



IALA GUIDELINE

G1101 AUDITING AND ASSESSING A VTS

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1. INTRODUCTION

Vessel Traffic Services are recognized internationally as a navigational safety measure through the *International Convention on the Safety of Life at Sea 74/78* (SOLAS) [1]. In particular, the provisions in *SOLAS Chapter V (Safety of Navigation) Regulation 12* provides for vessel traffic services and states, amongst other things, that:

“Vessel Traffic Services (VTS) contribute to safety of life at sea, safety and efficiency of navigation and protection of the marine environment, adjacent shore areas, work sites and offshore installations from possible adverse effects of maritime traffic.”

and

“Contracting Governments undertake to arrange for the establishment of VTS where, in their opinion, the volume of traffic or the degree of risk justifies such services.”

SOLAS also states that Contracting Governments planning and implementing VTS shall, wherever possible, follow the guidelines developed by the IMO.

Recognising that the safety and efficiency of maritime traffic and the protection of the marine environment would be improved if vessel traffic services were established and operated in accordance with internationally approved guidelines the IMO Assembly adopted IMO Resolution *A.1158(32) Guidelines for Vessel Traffic Services* [2]. The Resolution describes the purpose and general principles for the operation of a VTS and participating vessels, in addition to the roles and responsibilities of contracting governments, competent authorities and VTS providers.

2. OVERVIEW

The establishment and on-going operation of a VTS is a considerable investment. To achieve the purposes for which it was implemented, it needs to be effective and routinely evaluated to ensure that the operational objectives are being met, the technical and operational performance is acceptable, and the issues identified and defined in determining the need for the VTS have been either alleviated or at least reduced to an acceptable level.

3. AIMS AND OBJECTIVES

The aim of this document is to provide guidance for competent authorities and VTS providers to meet their obligations under SOLAS for the establishment and operation of a VTS. In particular, it aims to provide guidance for auditing and assessing a VTS and the subsequent on-going assessment and evaluation to ensure:

- conformity with international obligations;
- the technical performance of the VTS equipment is consistent with the objectives of the VTS;
- the operational objectives are being met; and
- the degree of risk identified in determining the need for the VTS have been either alleviated or at least reduced to an acceptable level.

Note:

This Guideline is intended to complement other IALA guidance, as amended, on the establishment and on-going operation of a VTS. It is not intended to replicate the information and guidance in these documents or be prescriptive about auditing provisions / quality management systems. Rather, it provides a framework to assist authorities to meet their obligations for the establishment and operation of a VTS in a consistent manner. Key IALA documentation associated with this Guideline may be found on the IALA website www.iala-aism.org.



4. RESPONSIBILITIES

The responsibilities of the Contracting Governments/competent authorities and VTS providers in planning, establishing and operating a VTS are described in IMO Resolution *A.1158(32) Guidelines for Vessel Traffic Services*. Recognizing that the relationship between the competent authority and the VTS provider may differ between countries the following guidance is provided for the respective responsibilities.

4.1. CONTRACTING GOVERNMENT / COMPETENT AUTHORITY

The Contracting Government should:

- establish a legal basis for VTS that gives effect to regulation V/12 of the Convention; and
- appoint and authorize a competent authority for VTS.

The competent authority for VTS should:

- establish a regulatory framework for establishing and operating VTS in accordance with relevant international conventions and IMO instruments, IALA standards and national law; and
- authorize VTS providers to operate VTS within a delineated VTS area.

The Contracting Government/competent authority should ensure the on-going effectiveness of the VTS and consistency with international guidelines through audits and/or periodic assessments. Such assessments could be managed by the Contracting Government/competent authority itself or by an accredited third party, such as an IALA approved classification society (IALAACs). However, even though the audits or assessments are made by a third party, the responsibility always lies with the Contracting Government/competent authority.

4.2. VTS PROVIDERS

VTS providers should:

- ensure that VTS conform with the regulatory framework set by the competent authority for VTS;
- set operational objectives for VTS that are consistent with improving the safety and efficiency of ship traffic and the protection of the environment. The objectives set should be routinely evaluated to demonstrate that they are being achieved;
- ensure that appropriate VTS equipment, systems and facilities for the delivery of VTS are provided;
- ensure that VTS are adequately staffed and that VTS personnel are appropriately trained and qualified; and
- ensure that information regarding requirements and procedures of VTS and the categories of ships required to participate in VTS are promulgated in appropriate nautical publications.

The VTS should be operated under a quality management system (QMS) and the VTS provider should ensure the on-going integrity of the QMS through periodic review/audit as described in the VTS Manual and IALA Recommendation *R0132 Quality Management for Aids to Navigation Authorities (O-132)* [3].

5. FRAMEWORK FOR AUDITING AND ASSESSING

The framework for auditing and assessing a VTS and the subsequent on-going assessment and evaluation of safe and effective provision of the service/s provided should be comprised of the following elements:

- The use of a quality management system (QMS)



- The use of a safety management system (SMS)
- The audit checklist for the assessment of a VTS, which may be found at annex A
- The guidance provided in the VTS Manual and IALA recommendations and guidelines regarding the establishment and operation of a VTS

5.1. CHECKLIST FOR AUDITING AND ASSESSING A VTS

The checklist at annex A provides a tool to assess and monitor the delivery of a VTS with regards to international obligations, the IALA recommendations, guidelines and VTS Manual.

The QMS that an individual VTS provider operates under may have a corporate focus and a scope that does not fully cover the specific delivery of a VTS. The checklist provides a robust, yet flexible, framework to ensure the VTS can be assessed and monitored in a way that facilitates consistency in the delivery of a VTS.

6. PROCEDURES FOR AUDITING AND ASSESSING A VTS

IMO Resolution *A.1158(32)* describes the principles and general provisions for the operation of a VTS and participating vessels, in addition to the roles and responsibilities of Contracting Governments, competent authorities and VTS providers.

Audits and assessments are an essential management tool to be used for verifying objective evidence of processes, to assess how successfully processes have been implemented, for judging the effectiveness of achieving any defined target levels, to provide evidence concerning reduction and elimination of problem areas.

The criteria for auditing and assessment of a VTS provider should be made available by the competent authority.

The following procedures provide competent authorities with guidelines for auditing and assessing a VTS:

- Step 1 – Request

The entity¹ submits a request to the competent authority.

Prior to submission of an audit and/or assessment request, it is recommended that the entity conducts its own internal check using the audit checklist at annex A.

- Step 2 – Pre-audit documentation

The entity submits completed pre-audit documentation. The entity should ensure that the checklist and the supporting documentation are submitted in sufficient time to allow the competent authority to properly assess the submission.

- Step 3 – Evaluation of pre-audit documentation

The competent authority evaluates the pre-audit documentation and the supporting documentation to ensure conformance with IMO Resolution *A.1158(32) Guidelines for Vessel Traffic Services*, IALA recommendations and guidelines, and any additional requirements.

Does pre-audit documentation comply with the requirements?

If “Yes”, the audit can take place at an agreed time.

If “No”, the competent authority notifies the entity and provides reasons to serve as a basis for corrective actions.

¹ Entity is the organization seeking to be audited and/or assessed



- **Step 4 – Audit**
The competent authority or a body appointed conducts an audit.
- **Step 5 – Audit findings**
The competent authority investigates if the entity complies with the set requirements.
The competent authority notifies the entity about the results of the findings in writing and if necessary, provides reasons to serve as a basis for corrective actions.
A time limit should be set for when the entity should provide an answer with the corrective actions taken.
- **Step 6 – Respond to findings**
The entity replies and gives information about the corrective actions taken as a result of the findings.
- **Step 7 – Additional audit**
After the entity responds to audit findings, the competent authority or appointed body conducts an additional audit in order to ensure that the corrective actions resulting from the audit findings have been taken.
- **Step 8 – Approval**
The competent authority issues a document or confirmation that the entity is approved as a VTS provider.

7. DEFINITIONS

The definitions 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> and were checked as correct at the time of going to print. Where conflict arises, the IALA Dictionary should be considered as the authoritative source of definitions used in IALA documents.

8. ABBREVIATIONS

AIS	Universal Shipborne Automatic Identification System
CCTV	Closed-circuit television
IALAACS	IALA approved classification society
IMO	International Maritime Organization
QMS	Quality management system
SMS	Safety management system
SOLAS	International Convention on the Safety of Life at Sea 74 (as amended)
VTS	Vessel traffic service or vessel traffic services (dependent on context)



9. REFERENCES

- [1] IMO. International Convention for the Safety of Life At Sea
- [2] IMO. Resolution A.1158(32) Guidelines for Vessel Traffic Services
- [3] IALA. Recommendation R0132 Quality Management for Aids to Navigation Authorities (O-132)



ANNEX A AUDIT CHECKLIST FOR THE ASSESSMENT OF A VTS

A.1. GENERAL INFORMATION

No.	Issue/question	VTS notes	Auditor notes/comments
1.	Date:		
2.	Name of Auditing body:		
3.	Name of the competent authority:		
4.	Name of the VTS provider:		
5.	Name of VTS: The full name and address of the VTS, as given in their official documentation, should be inserted.		
6.	Date of last audit: Provide a copy of the audit report.		
7.	Are internal audits carried out? Provide a copy of the assessment / audit report.		
8.	VTS Area(s): A chart showing the delineation of the VTS area/sectors.		
9.	Allocated VHF channels: Provide a list of the allocated VTS VHF channels		
10.	Radio Call sign and name identifiers: Provide the radio call sign and name identifier of the VTS.		



A.2. DOCTRINE AND REQUIREMENT

A.2.1. LIST OF DOCUMENTS

The reference “IALA Documentation relating to VTS” provides a list of the standards, recommendations, guidelines and model courses specifically related to the development, implementation and operation of a VTS. It is available at <https://www.iala-aism.org/product/iala-documentation-relating-to-vts/>

These documents, as updated, need to be considered for integration into internal procedures. National/local references and other relevant international arrangements may be Included as necessary.

A.2.2. COMPLIANCE WITH REQUIREMENTS

No.	Issue/question	VTS notes	Auditor notes/comments
1.	Which government body is responsible for the implementation and enforcement of SOLAS Chapter V Regulation 12 – Vessel Traffic Services?		
2.	What national legislation is in place to enable laws to be passed to give domestic effect to SOLAS obligations, such as: Regulatory provisions? Compliance and enforcement provisions?		
3.	Is the VTS operated in accordance with IMO Resolution A.1158(32)?		
4.	Describe the legislative framework in place and the measures taken to ensure compliance with IMO Res. A.1158(32)?		
5.	List any internal or external stakeholder arrangements for the operation of the VTS.		
6.	Does the VTS extend beyond the territorial seas?		
7.	If yes, is this consistent with Guideline G1089 – Provision of a VTS		
8.	Any other issues to discuss?		



A.3. OPERATION

A.3.1. PROCEDURES

No.	Issue/question	VTS notes	Auditor notes/comments
1.	Do you have documented operational procedures in place? (ref: IALA Recommendation R0127 and Guideline G1141)		
2.	How do you promulgate relevant VTS information to your users such as applicability, necessary reporting, etc.? For example, do you publish via ALRS, User Guides, or website?		
3.	Do you have established operating procedures for incidents such as collision, allision, grounding, etc? (ref: IALA Recommendation R0127 and Guideline G1141)		
4.	Do you have contingency plan(s) to ensure the availability of the VTS operations in cases of emergency (i.e., redundancy of equipment, secondary location to operate, extra staffing, etc.)?		
5.	Any other issues to discuss?		

A.3.2. PERSONNEL, TRAINING AND QUALIFICATION

No.	Issue/question	VTS notes	Auditor notes/comments
1.	Is the VTS appropriately staffed, according to an established ratio of operators and supervisors? (if any) (ref: IALA Guideline G1045 On Staffing levels at a VTS)		
2.	How do you manage personnel rosters and schedules? Provide documents.		
3.	Are training courses for VTS personnel delivered according to IALA Recommendation R0103, Guideline G1156 and associated Model Courses? Provide documentation such as certificates and records of training.		
4.	Is the training provided by an accredited organization (ref: IALA Guideline 1014 On the accreditation and approval process for VTS training)?		
5.	What is your VTS operator/supervisor on the job training program? Provide documentation of qualifications.		
6.	Do you have a policy regarding the use of drugs and alcohol?		
7.	Do you have a policy on managing / preventing fatigue amongst your VTS personnel?		
8.	Any other issues to discuss?		

A.3.3. EQUIPMENT

No.	Issue/question	VTS notes	Auditor notes/comments
1.	List your operational equipment e.g., radar, AIS, CCTV, remote sites, etc. (ref: IALA Recommendation R0128 (V-128) On Operational and Technical Performance of VTS Systems and Guideline G1111 – Preparation of Operational and Technical Performance Requirements for VTS Systems)		
2.	What is your maintenance program, i.e., how do you ensure reliability of your equipment?		
3.	Do you have any systems not covered by IALA Recommendation R0128 (V-128)? If Yes, please provide justification.		
4.	Any other issues to discuss?		



A.4. MANAGEMENT SYSTEM

No.	Issue/question	VTS notes	Auditor notes/comments
1.	Do you have any measures in place for identifying and managing opportunities for improvement? For example, do you conduct customer satisfaction surveys with your stakeholders?		
2.	Do you have a process for taking corrective and/or preventative action as part of continually improving of the management system?		
3.	What performance measures are in place to assess and monitor that the objectives of the VTS are being met? For example, do you collect any data on the number of accident/incidents such as groundings, collisions, allisions, near-misses, and pro-active interventions by VTS personnel?		
4.	Any other issues to discuss?		