IALA

IALA GUIDELINE

GUIDELINE 1089

PROVISION OF A VTS

Approved C72 Dec 20. Issue pending adoption of new IMO Resolution

Edition 2.0

<mark>Date: December 2021</mark>

DOCUMENT REVISION

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
December 2012	First edition	
Approved by Council 72 in December 2020. Shall be applied at the same day as the revised IMO Resolution enters into force.	Revised Document	Major review to align with new IMO Resolution xxxx Guidelines for Vessel Traffic Services and new/revised IALA documentation since Edition 1 was released.

CONTENTS

1.   INTRODUCTION

A Vessel Traffic Service (VTS) is recognized internationally as a navigational safety measure in the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS). The Convention also states that Contracting Governments planning and implementing VTSs shall, wherever possible, follow the guidelines developed by the International Maritime Organization (IMO).

IMO Resolution A.xxx(xx) Guidelines for Vessel Traffic Services:

- Recognises IALA as "*as an important contributor to IMO's role and responsibilities relating to vessel traffic services; and*
- *States that "Contracting Governments are encouraged to take into account IALA standards and associated recommendations, guidelines and model courses*."

2.   DOCUMENT PURPOSE

The purpose of this document is to provide guidance for the provision of VTSs to participating ships in a harmonized manner in accordance with IMO Resolution A.xxx(xx) and IALA Standards.

> This Guideline is associated with IALA *Recommendation R0127 - VTS Operations,* a normative provision of IALA Standard 1040 Vessel Traffic Services. To demonstrate compliance with Recommendation R0127, the provisions of this Guideline need to be implemented.

3.   CONSIDERATIONS

IMO Resolution A.xxx(xx) Guidelines for Vessel Traffic Services defines a VTS as:

> *"A service implemented by a Government with the capability to interact with vessel traffic and respond to developing situations within a vessel traffic service area to improve the safety and efficiency of navigation, contribute to safety of life at sea and support the protection of the environment."*

A VTS operates within a comprehensive environment in which ships, ports, allied services and other organizations fulfil their respective roles, as appropriate. Key factors in delivering a VTS include:

- The regulatory and legal framework for VTSs; and
- How interactions are conducted between VTSs and participating ships.

3.1.   Regulatory and Legal Framework

SOLAS regulation V/12 states that:

> *"The use of VTS may only be made mandatory in sea areas within the territorial seas of a coastal State."* and that,

> *"Contracting Governments shall endeavour to secure the participation in, and compliance with, the provisions of vessel traffic services by ships entitled to fly their flag."*

IMO Resolution A.xxx(xx) Guidelines for Vessel Traffic Services states that:

- Contracting Governments 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".*

- Competent authorities for VTS should:

  "*establish a regulatory framework for establishing and operating VTSs in accordance with relevant international conventions and IMO instruments, IALA standards and national law*".

- Participating ships should:

  "*provide reports or information required by VTS*";

  "*take into account the information provided, or advice and warnings issued, by VTS*"; and

  "*comply with the requirements and instructions given to the ship by VTS unless contradictory safety and/or marine environment protection reasons exist*".

3.2.   Interaction with participating ships

Important considerations when interacting with participating ships include:

- IMO Resolution A.xxx(xx) Guidelines for Vessel Traffic Services states that:

  "*Nothing in these Guidelines changes the Master's ultimate responsibility for all aspects of the operation of the ship including the responsibility for safe navigation.*";

- The implications of providing information, warning, advice or instruction as defined in IMO Resolution A.918(22) - Standard Marine Communication Phrases (SMCP). In particular, when an instruction is issued, the recipient has a legal obligation to comply with this message unless the master considers that contradictory safety and/or marine environment protection reasons exist;

- Irrespective of whether the service is initiated by the VTS or the participating ship, care should be taken that VTS operations do not encroach upon the master's responsibility for safe navigation; and

- IMO Resolution A.xxx(xx) Guidelines for Vessel Traffic Services emphasises that VTS communications should be timely, clear, concise and unambiguous. The effective delivery of a VTS is dependent on the provision of precise and unambiguous voice communications to ships and allied services to minimise the risk of unexpected and dangerous reactions.

  o Phrases that are used on the bridge of the ship, in particular specific rudder or engine commands such as "Stop Engine" or "Hard to Starboard", should not be used by the VTS.

  o While VHF is normally the primary communications medium for a VTS, any available means may be used.

  o The use of common communication phrases by VTS personnel reduces the opportunities for misunderstanding and the time required to communicate messages. IALA has issued detailed guidance on communications in Recommendation R1012 - *VTS Communications*, Guideline G1132 - *VTS VHF Voice Communications and Phraseology*. These draw on SMCP. Message Markers are essential in VTS Communications and assist where language difficulties exist.

3.2.1.   MESSAGE MARKERS

There are eight message markers as defined in SMCP. Seven of them are recommended for use by the VTS to emphasise the content of the message or to ensure that the message will be properly understood.

Message markers precede the message or the corresponding part of the message. Message markers clarify and make clear whether the message contains Information, Warning, Advice, Instruction, Question, Answer or Request by the use of message markers. Message markers may, however, also be particularly effective when language difficulties are apparent between the VTS and the ship.

It is best practice that a VTS always uses message markers when communicating with ships. The use of message markers becomes critical when responding to developing unsafe situations. In such circumstances a

degree of stress or urgency frequently exists and the use of message markers can help to ensure that the purpose of each part of the message is clear and unambiguous.

VTS providers should give particular consideration to the issuing of warnings, advice or instruction.

4.   PROVISON OF VTSs TO PARTICIPATING SHIPS

IMO Resolution A.xxx(xx) states that:

"The purpose of VTS is to contribute to safety of life at sea, safety and efficiency of navigation and the protection of the environment within the VTS area by mitigating the development of unsafe situations through:

1. *The provision of timely and relevant information on factors that may influence the ship's movements and assist on-board decision making.*

2. *The monitoring and management of ship traffic to ensure the safety and efficiency of ship movements.*

3. *Responding to developing unsafe situations."*

4.1.   Timely and relevant information

The provision of timely and relevant information on factors that may influence the ship's movements and assist on-board decision making should be provided where:

- Deemed necessary by the VTS; or

- Requested by the participating ship.

Timely and relevant information may include but is not limited to:

- The position, identity, intention and movements of ships;

- Maritime Safety Information (MSI) such as meteorological and hydrological conditions, notices to mariners, status of marine aids to navigation;

- Scheduling information to enable a ship to optimise its overall passage efficiency;

- Limitations of ships in the VTS area that may impose restrictions on the navigation of other ships (e.g. manoeuvrability), or any other potential hindrances;

- Information concerning the safe navigation of the ship; or

- Other information such as:
    - Reporting formalities and International Ship and Port Facility Security Code details;
    - Information to/from allied services; and
    - Amendments and changes in promulgated information concerning the VTS area such as boundaries, procedures, radio frequencies, reporting points.

4.1.1.   DELIVERY OF INFORMATION

Depending on the type of information and the situation, this may be delivered by:

- Broadcasting the information at fixed times and intervals, as promulgated in the appropriate navigational publications;
- Communicating directly with individual ship(s); or
- Data exchange and automated reporting as appropriate and where these are available.

4.1.2.   EXAMPLES OF TIMELY AND RELEVANT INFORMATION

Examples of timely and relevant information include:

Information related to:	Examples:
Navigational situations (including traffic and route information)	- Position, identity, destination of ships and the intention of other traffic. - Amendments and changes in promulgated information concerning the VTS area such as boundaries, procedures, radio frequencies, reporting points. - The mandatory reporting of movements. - Limited manoeuvrability that may impose restrictions on the navigation of other ships, or any other potential hindrances. - Suspension or change of routes.
Navigational warnings	- Uncharted obstacles such as dangerous wrecks. - Diving operations. - Ships not under command.
Meteorology	- Wind speed and direction. - Direction and height of the wave. - Visibility. - Atmospheric pressure. - Formation of ice.
Meteorological warnings	- Gale. - Storm. - Tsunami. - Restricted visibility.
Hydrography	- Stability of the seabed. - The accuracy of surveys. - Tidal height. - Tidal streams.
Electronic navigational aids	The availability of electronic navigational aids such as: GNSS, DGNSS, eLoran, AIS, LRIT, RACON.
Other information	- Port information. - Pilot or tug request. - Cargo information. - Health condition. - Port State Control (PSC). - International Ship and Port Facility Security (ISPS).

If a VTS is tasked with providing MSI services, guidance on this type of information is found in IMO Resolution A.706(17)a – World-Wide Navigational Warning Service.

4.2. Monitoring and management of ship traffic

The monitoring and management of ship traffic to ensure the safety and efficiency of ship movements may include:

- Forward planning and prioritisation of ship movements to prevent congestion or dangerous situations and improve overall efficiency;

- Organizing ships underway noting that special transports or ships with hazardous or polluting cargo may affect the flow of other traffic;

- Organizing space allocation;

- Establishing a system of traffic clearances;

- Establishing a system of voyage or passage plans;

- Providing route advice;

- Establishing mandatory reporting of movements in the VTS area;

- Establishing recommended or advisory routes to be followed;

- Establishing speed limits to be observed;

- Organizing nautical activities (e.g. sailing regattas) or marine works in-progress (such as dredging or submarine cable-laying) to avoid interference with the flow of ship traffic; and

- Ensuring compliance with and enforcement of regulatory provisions for which they are empowered.

4.2.1. EXAMPLES OF THE MONITORING AND MANAGEMENT OF SHIP TRAFFIC

Examples of when the monitoring and management of ship traffic might be required include:

Information related to:	Examples:
Traffic clearance	- On, or prior to, entering, a VTS area. - Departing from a berth or an anchorage within a VTS area. - Entering into a fairway within a VTS area. - Prior to commencing a manoeuvre that may be detrimental to safe navigation.
Anchorage	- Organizing the movements to/from an anchorage position/area. - Assigning an anchorage position. - Assisting ships into anchorage position.
Enforcement	- Ensuring adherence to speed limits. - Ensuring adherence to rules regarding traffic routeing measures. - Ensuring adherence to pilotage requirements. - Ensuring adherence to traffic regulations and local by-laws.
Waterway management (sea, channels and fairway)	- Requiring a passage plan before entering a VTS area. - Planning lock and bridge passages. - Reporting position at determined reporting point/line/pilot station. - Dredging or compass swing in confined waterway. - Organizing other traffic when a ship has passed point of no return. - Organizing the traffic concerning ship dimensions in comparison to fairway restrictions and under keel clearance. - Establishing and organizing ship safety zones in case of particular operations; - Establishing and organizing exclusion zones; - Instructing ships to keep clear from special areas/positions; - Organizing the traffic as regards to meteorological, hydrographical or other restrictions such as visibility, wind speed, current and sea state.

4.3. Responding to developing unsafe situations

Responding to developing unsafe situations involves support to the navigational safety of the ship through the provision of essential navigational information to assist on board navigational decision-making. It may also involve the provision of navigational advice and/or instruction.

Developing unsafe situations may include:

- A ship unsure of its route or position;

- A ship deviating from the route;

- A ship requiring guidance to an anchoring position;

- A ship that has defects or deficiencies, such as navigation or manoeuvring equipment failure;

- Meteorological conditions (e.g. low visibility, strong winds);

- A ship at risk of grounding or collision;

- Emergency response or support to emergency services;

- Ship deviating from the passage plan; and

- Assistance to a ship to support the unexpected incapacity of a key member of the bridge team.

Key considerations in responding to developing unsafe situations include:

- Navigational support should not be considered to be an alternative to pilotage.

- If VTS interaction is considered necessary or navigational support requested, the general principle should be that it is used to get the ship to a place of safety to enable the ship to recover from the situation for which navigational support was initially required. This could include regaining situational awareness, effecting repairs or embarking a pilot to continue its passage.

- Navigational support depends on many factors including:

    o Status of the waterway, including other ships in the area and weather conditions;

    o Equipment capabilities and limitations; and

    o Clarity of communications between VTS and ship.

- Navigational support may be carried out on the main working channel or an alternative to avoid overloading the working frequency.

- Before navigational support is provided and if time permits, a VTS should make an assessment of capabilities and conduct other relevant checks.

- The commencement and conclusion of direct navigational support should be formalised if time permits.

The provision of navigational support is likely to be required in three generic circumstances:

- When observed;

- On request; or

- Procedural.

4.3.1. WHEN OBSERVED

This is a situation when the VTS observes a developing navigational situation (e.g. a ship deviating from a planned or recommended route) and deems it necessary to intervene.

Early intervention is likely to be necessary, which may preclude pre-assessment checks being carried out.

Once the immediate situation has been resolved, the continuation of navigational support should be subsequently clarified and the need for further assessments and checks considered.

4.3.2. ON REQUEST

This is a situation when navigational support is provided at the request of a member of a ship's bridge team or an embarked pilot.

Provision of navigational support should be formalised and there should be sufficient time for the VTS to make appropriate pre-assessment checks.

4.3.3. PROCEDURAL

This is a situation when navigational support from a VTS forms part of a specific local operational procedure agreed to between participants.

All participants should be appropriately trained in such procedures, which should be formally documented and promulgated.

4.3.4. EXAMPLES OF RESPONDING TO DEVELOPING UNSAFE SITUATIONS

Examples of navigational support when responding to developing unsafe situations include:

Information related to:	Examples:
Request and identification	• Requesting ship identification and details such as position, course and speed. • Requesting status of ship's equipment. • Identifying start and end of navigational support if time permits.
Navigational information (including position and course information)	• Providing range and bearing from fixed objects, fairway/channel or way-points. • Providing proximity to navigational hazards. • Providing information related to navigating into a channel/fairway/lane (i.e. track is parallel/diverging/converging with/from/to reference line).
Advice	• Advising a ship to alter the course, speed. • Advising a ship to close up/drop back on/from another ship • Advising a ship to keep clear from area/position.
Warning	• Deviating from the planned or recommended route towards shallow water, dangerous wrecks or other obstacles not otherwise promulgated. • Diving operations. • Ships not under command.
Instruction	• Instructing a ship to keep clear from area/position. *Note: The VTS provider should give careful consideration to authorizations for issuing an Instruction in developing unsafe situations.*

5.   VTS BEYOND TERRITORIAL SEAS

SOLAS regulation V/12 (Vessel Traffic Services) paragraph 3, specifically states that *"The use of VTS may only be made mandatory in sea areas within the territorial seas of a coastal state."*

Recognising the contribution of VTSs to the safety of navigation, improved efficiency of traffic flow and the protection of the marine environment, a VTS may be established beyond territorial seas:

- In association with an IMO adopted system; or
- On the basis of voluntary participation

5.1.   VTS in association with an IMO adopted system

IMO Resolution A.xxx(xx) Guidelines for Vessel Traffic Services states that:

> *"A VTS may be established in association with an IMO adopted ships' routeing system or mandatory ship reporting system in accordance with regulations V/10 and V/11 of the Convention, respectively."*

The principles of the provision of VTSs to participating ships set out in paragraphs 4.1 – 4.3 still apply, but consideration may need to be given to the legal basis for any powers of regulation and enforcement.

5.2.   VTS on the basis of voluntary participation

IMO Resolution A.xxx(xx) Guidelines for Vessel Traffic Services states that *"A VTS may be established beyond the territorial seas of a coastal State to provide information and advice on the basis of voluntary participation."*

When a VTS is established beyond the territorial seas of a coastal State solely on the basis of voluntary participation, it is unlikely that it will have any powers of regulation or enforcement.

While the principles of the provision of VTSs set out in paragraphs 4.1 – 4.3 above still apply, a VTS established on the basis of voluntary participation is unlikely to be empowered to regulate or issue instructions.

VTS personnel should take into account that where a VTS is established on the basis of voluntary participation, not all ships present in the VTS Area may be participating and may not even be monitoring the designated communications channel(s).

6.   OTHER CONSIDERATIONS

IMO Resolution A.xxx(xx) Guidelines for Vessel Traffic Services states that *"Ships not designated as participating ships may take part in a VTS subject to complying with the requirements of the VTS and any guidance issued by the VTS provider".*

Instances where this may occur include situations when:

- A VTS may encourage voluntary participation from categories of ships that are not required by the regulations of that VTS to participate; or
- A ship that is not required by the regulations of that VTS to participate may request to participate in the VTS and receive information and advice during their transit.

In these situations, the principles of the provision of VTSs set out in paragraphs 4.1 – 4.3 still apply. However, careful consideration should be given to factors such as:

- the authority to issue requirements or instructions to voluntary participants;
- voluntary participants may not provide all of the information required of mandatory participants; and
- 'participating ships' may not be aware of 'voluntary participants'.

7.   REFERENCES

[1]   International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS)

[2]   IMO Resolution A.xxx(xx) Guidelines for Vessel Traffic Services

[3]   IMO Resolution A.918(22) IMO Standard Marine Communication Phrases (SMCP)

[4]   IMO Resolution A.706(17)a - World-Wide Navigational Warning Service

[5]   IALA Recommendation R1012 - VTS Communications

[6]   IALA Guideline G-1132 - VTS VHF Voice Communications and Phraseology