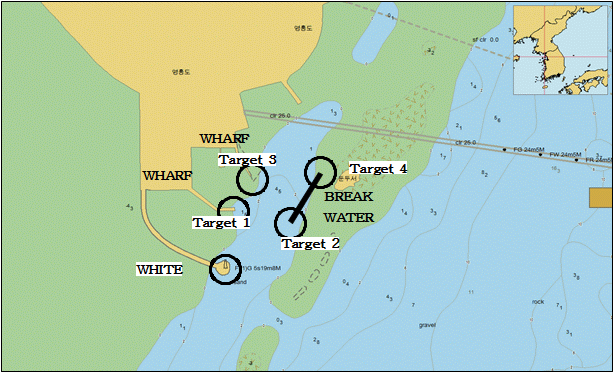
1. Chart on Port of Yeon-Pyong Island

Definition of target in Figure 1 can be different as below table:

1. Definition of target in Figure 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Target | Definition 1 | Colour 1 | Definition 2 | Colour 2 |
| 1 | Obstacle(danger) | Yellow | Port passage | Red |

## Jin-Doo(Young-Heung Island) Port



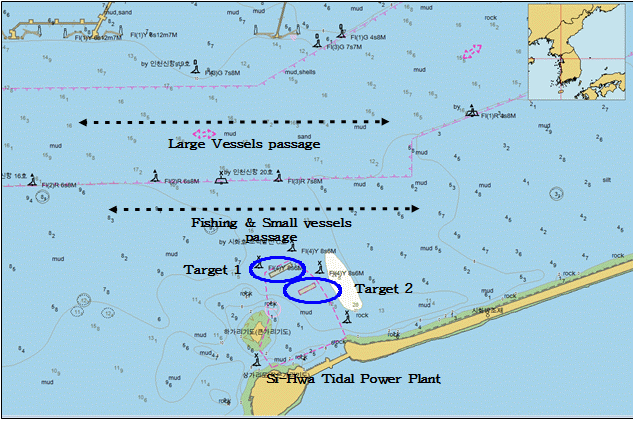
1. Chart on Port of Jin-Do Port

Definition of target in Figure 2 can be different as below table:

1. Definition of target in Figure 2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Target No. | Definition 1 | Colour 1 | Definition 2 | Colour 2 |
| 1 | Obstacle(danger) | Yellow | Port passage | White |
| 2 | Obstacle(danger) | Yellow | Port Passage | Red |
| 3 | Obstacle(danger) | Yellow | Port Passage | White |
| 4 | Obstacle(danger) | Yellow | Port Passage | Red |

## Si-Hwa Tidal Power Plant Front



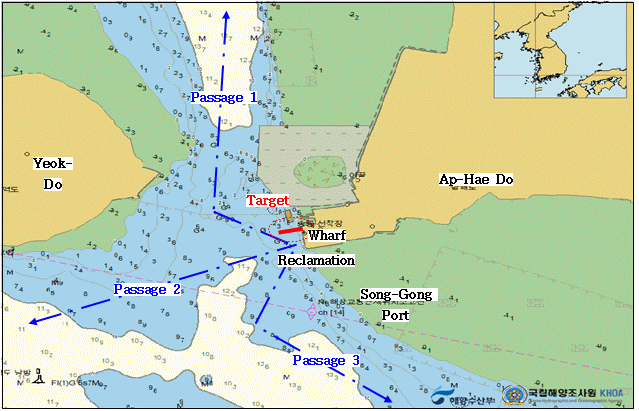
1. Chart on Si-Hwa Tidal Power Plant Front

In case of Target 1 and 2 are installed on submerged breakwater, consideration on the most appropriate location for the AtoN is required/needed. Definition of target in Figure 3 can be different as below table:

1. Definition of target in Figure 3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Target No. | App. Location 1 | Colour 1 | App. Location 2 | Colour 2 |
| 1 | Edge of east | Yellow(special) | Edge of west | Yellow(special) |
| 2 | Edge of east | Yellow(special) | Edge of west | Yellow(special) |

## Song-Gong Port, Mokpo



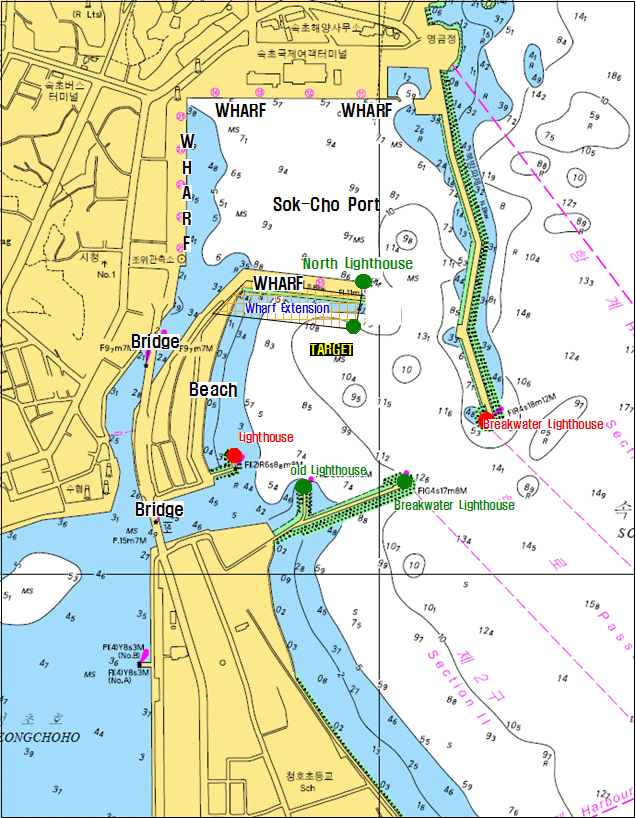
1. Chart on Song-Gong Port

Definition of target in Figure 4 can be different as below table:

1. Definition of target in Figure 4

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Target No. | Definition 1 | Colour 1 | Definition 2 | Colour 2 | Definition 3 | Colour 3 |
| 1 | Obstacle | Yellow | Port Entry | Red | Passage Pt | Red or Wht. |

## Sok-Cho port, Sok-Cho



1. Chart on Sok-Cho port

Definition of target in Figure 5 can be different as below table:

1. Definition of target in Figure 5

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Target No. | Definition 1 | Colour 1 | Definition 2 | Colour 2 | Definition 3 | Colour 3 |
| 1 | Obstacle  (Beach area) | Yellow | Port Entry | Green | Passage Pt | Cardinal mark |

# References

1. MBS, NAVGUIDE

# Action requested of the Committee

The Committee is requested to: Review on this input paper for making new working item during 2018-2022 season.

1. Review on this input paper
2. Consideration on making new working item

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-1)
2. Leave open if uncertain [↑](#footnote-ref-2)