



LAP19-14.2.1  
(ARM9-9.4)

## DRAFT IALA GUIDELINE

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# THE GOVERNANCE OF MARINE AIDS TO NAVIGATION (ATON) SERVICE PROVISION

**Edition 1.0**

**December 2018**

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Association Internationale de Signalisation Maritime



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

Date	Page / Section Revised	Requirement for Revision
To be added	Whole document	First issue New guideline on how a national Competent Authority can demonstrate proper governance of its obligation under SOLAS Chapter V to provide an adequate aids to navigation service.



<b>1. INTRODUCTION .....</b>	<b>4</b>
1.1 Overview .....	4
1.2 Aim and Objective .....	4
<b>2. THE PROPER GOVERNANCE OF ATON SERVICES .....</b>	<b>5</b>
2.1 National Maritime Legislation .....	5
2.2 Funding AtoN Services .....	5
2.3 The Administration of proper Governance to meet IALA Standards .....	6
2.3.1 Standard 1010 – AtoN Planning and Service Requirements: .....	6
2.3.2 STANDARD 1020 – AtoN Design and Delivery .....	7
2.3.3 Standard 1030 – Radionavigation service .....	7
2.3.4 Standard 1050 – Training and Certification .....	7
2.3.5 Standard 1070 – Information Services .....	7
2.4 Audit of AtoN .....	8
2.5 Preparing for an IALA Mission .....	9



## 1. INTRODUCTION

### 1.1 OVERVIEW

The World-Wide Academy (The Academy) is the principal tool which IALA uses to build capacity in coastal States judged to be in need of its services. It does this through missions and follow-up reviews to determine how the recommendations raised during its missions will be implemented for the enhancement of safe navigation.

An analysis of all 152 independent coastal States and over 30 missions to such States found that over 40% of them were either unaware of the extent of their obligations, or had yet to exercise the necessary level of governance to implement procedures to demonstrate compliance with Chapter V of the International Convention on the Safety of Life at Sea (SOLAS), 1974 as amended. Based on this analysis, IALA has published Recommendation R0### on the Governance of marine aids to navigation (AtoN) services.

### 1.2 AIM AND OBJECTIVE

The aim of this Guideline is to provide coastal States with a summary of the actions that they should adopt to demonstrate the appropriate level of proper governance over the provision of key aspects of SOLAS Chapter V relating to the dissemination of Maritime Safety Information (MSI) relating to changes to Aids to Navigation (AtoN); the provision of Vessel Traffic Services (VTS) where the volume of maritime traffic or degree of risk justify such a service and primarily and the provision of appropriate Aids to Navigation (AtoN), based on the volume of traffic and the degree of risk in their waters.

The International Hydrographic Organization (IHO), IALA's sister organization in the "Delivering as One" Group, leads on the proper dissemination of MSI<sup>1</sup>. IALA has published a raft range of recommendations and guidelines relating to the provision and management of VTS<sup>2</sup>. The objective of this Guideline is to ensure that contracting Governments to SOLAS National Members and other appropriate Authorities exercise proper governance over the other key aspects of safety of navigation, including AtoN, for which IALA sets the international standards and guidance on best practice. To avoid duplication, references to IALA Recommendations and Guidelines are shown in square brackets where appropriate.

This Guideline is focussed on assisting Coastal States and Competent Authorities in meeting their specific governance obligations under SOLAS Chapter V, Regulation 13 (establishment and operation of Aids to Navigation). Additional obligations related to the governance of Vessel Traffic Services (VTS) stemming from SOLAS Chapter V, Regulation 12 are described in the International Maritime Organization (IMO) Guidelines for Vessel Traffic Services (Resolution A.857(20)) and IALA Standards 1040 and 1050 on Vessel Traffic Services and IALA Standard 1050 Training and Certification, in conjunction with their associated Recommendations, Guidelines and Model Courses.

<sup>1</sup> See IMO MSC.1/Circ.1310/Rev1 dated 21 November 2014

<sup>2</sup> IALA Recommendation V-119; V-127 and Guidelines 1045; 1073; 1089; 1101; 1104 and 1101 et al



## 2. THE PROPER GOVERNANCE OF ATON SERVICES

Chapter V of the ~~Safety of Life at Sea Convention~~ SOLAS, 1974, as amended, places a clear obligation on coastal States to keep mariners fully informed of safety-related matters and to provide VTS and AtoN “as the volume of traffic justifies and the degree of risk requires”.

The dissemination of MSI and the provision of VTS and/or AtoN services depends on rapid reaction to reports of navigational dangers; a clear understanding of the volume and mix of all maritime traffic operating in the waters of a coastal State and the routes that they take; an analysis of risk in those waters and how the marine environment will be preserved for future generations. The Competent Authority must therefore have proper legislation and management procedures in place to broadcast safety-related messages; measure traffic volumes and patterns and determine risk control measures to lower risk to a level which is as low as reasonably practicable “ALARP”. This will require higher authority to embrace a culture of maritime safety; exercise clear leadership and provide an adequate resource of specialist equipment, competent personnel and funding. The methods of achieving these fundamental obligations should be set out in a formal Strategic Plan published by the national Competent Authority responsible for AtoN service provision [Guideline 1052.4.4].

### 2.1 NATIONAL MARITIME LEGISLATION

The national maritime legislation enacted by each country should nominate the relevant Ministry with ultimate responsibility for the provision of services to meet its IMO Coastal State obligations. Proper governance of these obligations will need to be coordinated through a maritime strategy developed by an appropriate form of national Maritime Committee, comprising key Ministries and Organisations. Without this overarching strategy, the provision of appropriate safety of navigation services cannot be properly managed in a focussed and cost-effective manner.

Proper management will depend on national maritime legislation (often referred to as The Shipping and/or Ports Act(s)) specifying unambiguously the Ministry or other Governmental Organisation(s) acting as the national Competent Authority for MSI, VTS and/or AtoN services. It should include a Section on “The Safety of Navigation” which should, *inter alia* amongst others, include articles on the incorporation of SOLAS Chapter V into national legislation; nomination of the VTS and/or Maritime Authority and its “Director”, and the nomination of the national MSI Coordinator<sup>3</sup>.

The 13<sup>th</sup> IALA General Assembly approved the adoption of seven IALA Standards which form a framework, the implementation of which by all coastal States will harmonise marine AtoN world-wide. Maritime legislation should therefore specify that the “Director” “shall have due regard to the IALA harmonised maritime buoyage system and any standards, recommendations or guidelines issued by IALA”.

Legal definitions of a “marine aid to navigation” (as opposed to a “navigational aid” which is on-board a ship/vessel) should be included together with empowering the “Director” to have the absolute right to ensure that all AtoN established by any port, marina or other maritime facility, are established and maintained in compliance with SOLAS Chapter V Regulation 13.2, meaning specifically to the international recommendations and guidelines published by IALA.

### 2.2 FUNDING ATON SERVICES

Proper safety of navigation services cannot be supplied without adequate funding. Some States have decided that the cost of such services shall be met from general taxation. However, under the United Nations Convention on the Law of the Sea (UNCLOS), a coastal State can charge for services specific

<sup>3</sup> IMO MSC.1/Circ.1310 3.4; 3.5



to a vessel. The enables States to levy “light” or “navigational” dues on vessels calling at their ports, or anchorages (but not on innocent passage through their waters), the rates of which will also need to be specified in law and reviewed periodically. If this “user-pays” system of funding is adopted, revenues from the collection of light dues should, when appropriate, be “ring-fenced” for the procurement and through-life maintenance and operating costs of all existing and new AtoN infrastructure. Without an adequate source of funding, the reliability of AtoN to IALA standards cannot be sustained.

### **2.3 THE ADMINISTRATION OF PROPER GOVERNANCE TO MEET IALA STANDARDS**

The policy to adopt IALA Standards remains with the national Competent Authority of each coastal State. However, if such a Competent Authority wishes to claim compliance with an IALA Standard, then it should implement all the normative Recommendations referenced in each that Standard<sup>4</sup>. If national maritime legislation dictates that a State will comply with IALA standards, then the proper governance of AtoN services requires a specific department, responsible to a “Director”, to be established with sufficient resources to manage effective quality control over all AtoN operating in the waters of a coastal State, whether owned by the “Competent Authority”, or not.

The adoption of the following IALA Standards will require the national Competent Authority to establish effective procedures to ensure compliance under the specific actions listed under each heading: One way of being kept updated on new and amended IALA publications is monitoring the IALA website.

#### **2.3.1 STANDARD 1010 – ATO N PLANNING AND SERVICE REQUIREMENTS:**

- establishing formal methods of interacting with stakeholders [Guideline 1079];
- adopting an international or in-house quality management system [Recommendation O-132; Guideline 1052];
- maintaining a national register of all AtoN within the State’s waters with AtoN positions recorded in the correct format [Recommendation O-118];
- drafting and publishing a “Level of Service” statement as part of an in-house operational plan [Guidelines G1004; G1033; G1051 and G1078];
- developing plans to react to new dangers and wrecks [Guideline G1046];
- compiling and analysing records of maritime incidents [Guideline G1118];
- compiling and analysing maritime traffic statistics and routes from all available sources in accordance with SOLAS Chapter V Regulation 13.1 [Guideline G1138];
- conducting formal risk assessments in each maritime zone [Recommendation R1002; Guidelines G1018; G1104; G1123; G1124 and G1138];
- approving the installation, alteration or removal of any AtoN within the State’s waters, irrespective of which organisation owns, operates or maintains it<sup>5</sup>;

<sup>4</sup> Normative provisions are those with which it is necessary to conform in order to claim compliance with a Standard. Informative provisions are those which specify additional desirable practices, but with which it is not necessary to conform in order to claim full compliance.

<sup>5</sup> The Competent Authority retains responsibility for the effective operation of all AtoN in its waters. It must therefore have a mechanism to approve such AtoN. Maritime New Zealand (MNZ) publishes an “Application for Director’s Approval to Install, Alter or Remove” an AtoN on its website. MNZ has kindly agreed to let IALA draw the attention of other national Competent Authorities to this excellent format.

**Commenté [JC1]:** Is this assuming that IALA would become a IGO in future?



- allocating categories to and analysing the availability statistics of all short-range (visual; audible and radio) AtoN [Recommendation R0130; Guidelines 1035; 1037];
- adoption of safety management procedures [Guideline 1092];
- adoption of an environmental management plan [Guideline 1036];
- consideration of effective responses to natural disasters [Recommendation R1009; Guideline G1120];
- adoption of an historic lighthouse conservation plan (if appropriate) [Recommendation R1005];
- ~~monitoring new and amended IALA publications via the IALA website.~~

#### **2.3.2 STANDARD 1020 – ATO N DESIGN AND DELIVERY**

- conducting audits and periodic inspections of all AtoN (see paragraph 2.4 below);
- fail-safe procedures for the monitoring of all AtoN and reporting failures [Recommendation A-126; Guidelines G1008; G1050 and G1052];
- fail-safe plans to react to any AtoN with less than a 95% level of availability to the mariner [Recommendation R0130.1.5];
- ensuring that all short-range visual and audible signals (if operated) AtoN conform to IALA Standards [Recommendation R1001; E-108; E-200 series; E-109; Guidelines G1038; G1065; G1073; G1090, etc.];
- maintenance and protection of all AtoN **owned and operated by the national Competent Authority** [Guidelines G1007; G1012; G1015; G1076; G1077; G1091 and G1109].

**Commenté [JC2]:** Should this not be applicable to “all AtoN operating in the waters of a coastal State, whether owned by the “Competent Authority”, or not”?

#### **2.3.3 STANDARD 1030 – RADIONAVIGATION SERVICE**

- ensuring that all short-range radio AtoN (if operated) conform to IALA standards [Recommendation R-101; A-123; 124; Guidelines G1010; G1062; G1082; G1084; G1098];
- adoption of a policy on the use of virtual AIS AtoN [IMO MSC.1/Circ.1473.4.3; Recommendation O-143 and Guideline G1081].

#### **2.3.4 STANDARD 1050 – TRAINING AND CERTIFICATION**

- ensuring that key management personnel in the national Competent Authority and other AtoN service providers hold the appropriate certificates of competency [Recommendation R0141].
- career development training for AtoN managers and technicians [Recommendation R0141; ~~Model e~~ Courses L1.1 and L2.0].

#### **2.3.5 STANDARD 1070 – INFORMATION SERVICES**

- maintaining an adequate ~~stock-folio~~ of corrected charts and nautical publications;
- reporting new, altered or removed AtoN to the Principal Charting Authority [SOLAS Chapter V Regulation 9.2.3];
- maintaining comprehensive records of all ~~draft~~ navigational warnings and/or hydrographic notes related to AtoN failures; installation; alteration or removal.



## 2.4 AUDIT OF ATON

It is the Minister of the nominated national Competent Authority ~~of a Contracting Government to SOLAS~~ who bears the responsibility for ensuring that AtoN service provision is fully compliant with the obligations set out in SOLAS Chapter V Regulation 13. Whereas the provision of AtoN service provision can be delegated to other Organisations, the responsibility for their effective operation cannot. Barring natural disasters and ~~force majeure~~, AtoN must be designed and operated to be available to the mariner for no less than 95% of the time [Recommendation R0130.1.5]. This applies to all AtoN in a State's waters, irrespective of who owns and operates them. It is therefore incumbent on the Minister to ensure that a fail-safe procedure exists to monitor, audit and inspect such AtoN so that the mariner and the ships operating in the waters of each coastal State relying on them are kept safe and that the marine and coastal environment is preserved.

~~It is self-evident that in order~~ to demonstrate proper governance, all AtoN owned, operated and maintained by the national Competent Authority should be monitored (either directly or remotely or both) and inspected as part of the Authority's effective management procedures, and immediate action is taken to restore operation following a failure.

Assuming that national maritime legislation incorporates a clause to the effect that the "Director" shall *"have the absolute right to ensure through audits, inspections or any other means that all other marine aids to navigation established by any port, marina or other maritime facility, are established in compliance with the stipulated conditions and specifications and are maintained in proper working order"*, the "Director" given management of the items listed in paragraph 2.3 above will need to establish a periodic inspection or audit programme. This should ensure that all ~~short-range AtoN (and Differential Global Navigation Satellite Systems if appropriate)~~ are operating to IALA ~~s~~Standards. ~~If such AtoN are lit, inspections will need to be conducted during the hours of darkness.~~

The first step in this essential process is to ensure that a formal national register of all AtoN in the waters of a coastal State is developed and maintained<sup>6</sup>. This will require a physical inspection of each AtoN to determine its function, position, dimensions, characteristics, specifications and condition.

The second step is to ensure that a detailed comparison is conducted between information shown in international Lists of Lights and on the largest scale corrected charts, matches exactly the details contained in the national register<sup>7</sup>. Differences should be reported without delay to the NAVAREA Coordinator (if of an urgent nature) and Principal Charting Authority, so that navigational warnings and Notices to Mariners can be issued promptly.

The final step is to convene meetings with all owners and operators of AtoN in the waters of the coastal State so that periodic inspections at appropriate intervals can be arranged. ~~Such inspections should include observation checks on the actual ranges of lights and their visibility sectors, if appropriate<sup>8</sup>.~~

Should non-conformances to international standards be detected during these audits, appropriate MSI action should be taken immediately and the operator should be instructed to take such steps as are necessary to achieve proper compliance within an agreed timeframe.

**Commenté [JC3]:** This sentence seems to be very specific, but not all inclusive. Check whether there are any IALA Guidelines that address the way to inspect AtoN.

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<sup>6</sup> The IALA World-Wide Academy has created a template for a national register of AtoN in MS Excel format which national Competent Authorities may wish to use as a basis for their own registers should they consider that to be appropriate.

<sup>7</sup> Lists of Lights quote positions to 2 places of decimals of a minute, whereas the positions in the national register should be quoted to 3 places of decimals of a minute. Because minor floating AtoN and unlit daymarks are not included in Lists of Lights, the national Competent Authority may need to allocate national numbers to such AtoN as well as the International number for lit fixed marks.

<sup>8</sup> The IALA World-Wide Academy has also created a simple range observation form which can be adapted for use by any national Competent Authority should it so wish.





Regular stakeholder meetings [Guideline G1079] should ensure that these procedures run smoothly for the benefit of the safe, efficient and effective movement of both domestic and international shipping.

## **2.5 PREPARING FOR AN IALA MISSION**

The IALA World-Wide Academy has prepared a booklet which sets out the preparation expected from a coastal State which has requested a technical mission. A pdf version of this booklet can be downloaded from the Academy page of the IALA website ([www.iala-aism.org](http://www.iala-aism.org)).