



IALA GUIDELINE

G1102 VTS INTERACTION WITH ALLIED OR OTHER SERVICES

Edition 1.1

January 2022

urn:mrn:iala:pub:g1102:ed1.1



DOCUMENT REVISION

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

Date	Details	Approval
December 2013	First issue.	
January 2022	Edition 1.1 Approved by Council December 2021 and published January 2022, in alignment with IMO Resolution A.1158(32) Guidelines for Vessel Traffic Services.	Council 74



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1. INTRODUCTION

1.1. PREAMBLE

A vessel traffic service (VTS) is recognized as a valuable asset to reduce incidents resulting from conflicts in vessel traffic. This contributes to the safety and efficiency of maritime traffic and protecting the marine environment. Consequently, a VTS plays an important role in risk management, not only on behalf of maritime traffic safety and fluency, but also on behalf of the continuity of the maritime transport chain.

The role of a VTS is well established and its services are well positioned in the maritime domain. However, this Guideline has a broad perspective, to help VTS providers in their interaction with other services, outside the VTS area.

Also in the maritime domain, VTS information may be needed to support other services such as maritime security or environmental agencies, with which the VTS provider may not have had previous interaction. The possible stakeholders who may wish or need to co-operate with the VTS provider need to be identified. Examples are given in annex A.

Present legislation, guidelines and manuals could be studied in order to identify the limitations on possible interaction with allied and other services, identify inconsistencies with legislation, guidelines and manuals and determine any modifications necessary.

In particular, the references in section 7 may provide guidance in this respect.

1.2. OBJECTIVE

This Guideline describes the issues to be considered and the principles to be respected for successful interaction between a VTS and allied or other services.

2. GUIDELINE DEFINITIONS

For the purposes of this Guideline the following definitions are provided.

“Maritime domain” is used as a generic term covering:

- all geographical areas (ocean, sea, coastal waters, harbour approaches, inland waters or all other navigable waterways), structures in, on, under or bordering these areas;
- all aspects of maritime infrastructure in mentioned geographical areas (e.g., waterways, locks, bridges, specific traffic management arrangements);
- all activities between stakeholders relating to and/or adjacent to safety and efficiency of
- shipping, security on board and ashore and the protection of the marine environment;
- waterborne transport of people and cargo and its handling; and
- all people within this domain.



“Allied service” - allied services are services actively involved in the safe and efficient passage of the vessel through the VTS area.

“Other service” refers to services other than the allied services, which MAY use VTS data to more effectively undertake their work (e.g., ensuring local security or preventing illegal imports).

“VTS Data” is the data produced by VTS and/or owned by the VTS provider.

“Interaction” is the action that occurs as two or more services have an effect upon one other.

“Single Window” - within the context of UN/CEFACT recommendation 33¹, a Single Window is defined as a facility that allows parties involved in trade and transport to lodge standardized information and documents with a single-entry point to fulfil all import, export, and transit-related regulatory requirements. If information is electronic, then individual data elements should only be submitted once.

3. CRITERIA FOR A VTS TO INTERACT WITH ALLIED AND OTHER SERVICES

Interaction of a VTS with allied or other services should be based on at least the following principles or criteria:

- There should be a clear need for interaction between a VTS and allied or other services:
 - The interaction should not affect the integrity of the services concerned²;
 - The interaction should be based on an arrangement that clearly defines the objective and scope of the interaction, the data and information exchanged, the purpose for (re)use of the data and information, and an external procedure with the operational details as in Annex C;
 - There should be a mechanism or protocol that triggers the interaction, and the period of the interaction (when it is commencing and finishing).
- VTS data input and output should not interfere with the VTS operational task.
- In case the data output to a stakeholder could result indirectly in a change of vessel behaviour, the VTS provider and this stakeholder should analyse the processes involved and co-ordinate their interaction, to provide the vessel with unambiguous information.
- Legal, security and confidentiality considerations and constraints should be taken into account when the interaction arrangement is being established. See annex D.

The capabilities of VTS systems can create value to allied and other services, even to satisfy business needs from stakeholders, which are normally not associated with the VTS:

- Import of voyage information.
- Export of the general traffic image interfacing with the voyage information.
- Export of the information of the vessels automatically connected to the available dangerous and polluting cargo and voyage information.
- Capability to automatically connect vessels to the available route information.
- Providing or relaying specific messages.
- Export of ETA/ATA (Estimated/Actual Time of Arrival) and ETD/ATD (Estimated/Actual Time of Departure) information, as indicating the time-dependent availability of resources available.

¹ UN/CEFACT recommendation (33) and Guidelines on establishing a Single Window to enhance the efficient exchange of information between trade and government. United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT). See <http://www.unece.org/cefact.html>

² This includes the integrity of the technical infrastructure and systems used in the interaction.



Nevertheless, the VTS provider may choose to respond to those business needs, as long as the above-mentioned principles or criteria underlying the interaction are respected.

4. INTERACTION WITH ALLIED AND OTHER SERVICES

It should be taken into account, that interaction between a VTS and allied or other services – inside or outside the maritime domain – could be necessary to sustain those services. In such a case, an arrangement between the VTS provider and the provider(s) of those services should be in place.

In some cases, when considered necessary, support from a VTS may extend outside the VTS area. This could result from national, regional or international arrangements.

Some examples of possible interaction between a VTS and allied or other services are described at annex B.

5. IDENTIFICATION OF POSSIBLE STAKEHOLDERS

The core capability of a VTS is to interact and respond to traffic situations developing in the VTS area. However, there are other stakeholders who may wish to interact with a VTS or with whom the VTS wishes to interact.

In this case, an arrangement should be set up between the VTS provider and the stakeholder(s), and it may be expected that issues and consideration to specific details should be given, as in chapter 3, in order to avoid unintended action, which may impair the VTS services. This may vary, depending on the country and legislation applicable.

In addition to the given possible stakeholders as at annex A, the VTS provider may become involved, if not already, in the exchange of traffic related information with state, provincial or local government, and associated agencies or organizations, for purposes less familiar to the maritime domain; such as monitoring emissions from shipping, securing vital supply chains for society and assessing the risks associated with maritime transport of dangerous or polluting cargo close to coastal or port communities.

Examples of possible stakeholders are described in annex A.

6. LEGAL ASPECTS AND CONSTRAINTS

IALA Guideline *G1086 Global Sharing of Maritime Data and Information* [1] already provides valuable guidance on legal aspects.

Actually, there is a range of potential legal aspects and constraints that could affect the merit of and ability to use VTS information for allied and other services. The nature of these will vary between different countries and has to be taken into consideration.

Further considerations in this respect are provided at annex D.

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

ATA	Actual Time of Arrival
ATD	Actual Time of Departure
CEFACT	Centre for Trade Facilitation and Electronic Business (UN)
ETA	Estimated Time of Arrival
ETD	Estimated Time of Departure
IMO	International Maritime Organization
ISPS	International Ship and Port facility Security Code
MAS	Maritime Assistance Service
MRCC	Maritime Rescue Co-ordination Centre
PFSP	Port Facility Security Plan
PSC	Port State Control
RSO	Recognized Security Organization
SOLAS	International Convention for the Safety of Life at Sea
UN	United Nations
VTS	Vessel traffic service or vessel traffic services (dependent on context).

9. REFERENCES

- [1] IALA. Guideline G1086 Global Sharing of Maritime Data & Information
- [2] IALA. Guideline G1141 Operational Procedures for Delivering a VTS
- [3] IALA. Guideline G1018 Risk Management
- [4] IALA. Guideline G1046 Response plan for the marking of new wrecks



ANNEX A EXAMPLES OF POSSIBLE STAKEHOLDERS

Port Administration / Harbour Master

Maritime Rescue Co-ordination Centre (MRCC)

Port State Control (PSC)

Environmental Agency

Coastguard

Adjacent VTS

Immigration / Border Control

Police

Recognized Security Organization (RSO / ISPS)

Navy

Maritime Pilot Organization / Maritime Pilots

Health Authorities / Medical Assistance

Ship Owners / Agents

Terminal Operators

Tugboat Companies

Boatmen / Linesmen

Inspection

Customs

Stevedores

Port Service Providers (e.g., bunker/water providers, surveyors, etc.)

Ship Reporting Agencies

Cargo Treatment / Processing

Research Institutes

Maritime Assistance Service (MAS)

ANNEX B POSSIBLE INTERACTION BETWEEN A VTS AND ALLIED OR OTHER SERVICES

B.1. SECURITY

Through routine VTS operations and interaction with maritime traffic, VTS personnel are aware of the situation and circumstances in the VTS area and may be in a position to detect and report events out of the ordinary.

Though much has been written about Maritime Security in all relevant documents, there is no existing definition. SOLAS Chapter XI only provides a definition on Security Incident:

'Security incident means any suspicious act or circumstance threatening the security of a ship, including a mobile offshore drilling unit and a high-speed craft, or of a port facility or of any ship/port interface or any ship-to-ship activity.'

A VTS may assist security assessments through:

- VTS in-depth knowledge of coastal, port and inland waterway infrastructure and its critical and vulnerable locations.
- VTS real-time knowledge of vessel activity, including scheduled movements, vessel locations and intentions.
- VTS-capability to interact with law enforcement authorities.
- VTS in-depth knowledge of regular port operations, including vessel routes and ship-port interface activities.

The VTS maintains regular and continuous communications with vessels in case a vessel is denied access to a port or restricted area for security reasons. The VTS may determine a safe anchorage, holding area or designated / alternative route. The VTS may communicate this information to the vessel and to the appropriate security authority, and monitor the vessel's status while anchored or in the holding area, or its progress and compliance to the designated route.

B.2. SAFETY AND PROTECTION OF THE MARINE ENVIRONMENT

Prevention of harm to vessels, waterways and infrastructure will contribute to the safety of personnel, vessels, cargo, and to the protection of the marine environment and of investments in port or waterway infrastructure.

B.3. EFFICIENCY OF MARITIME TRAFFIC

Next to the support given by a VTS for improving safety and the fluency of maritime traffic, support from a VTS may also contribute to efficient information management in the maritime transport chain at large. For instance, when information and data contained in or captured by the VTS database is made available for re-use in a Single Window environment, multiple reporting and processing of the same information or data for different stakeholders can be avoided. (e.g., notice of arrival to coastguard, customs, immigration, etc.).

It should be noted that it is important to avoid confusion between allied and other services and the services provided by a VTS.

B.4. SEARCH AND RESCUE

VTS personnel are aware of the situation and circumstances in the VTS area and may be in a position to detect and report the present information of the SAR / emergency situation. A VTS may collect information from all vessels concerned in the SAR area.



In this manner a VTS may assist, by providing and exchange of information to the MRCC for SAR and emergency operations in the VTS area. Examples of good practice operational procedures concerning SAR and emergency situations are given in annex C.



ANNEX C EXAMPLES OF OPERATING PROCEDURES

C.1. OPERATIONAL EMERGENCY PROCEDURES

The VTS functions according to IALA Guideline *G1141 Operational Procedures for Delivering a VTS* [2] are subdivided into internal and external. External Procedures cover procedures that govern the interaction with participating vessels and allied services. The VTS should be maintained during any emergency response.

Incidental co-operation with emergency services, such as Search and Rescue and Pollution Control may be conducted in accordance with pre-established contingency plans in which the procedures for interaction with allied or other services are laid down and responsibilities established.

C.2. COLLISION, CAPSIZE, SINKING, GROUNDING, FIRE ON VESSEL, MAN OVERBOARD

Procedures may be established to deal with incidents such as collision, capsize, sinking, grounding, fire on vessel, “man overboard”, which may include the following actions:

- 1 Alert MRCC.
- 2 Inform relevant regulatory authority/ies.
- 3 Support on-scene coordination.
- 4 Consider back-up VTS personnel.
- 5 Promulgate information concerning incident to vessels in the VTS area.
- 6 Restrict traffic in the area.
- 7 Inform pilot boats, tugboats and other support units.

C.3. POLLUTION

Pollution incident procedures may be established. The following actions may be included:

- 1 Alert or Inform relevant regulatory authority/ies.
- 2 Instigate or support actions to contain the pollution and further pollution response.
- 3 Promulgate information concerning incident to vessels in the VTS area.
- 4 Restrict traffic in the area.

C.4. PLACES OF REFUGE

Places of Refuge procedures may be developed, depending on national requirements and the particular arrangements arising out of the implementation of IMO Resolution A.949(23) Guidelines on Places of Refuge for Ships in Need of Assistance.

C.5. MEDICAL ASSISTANCE

Procedures for medical assistance may be established. Actions may include:

- Inform MRCC.
- Inform coastal radio station.
- Consider special manoeuvring requirements.



C.6. VESSEL NOT UNDER COMMAND (NUC)

Procedures in the event of a 'vessel not under command' may be established. Actions may include:

- 1 Promulgate information concerning incident to vessels in the VTS area.
- 2 Obtain detailed information about on board situation.
- 3 Maintain communication with vessel.
- 4 Assess vessel's proximity to danger (danger to vessel itself and other traffic).
- 5 Advise the officer of the watch accordingly.
- 6 Activate tugs and other support units if appropriate.

C.7. SECURITY INCIDENT

Procedures in the event of a security incident may be established. Procedures may reflect any involvement of the VTS with the PFSP (Port Facility Security Plan) as per the International Ship and Port facility Security Code (ISPS).

C.8. PROTEST ACTION

Procedures may be established to respond to protest action against a vessel transiting the VTS area. Actions may include:

- Alert responsible authority.
- Act on local call-out procedures, including VTS manager.
- Promulgate information concerning the protest action to vessels in the VTS area.
- Throughout any protest action, to ensure the safety of ships and protestors.

C.9. NATURAL DISASTER

Natural disaster recovery procedures may be established to respond to situations such as earthquake, tsunami, tidal wave, fire, and exceptional weather conditions. Actions may include:

- Promulgate information to vessels in the VTS area.
- Act on local call-out procedures.
- Inform MRCC.

C.10. COASTAL ACCIDENTS

Coastal accident procedures with allied and other services should be established to deal with accidents involving swimmers or divers reported directly to the VTS by witnesses. Actions may include:

- Inform MRCC.
- Inform relevant competent services.

C.11. MARINE EVENTS

The coordination of planned marine events with respect to the preservation of marine safety and continuity of traffic flows, may require substantial effort from a VTS, in co-operation with:

- the organizers of the event; and



- allied and other services, including those engaged with the public safety and order.

A VTS may also become involved in:

- The preparation of such an event.
- Timely provision of information to shipping and interests associated.
- Guidance of passing maritime traffic and to specific activities of such event.

C.12. RISK ASSESSMENT AND INCIDENT CLASSIFICATION

Correct classification of an incident is vital at the earliest possible stage, to ensure that an appropriate level of response and interaction with relevant allied services are initiated. The numerous factors affecting the severity, complexity and duration of an incident must be thoroughly assessed. Incidents are to be classified only by authorized and qualified persons.

Further guidance on risk assessment and incident classification can be found in IALA Guideline *G1018 Risk Management* [3] and in IALA Guideline *G1046 Response plan for the marking of new wrecks* [4].



ANNEX D FURTHER LEGAL AND SECURITY CONSIDERATIONS

VTS providers should also consider the purpose of any re-use of VTS information and how that influences the form and time in which information may be provided. For example, information to alert or assist search and rescue operations would generally be required freely and urgently. Other uses, such as compiling data on past shipping trends, could be provided at a later time, perhaps affording sufficient time for a formal written application.

In many cases, the high level legislation under which the VTS operates may determine how data and information may be re-used. If a VTS provider is part of an agency whose objectives include safety at sea, security and protection of the marine environment, it may be easier to provide information to organizations undertaking similar or complementary work such as marine parks and fisheries management. Another issue in some countries may be whether the eventual use of the transferred information is consistent with the purpose for which it was originally collected. Clearly describing and specifying the purpose for which the data is collected in the first place from the outset may solve this issue.

Transfer and sharing of data & information, particularly between government agencies, should be based upon an agreement, memorandum of understanding or similar instrument between the VTS provider and the organization requiring the data. It is also recommended that VTS providers develop clear protocols and procedures so that data transfer is implemented and maintained consistently and correctly.

The type and format of information supplied by the VTS provider may influence the extent of its distribution. Aggregated information on shipping movement trends may be more readily and widely distributed than information that identifies individual vessels.

In many countries, specific legal instruments may override other general policies. Examples of such instruments include search warrants and court orders. Other factors that may influence the interaction include but are not limited to:

- National laws and policies on the reuse of public data.
- Data storage regulations.
- Legal investigation protection.
- Commercial sensitivity.

Where VTS information may need to be used for evidence purposes, VTS providers should consider data collection and storage protocols that will safeguard the information & data's security and handling continuity to protect the information & data's admissibility as evidence in court.

If more than one agency or country contributes to the collection of information supplied to a VTS provider, the question of data ownership and transfer policy may need to be jointly resolved. All VTS providers should also consider the issue of protocols for any subsequent transfer of information from the recipient organization to third parties.