ANM15 working paper
Agenda item 09
Task Number
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The Use of Aids to Navigation in the Design of Fairways and Waterways

1 PURPOSE AND OBJECTIVE OF THE GUIDELINE

(This is meant to replace the introduction of the existing draft.)

The purpose of this Guideline is to provide guidance for Aids to Navigation Authorities on the

- use of AtoN in the design of fairways and waterways including dredged channels and canals.
- new design or review of existing AtoN for fairways and waterways.

The objective is to define a level of deployment of AtoN which enables safe and efficient vessel traffic in a cost effective way for the AtoN Authorities.

This Guideline shall be used for a general overview. For detailed AtoN planning it is necessary to use it in conjunction with other IALA Recommendations and Guidelines.

2 NEW STRUCTURE OF THE GUIDELINE

(This is meant to replace the table of contents of the existing draft.)

3 SOME ITEMS SAVED FROM THE INTRODUCTION FOR FURTHER USE

Methodology

This Guideline proposes a systematic approach and the use of performance parameters for defining requirements for the design of AtoN systems. Thus it supports the approach of the e-NAV concept, considering also at the same time, that a considerable part of AtoN design is based on experience and good practise.

A risk-based methodology for a systematic approach is described which can be recommended for greater projects.

(THIS HAS TO BE JUGDED AFTER WORKING THROUGH THE DRAFT, IF THIS PREMISE IS REALLY FULFILLED.)

Procedures for determining the requirements for short-range marine aids of fairways

Types of analysis and associated procedures

Site analysis
Needs analysis
Operational analysis
Simulation and GIS
Cost-benefit analysis

Background

Changes in the art of navigation and of conditions

Future Developments

In the future the e-Navigation concept will have a considerable impact on the design of AtoN for an existing or a planned channel.

USER REQUIREMENTS

Accuracy

Relevant IMO documentation
SOLAS, Chapter V, regulation 13

IMO-resolution A.915(22) “Revised Maritime Policy and Requirements for a Future Global Navigation Satellite System (GNSS)”, adopted on 29 November 2001
IMO Resolution A.953(23) World-Wide Radionavigation System, adopted on 5 December 2003
IHO STANDARDS FOR HYDROGRAPHIC SURVEYS 5th Edition, February 2008 Special Publication No. 44

PERFORMANCE PARAMETERS

Accuracy

Accuracy of GNSS

Positioning Accuracy of AtoN

Perception of AtoN

Visual AtoN

Useful range

Lights **Error! Bookmark not defined.**

Daymarks and unlighted AtoN

Classes of buoys

Perception with shipborne radar

Perception by means of additional electronic devices on AtoN

PRINCIPLES OF MARKING

General

MBS (Mandatory tool box)

Recommendations and Guidelines (Level of Service, Technology and Other issues)

4 ACTION REQUESTED OF THE COMMITTEE

The Committee is requested to approve sub group of working group 2 ~~is requested~~ to start redrafting the guideline started at ANM15 and to provide a Draft Guideline for ANM 16