Draft Revision of IMO Resolution A.857(20)

**VTS work program 2010-2014, task 3:**

**Review/update/provide input to IMO on Resolution A.857 (20) –**

**Guidelines for Vessel Traffic Services**

###### ANNEX 1(to the Assembly Resolution): GUIDELINES AND CRITERIA FOR VTS

* All highlighted areas to be checked with task #10.

**PREAMBLE**

1 These Guidelines are associated with SOLAS Chapter V, Regulation 12 (Vessel Traffic Services) and describe the principles and general operational provisions for the operation of a vessel traffic service (VTS) and participating vessels.

2 Contracting Governments should take account of these Guidelines when planning, implementing and operating vessel traffic services.

3 These Guidelines should be used in conjunction with the applicable Guidelines and Criteria for Ship Reporting Systems, resolution MSC.43(64) as amended by resolutions MSC.111(73) and MSC.189(79) and the IALA VTS Manual.

1. **DEFINITIONS AND CLARIFICATIONS**
   1. The following terms are used in connection with vessel traffic services:

.1 Vessel Traffic Service (VTS) - a service implemented by a Competent Authority, designed to improve the safety and efficiency of vessel traffic and to protect the marine environment. The service should have the capability to interact with the traffic and to respond to traffic situations developing in the VTS area.

.2 Competent Authority - the Authority made responsible, in whole or in part, by the Government for maritime safety, including protection of the marine environment, and efficiency of vessel traffic.

.3 VTS Authority - the Authority with responsibility for the management, operation and co-ordination of the VTS and its interaction with participating vessels and the safe and effective provision of the VTS.

.4 VTS area - the delineated, formally declared service area of the VTS. A VTS area may be subdivided in sub-areas or sectors.

.5 VTS centre - the location from which the VTS is operated. Each sub-area of the VTS may have its own separate centre.

.6 VTS operator (VTSO) - an appropriately qualified person carrying out VTS operations on behalf of a VTS Authority.

.7 VTS Sailing Plan - a Plan that is mutually agreed between the VTS and the master of a vessel concerning the movement of the vessel in a VTS area.

.8 VTS traffic image - the surface picture of vessels and their movements in a VTS area.

.9 Types of VTS services - VTS should at least comprise an Information Service and may also include a Traffic Organization Service and/or a Navigational Assistance Service. These services defined as follows:

.9.1 An Information Service (INS)

.9.2 A Traffic Organisation Service (TOS)

.9.3 A Navigational Assistance Service (NAS)

.10 Allied services - are services actively involved in the safe and efficient passage of the vessel through the VTS area.

.11 Hazardous cargoes - include:

.11.1 Goods classified in the IMDG Code;

.11.2 Oils, noxious and harmful substances defined in MARPOL;

.11.3 Radioactive materials listed in the INF Code.

**2 GENERAL CONSIDERATIONS FOR VESSEL TRAFFIC SERVICES**

2.1 Objectives

2.1.1 The purpose of vessel traffic services is to improve the safety and efficiency of navigation, safety of life at sea and the protection of the marine environment and/or the adjacent shore area, worksites and offshore installations from possible adverse effects of maritime traffic.

2.1.2 A clear distinction may need to be made between a Port or Harbour VTS and a Coastal VTS. A Port VTS is mainly concerned with vessel traffic to and from a port, while a Coastal VTS is mainly concerned with vessel traffic passing through the VTS area. A VTS could also be a combination of a port or coastal VTS. The types of services rendered could differ between a port or harbour VTS and a coastal VTS.

2.1.3 The benefits of implementing a VTS are that it allows identification and monitoring of vessels, planning of vessel movements and where appropriate the provision of navigational information and assistance The efficiency of a VTS will depend on the reliability and continuity of communications and on the ability to provide timely and accurate information. The quality of service will depend on the VTS's capability to interact with the traffic and to respond to developing situations.

2.1.4. In addition VTS can contribute to:

1. The efficiency of related activities; and
2. Support Maritime Security. ; and
3. Assist in prevention of pollution and co-ordination of pollution response

2.1.5 The precise functions of any vessel traffic service will depend upon the particular circumstances in the VTS area and the volume and character of maritime traffic as set forth in 3.2 of these Guidelines and Criteria.

2.2 Responsibilities and Liability

2.2.1 Where two or more Governments have a common interest in establishing a VTS in a particular area, they should develop a co-ordinated vessel traffic service on the basis of an agreement between them. Where a co-ordinated vessel traffic service is established, it should have uniform procedures and operations.

2.2.2 In planning and establishing a VTS, the Contracting Government or Governments or the Competent Authority should:

.1 ensure that a legal basis for the operation of a VTS is provided for and that the VTS is operated in accordance with legislative requirements of the Contracting Governements;

.2 ensure that objectives for the VTS are set;

.3 ensure that a VTS authority is appointed and legally empowered;

.4 ensure that the services provided by the VTS authority are consistent with the IALA guidelines, recommendations, and manuals;

.5 ensure that a formal risk assessment is carried out;

.6 ensure that information covering the VTS area is up to date and available to vessels;

.7 ensure that the service area is clearly defined and declared as the VTS area; where appropriate, this area may be subdivided in sub-areas or sectors;

.8 determine the types of services to be provided, having regard to the objectives of the VTS;

.9 establish appropriate standards for shore- and offshore-based equipment;

.10 ensure that the VTS Authority is appropriately equipped with the equipment and facilities necessary to effectively accomplish the objectives of the VTS;

.11 ensure that the VTS Authority has sufficient qualified staff, suitably trained and capable of performing the tasks required, taking into consideration, the type and level of services to be provided and the current IMO Guidelines on the recruitment, qualifications and training of VTS operators given in Annex 2;

.12 establish appropriate standards for qualifications and training requirements [IALA model course V103] for VTS Operators, taking into consideration the type and level of services to be provided;

.13 ensure that standards for training VTS personnel meet the appropriate level and will need to provide the necessary accreditation and approval[[1]](#footnote-1);

.14 instruct the VTS Authority to operate the VTS in accordance with relevant IMO resolutions;

.15 establish a policy with respect to violations of VTS regulatory requirements, and ensure that this policy is consistent with national law. This policy should consider the consequences of technical failures, and due consideration should be given to extraordinary circumstances that result.

2.2.3 In operating a VTS the VTS Authority should:

.1 ensure that the objectives of the VTS are met;

.2 ensure that the standards set by the Competent Authority for levels of services and operator qualifications and equipment are met;

.3 ensure that the VTS is operated in conformity with relevant IMO resolutions;

.4 ensure that the VTS operations are harmonised with, where appropriate, ship reporting and routeing measures, aids to navigation, pilotage and port operations;

.5 consider, where appropriate, the participation of the pilot both as a user and provider of information;

.6 ensure that a continuous listening watch on the designated radio frequencies is kept and that all published services are available during the operational hours of the VTS;

.7 ensure that operating procedures for routine and emergency situations are established;

.8 in a timely manner, provide mariners with full details of the requirements to be met and the procedures to be followed in the VTS area.

This information should include but is not limited to, the following:

1. categories of vessels required or expected to participate;
2. radio frequencies to be used for reporting;
3. areas of applicability;
4. the times and geographical positions for submitting reports;
5. the format and content of the required reports;
6. the VTS authority responsible for the operation of the service;
7. any information, advice or instructions to be provided to participating ships; and
8. the types and level of services available.

This information should be promulgated to vessels in internationally recognized marine publications and in the "World VTS Guide"[[2]](#footnote-2).

2.2.4 The liability element of an accident following compliance with VTS guidance is an important consideration which can only be decided on a case-by-case basis in accordance with national law. Consequently, a VTS Authority should take into account the legal implications in the event of a shipping accident where VTS operators may have failed to carry out their duty competently.

2.2.5 Contracting Governments should ensure that ships flying their flag comply with the requirements of VTS. Those Contracting Governments which have received information of an alleged violation of a VTS, or report of a near miss, by a ship flying their flag should provide the Government which has reported the offence, or near miss, with details of any appropriate action taken.

2.3 VTS services

The following guidance concerning the services that are rendered by a VTS should be taken into account:

2.3.1 *Information Service.* An Information Service provides essential and timely information to assist the on-board decision-making process.

2.3.2 The *Traffic Organization Service*. A Traffic Organization Service is a service to provide for the safe and efficient movement of traffic and to identify and manage potentially dangerous traffic situations. A Traffic Organization Service provides essential and timely information to assist the on-board decision-making process and may advise, instruct or exercise the authority to direct movements..

2.3.3 The *Navigational Assistance Service.* A Navigational Assistance Service may be provided in addition to an Information Service and/or Traffic Organization Service. A Navigational Assistance Service is provided at the request of a vessel, or when deemed necessary by the VTS and provides essential and timely navigational information to assist the on-board decision-making process and may inform, advise and/or instruct vessels accordingly.

2.3.4 When the VTS is authorized to issue instructions to vessels, these instructions should be result-oriented only, leaving the details of execution, such as course to be steered or engine manoeuvres to be executed, to the master or pilot on board the vessel. Care should be taken that VTS operations do not encroach upon the master's responsibility for safe navigation, or disturb the traditional relationship between master and pilot.

2.3.5 A VTS area can be divided into sectors, but these should be as few as possible. Area and sector boundaries should not be located where vessels normally alter course or manoeuvre or where they are approaching areas of convergence, route junctions or where there is crossing traffic. The recommended VTS centre name identifier should be either ‘Location VTS’ or ‘VTS Location’, sectors within a VTS area should be identified separately or have the same name identifier[[3]](#footnote-3). The boundaries should be promulgated to vessels in internationally recognised marine publications and in the "World VTS Guide[[4]](#footnote-4)".

2.4 Communication and Reporting

2.4.1 Communication between a VTS Authority and a participating vessel should be conducted in accordance with the Guidelines and Criteria for Ship Reporting Systems and should be limited to information essential to achieve the objectives of the VTS[[5]](#footnote-5). IMO Standard Marine Communication Phrases (SMCP) should be used.

2.4.2 In any VTS message directed to a vessel or vessels it should be made clear whether the message contains information, advice, warning, or an instruction by the use of the IMO Standard Marine Communication Phrases[[6]](#footnote-6).

2.5 Organisation

2.5.1 Elements of a VTS

2.5.1.1 In order to perform the required tasks a VTS Authority requires: appropriately qualified staff; suitable accommodation; adequate instrumentation; and appropriate procedures governing operations and interactions between the various VTS responsibilities. The requirements in each area of responsibility are determined by the particular nature of the VTS area, the density and character of the traffic and the type of service that is to be provided. Consideration should be given to the establishment of back-up facilities to sustain and maintain the desired level of reliability and availability.

2.5.2 Tasks that may be performed

2.5.2.1 A VTS should at all times be capable of generating a comprehensive overview of the traffic in its service area combined with all traffic-influencing factors. The VTS should be able to compile a traffic image, which forms the basis of its capability to respond to traffic situations developing in its service area. The traffic image allows the VTS operator to maintain situational awareness, evaluate developing situations and make decisions accordingly.

Data should be collected to compile the traffic image, this includes:

.1 data on the fairway situation, such as meteorological and hydrological conditions and the operational status of aids to navigation;

.2 data on the traffic situation, such as vessel positions, movements, identities and intentions with respect to manoeuvres, destination and routeing;

.3 data of vessels in accordance with the requirements of ship reporting and if necessary any additional data, required for the effective operation of the VTS.

2.5.2.2 The acquired data should be processed and evaluated to enable the VTSO to respond to traffic situations developing in the VTS area and to decide upon appropriate actions. Conclusions from the evaluation need to be communicated to participating vessels. SMCP Message Markers should be used to relay information.

2.5.3 Operating Procedures[[7]](#footnote-7)

Where operating procedures are concerned, a clear distinction should be made between internal and external procedures.

***Internal Procedures*** *– procedures that cover the day-to-day running of a VTS centre or separate centre, including the operation of systems and sensors, interactions among the staff and the internal management of data.*

***External Procedures*** *– procedures that govern the interaction with participating vessels and allied services.*

A further distinction should be made between procedures governing the daily routine and procedures governing contingency planning such as search and rescue and environmental protection activities. All operational procedures, routine or contingency, should be laid down in handbooks or manuals and be an integral part of regular training exercises. Adherence to procedures should be monitored.

2.5.4 Information Management

A VTS authority should have an information management system with the capacity to retain, update, supplement and retrieve data once collected. Any data retained in a system for further use should be made available on a selective and secure basis.

2.6 Participating Vessels

2.6.1 Vessels navigating in an area where vessel traffic services are provided should make use of these services. Depending upon governing rules and regulations, participation in a VTS may be either voluntary or mandatory.

2.6.2 Decisions concerning the actual navigation and the manoeuvring of the vessel remain with the master. A VTS Sailing Plan or changes to that Sailing Plan does not supersede the decision of the master concerning the safe navigation of the vessel.

2.6.3 Voice communication with the VTS and other vessels should be conducted on the assigned frequencies in accordance with established ITU and SOLAS chapter IV (Radio Communications) procedures, in particular where a communication concerns intended manoeuvres. VTS procedures should stipulate what communications are required and which frequencies should be monitored. Prior to entering the VTS area, vessels should make all required reports, including reporting of deficiencies. During their passage through the VTS area, vessels should adhere to governing rules and regulations, maintain a continuous listening watch on the assigned frequency and report deviations from the agreed Sailing Plan, if such a plan has been established in co-operation with the VTS authority.

2.6.4 Communications, other than by voice, such as via AIS, email, internet and SATCOMS, may also be used to send required vessel data to the VTS.

2.6.5 Masters of vessels shall report any observed dangers to navigation or pollution to the VTS centre.

2.6.6 In case of communication failure of the vessel the master shall endeavour to inform the VTS centre and other vessels by other available means that the vessel is unable to communicate. If the technical failure prevents the vessel from participation or continuing its participation in a VTS, the master should enter in the vessel's log the fact and reasons for not or further participating.

2.6.7 Vessels should keep up to date information on governing rules and regulations regarding identification, reporting and/or conduct in the VTS area to be entered.

**3 GUIDANCE FOR PLANNING AND IMPLEMENTING VESSEL TRAFFIC SERVICES**

* 1. Responsibility for planning and implementing a VTS

* + 1. It is the responsibility of the Contracting Government or Governments or Competent Authorities or VTS Authority to plan and implement VTS or amendments to such services.

3.2 Guidance for planning a VTS

3.2.1 Local needs for traffic management should be carefully investigated and determined by analysing casualties, assessing risks and consulting local user groups. Where a VTS is considered to be the most appropriate instrument to address the risks identified in the area, then its implementation should be considered.

3.2.2 A VTS is particularly appropriate in an area that may include any of the following:

.1 high traffic density;

.2 traffic carrying hazardous cargoes;

.3 conflicting and complex navigation patterns;

.4 difficult hydrographical, hydrological and meteorological elements;

.5 shifting shoals and other local hazards;

.6 environmental considerations;

.7 interference by vessel traffic with other marine-based activities;

.8 a record of maritime casualties;

.9 existing or planned vessel traffic services in adjacent waters and the need for co-operation between neighbouring States, if appropriate;

.10 narrow channels, port configuration, bridges and similar areas where the progress of vessels may be restricted;

.11 existing or foreseeable changes in the traffic pattern resulting from port or offshore terminal developments or offshore exploration and exploitation in the area.

3.2.3 In further deciding upon the establishment of a VTS, Contracting Governments or Competent Authorities should also consider the responsibilities set forth in 2.2 of these Guidelines and Criteria, and the availability of the requisite technology and expertise.

3.3 Further guidance on vessel traffic services

3.3.1 VTS Authorities should, in the planning of the VTS to be established, make use of available manuals prepared by and published by appropriate international organisations or associations.

The following references should also be consulted for further details:

.1 IMO Guidelines and Criteria for Ship Reporting Systems (resolution MSC.43(64), as amended by resolutions MSC.111(73) and MSC.189(79));

.2 General Principles for Ship Reporting Systems and Ship Reporting Requirements, including Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants (resolution A.851(20));

.3 IALA guidelines and recommendations relating to VTS, and the VTS Manual;

.4 IALA/IMPA/IAPH/World VTS Guide.

1. Refer to IALA Guideline No 1014 – *‘Accreditation of VTS Training Institutes for Training VTS Personnel.’* [↑](#footnote-ref-1)
2. Refer to MSC Circular 586/Rev.1 on the IALA/IAPH/IMPA World VTS Guide. [↑](#footnote-ref-2)
3. Refer to IALA Guideline No 1083 – *‘On Standard Nomenclature to identify and refer to VTS centres Edition 1.’* [↑](#footnote-ref-3)
4. Refer MSC Circular 586 on the IALA/IAPH/IMPA World VTS Guide [↑](#footnote-ref-4)
5. Refer to the Guidelines and Criteria for Ship Reporting Systems, Para 2.2, Communication (IMO Resolution MSC 43(64)) [↑](#footnote-ref-5)
6. Refer to the Guidelines and Criteria for Ship Reporting Systems. Resolution MSC.43(64) , as amended by resolutions MSC.111(73) and MSC.189(79). [↑](#footnote-ref-6)
7. Refer to IALA Recommendation V-127 – Operational Procedures for VTS [↑](#footnote-ref-7)