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| IALA Guideline |

G1141

Operational Procedures for Vessel Traffic Services

Edition 1

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# INTRODUCTION

The purpose of vessel traffic services is to contribute to safety of life at sea, safety and efficiency of navigation and the protection of the marine environment within the VTS area by mitigating the development of unsafe situations.

VTS providers are responsible for ensuring that the objectives set by the competent authority are met (IALA Guidline G1131 – Setting and Measuring VTS Objectives). . The authority delegated to VTS staff should be clearly identified in the documented operational procedures of a VTS. Such procedures should be an integral part of a verifiable Safety Management System (SMS) or any other applicable standards for the VTS.

This Guideline has been prepared to assist in identifying key aspects that should be considered when developing operational procedures for a VTS centre. The list is neither mandatory nor exhaustive and should be adapted to suit individual needs. In preparing this Guideline it is recognised that:

* The nature of the tasks and activities to be performed will depend on the capability of the VTS, the VTS area and the level of services to be provided. In general, these tasks and activities all involve collecting, processing, evaluating and disseminating information. The collection and dissemination of this information will involve both internal and external communications, while information will be processed within the VTS centre itself. The level of decision-making that can be taken within the VTS centre should be clearly identified.
* The objectives of the VTS can only be met through co-operation and trust among users of the service, VTS personnel and allied services. This can only be achieved through the reliability of the VTS information, which is dependent on the assured availability, continuity and quality of the service provided to all stakeholders.

A clear distinction is made in this document between internal and external procedures.

***Internal Procedures*** *– procedures that cover the day-to-day running of a VTS centre, including but not limited to the operation of systems and sensors, interactions among the staff and the internal managementetc.*

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

A further distinction is made between routine and emergency procedures.

To achieve a standardised operations/performance within the VTS centre, clearly defined operating procedures are paramount. This will assist the user in understanding information or instructions given by the VTS.

It is recommended that the operating procedures are documented and updated in electronic and / or printed version. The records of updates should be kept. Updated procedures should be available to VTS personnel in all applicable locations. These standard operating procedures should be an integral part of training and adherence should be monitored.

To achieve collaboration, it is recommended that these procedures (or part of them) may be shared with allied services.

# Internal VTS Procedures

VTS provider should develop and document procedures for all operations, both routine and emergency, internal to the VTS. The following are examples of the type of operational activities for which procedures should be developed; the list is neither mandatory nor exhaustive.

## Routine Procedures

### Gathering and Recording of Information

The period of time for which information gathered by a VTS is required to be stored should be identified in internal procedures. This time period should be such that it allows for the full retrieval of data post-incident/accident, in compliance with national requirements and those of the incident/accident investigation procedures of the VTS authority and other interested parties. This type of information may include:

* Communications (internal and/or external);
* Sensor data (i.e. data used to generate the traffic image such as radar, CCTV, AIS);
* Shipping information data (e.g. vessel and cargo data, including vessel movement information);
* Meteorological and hydrological data; and
* Data from other sources.

Provision should be made for the storage, security, retrieval and presentation of this information.

### Operational Staff

The operational staff at any time should be based upon safe and efficient operations in the VTS area to meet the operational needs and should be reflected in the human resource planning, including staff rotation and rest period arrangements within any given shift or watch. IALA Guideline G1045 – Staffing Levels at VTS Centres – refers.

### Equipment Operation, Maintenance, Calibration and Updating

All manuals and handbooks for equipment operation, maintenance (preventative and remedial), calibration and updating should be properly maintained and be readily available to the appropriate personnel.

Key considerations include:

* Operation of equipment, to cover all normal and emergency procedures;
* Determination of acceptable availability criteria for equipment;
* Categorisation and prioritisation of maintenance and defects;
* Calibration of all sensors within specified tolerance level; and
* Updating of equipment (hardware and software) and their associated manuals/handbooks.

### Interaction with Allied Services

This should include interaction with, for example:

* Pilots;
* Tug operators;
* Shipping agents;
* Government agencies, including law enforcement agencies; and
* Commercial organisations.

### Public Relations

There should be a documented policy for dealing with the media and public. Issues for consideration may include:

* Nominated lead agency for public relations; and
* Protection of sensitive information.

### Security

Procedures should be in line with local and national requirements and should be clearly documented. They should, as a minimum, ensure the security:

* Data transmission and storage (e.g. Cyber Security);
* VTS personnel; and
* VTS buildings and structures.

Procedures should reflect any involvement of the VTS with the PFSP (Port Facility Security Plan) as per the International Ship and Port facility Security Code (ISPS).

### Training

There should be arrangements for regular assessments and application of appropriate measures for compliance in accordance with IALA Recommendation R0103 – Standards for Training and Certification of VTS Personnel.

### Watch Handover

Watch handover arrangements should be formalised and include, as an example, information on:

* Present traffic situation;
* Expected / developing traffic situations;
* Incidents and special operations (e.g. SAR or military operations);
* Environmental conditions;
* Equipment performance / availability;
* Status of allied services;
* Personnel availability;
* Appropriate times for watch handover; and
* Method for documenting the handover.

### Vessel Handover

The arrangements for vessel handover between adjacent sectors should be clearly laid down. Components may include:

* Mutual understanding of the handover procedures;
* Identification of information to be communicated between operators (e.g. communication channel, vessel identification, etc.);
* Method for documenting the handover.

### Maintenance of Marine Publications

A VTS provider should ensure that arrangements are in place for maintaining, updating and disseminating nautical and associated publications (paper and electronic).

## Emergency Procedures

A VTS provider should have documented contingency plans to ensure the safety of VTS personnel and for the continuity of operations in the event of an emergency. The authority should have plans to address events such:

* System and equipment Failure:
* Loss of external communications;
* Loss of internal communications;
* Loss of functionality of sensor equipment;
* Loss of information management systems.
* Internal emergencies, for example fire and flood;
* Forced evacuation of VTS centre;
* Personnel medical emergencies; and
* Security incidents.

The following may be included in these plans:

* Remedial action;
* Callout procedures;
* Fall-back options;
* Recording of incident;
* Data safeguarding;
* Post-emergency debriefing.

# External VTS Procedures

VTS providers should develop procedures governing routine operations external to the VTS, covering interactions between the VTS, participating vessels and allied services. External information exchange should be standardised as much as possible. In communications with participating vessels, the, IMO Standard Marine Communication Phrases (SMCP) (reference Resolution A.918(22)) and IALA Guideline G1132 – VTS VHF Voice Communication - should be used whenever applicable.

The following topics may be considered for inclusion. The list is neither mandatory nor exhaustive and should be adapted to suit local needs.

## Routine Procedures

### Pre-Arrival Information

Pre-arrival information is basic information regarding the vessel and its intent to enter the VTS area. The VTS provider and / or Competent Authority should specify the format and timing of pre-arrival information. Aspects for consideration may include:

* Contents of Pre-arrival:
* Route information;
* ETA;
* Vessel Identity (Name, IMO number, Call Sign, MMSI);
* Vessel dimensions i.e. LOA, LBP, beam etc;
* Vessel drft;
* Air draft
* Hazardous, dangerous or polluting cargo details;
* ISPS security level;
* Information about any vessel defects or deficiencies; or
* Other specified details.
* Communication requirements for participating vessels;
* Processes to ensure advanced information has been obtained;
* Procedures for non-compliance; and
* Procedures for information exchange with allied services.

### Vessels Entering VTS Area

When a vessel enters the VTS Area procedures for the following actions should be considered:

* Procedures for establishing communications and verifying vessel identity, position and intention;
* Requirements for information exchange, which may include:
* Confirm reporting requirements;
* Provide relevant traffic information;
* Provide navigational / fairway information;
* Compliance with International and National requirements (charts and publications, voyage or passage plans, defects or deficienciess such as navigation or manoeuvring equipment failure).
* Procedures for updating information with allied services.

### Vessels Within VTS Area

Procedures should be established for vessels transiting a VTS area. These may include:

#### Mandatory Participation

* Identification of reporting requirements;
* Provision or exchange (AIS, VDES or other means) of relevant information to participating vessels at regular intervals or on demand or deemed necessary by the VTS, including:
* Environmental conditions;
* Traffic situation;
* Navigational conditions;
* Traffic separations/overtaking restrictions;
* Warnings and restrictions concerning the movement of traffic in the area.
* Special provisions for vessels carrying hazardous, dangerous or polluting cargo;
* Compliance with pilotage directions and with IMO requirements regarding Pilot transfer arrangements;
* Procedures for non-compliance; and
* Procedures for information exchange/update on allied services.

#### Voluntary Participation

* Track/monitor and communicate with vessels not required to participate in the VTS; and
* Procedures for information exchange/update on allied services.

### Vessels at Anchor

Procedures should be established for vessels at anchor in a VTS area. Depending on the capability of the VTS to monitor the vessel position under prevailing conditions, these may include:

* Anchorage assignment;
* Communication requirements;
* Reporting requirement for vessels prior to leaving the anchorage;
* Non-compliance by a vessel with the requirements and procedures laid down for the VTS area; and
* Procedures for information exchange/update on allied services.

### Vessels at Berth

Procedures should be established for vessels at berth in a VTS area. Depending on the capability of the VTS to monitor the vessel position under prevailing conditions, these may include:

* Reporting requirements for vessels on arrival at berth;
* Security requirements and/or level;
* Special requirements to maintain communications watch;
* Need for restrictions for other vessels passing the berth;
* Reporting requirement for vessels prior to leaving the berth;

Non-compliance by a vessel with the requirements and procedures laid down for the VTS area; and

* Procedures for information exchange/update on allied services.

### Vessels Departing the VTS Area

Procedures should be established for vessels departing the VTS area. These may include:

* Reporting requirement for vessels prior to departing the area;
* Non-compliance with the VTS area requirements; and
* Handover requirements with adjacent or next VTS.

### Transition between Adjacent VTS Areas

Procedures should be established for vessels transiting between adjacent VTS areas. The handover arrangements may include:

* Transfer of vessel information such as identification, cargo, destination and ETA
* Process for communication procedures; and
* Process to ensure vessel monitoring.

### Adverse Environmental Conditions

In situations of adverse environmental conditions within the VTS area, such as poor visibility, strong currents or tidal streams, high winds, ice etc. special procedures may be required. These may include:

* Restriction or prohibition on movement;
* Additional reporting requirements;
* Additional separation between vessels;
* Additional requirements (e.g. mandatory tug service, pilot, etc.).

Special consideration may need to be given depending on vessel characteristics and local geography and conditions.

## Emergency Procedures

The activities of the VTS centre should be maintained during any emergency response.

Other authorities (e.g. Maritime Rescue Co-ordination Centre (MRCC)) might be responsible for handling external emergencies within the VTS area. In that case procedures on the interaction between the VTS and these authorities need to be established.

### Collision, Capsizing, Sinking, Grounding, Fire onBOARD, Man Overboard

Procedures should be established to deal with situations such as collision, capsizing, sinking, grounding, fire onboard, man overboard, which may include the following actions:

* Alert MRCC;
* Inform and co-operate with relevant emergency services;
* Inform relevant regulatory authority/ies;
* Act on local call-out procedures;
* Consider back-up VTS personnel;
* Promulgate or relay information concerning situations with vessels in VTS area;
* Restrict traffic in the area;
* Activate tugs and other support units; and
* Ensure all recording equipment is operating correctly.

### Pollution

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

* Alert relevant environmental authority and/or service(s);
* Alert relevant response authority and/or service(s)
* Inform and co-operate with relevant regulatory authority/ies;
* Assess scale of incident and call in specialist support, as appropriate;
* Promulgate information concerning incident to vessels in VTS area; and
* Restrict traffic in the area.

### Places of Refuge

Places of Refuge procedures should 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.

### Medical Emergency

Procedures for medical emergencies should be established. Actions may include:

* Inform MRCC ;
* Inform coastal radio station;
* Consider special manoeuvring requirements.

### Vessel Not Under Command (NUC)

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

* Promulgate information concerning incident to vessels in the VTS area;
* Obtain detailed information about onboard situation;
* Maintain communication with vessel;
* Assess vessel’s proximity to danger (danger to vessel itself and other traffic);
* Activate tugs and other support units, if appropriate.

### Security Incident

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

### Protest Action

Procedures should 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 but not limited to VTS manager;
* Promulgate information concerning incident to vessels in the VTS area.

Throughout any protest action, the safety of ships and protestors is paramount.

### Natural Disaster

Natural disaster procedures should be established to deal with situations such as earthquake, tidal wave, fire, exceptional weather conditions. Actions may include:

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