



# THE REVISION ON IMO RESOLUTION A.857(20) GUIDELINES FOR VESSEL TRAFFIC SERVICES

Key areas



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# **1. Role of Competent Authority / VTS Authority**

Explanation and Panel Discussion

Monica Sundklev



# 1. Role of Competent Authority/ VTS Authority

## Explanation and Background

*The current resolution is overly prescriptive on the responsibilities of the Competent Authority and VTS Authority. It does not recognize that circumstances may differ due to international/national law, geographical characteristics, traffic density/diversity, accessibility and environmental conditions. (MSC 99-20-3)*

- Following issues have been identified (in general):
  - Misunderstanding on the responsibilities between the Government and the Competent Authority.
  - Misunderstandings of responsibilities and debate between the two different authorities (CA+VTSA).
  - Misunderstandings onboard on how to respond to the VTS Centre when navigating in a VTS area.
- Result is that:
  - Competent Authorities are not legally appointed and authorized to regulate VTS.
  - Unclear of who is the Competent Authority.
  - VTS Authorities are not being appointed and not being audited and VTS operations may not be harmonized and quality ensured.
  - Several of the listed responsibilities could be the responsibility of either the CA or VTSA.
  - Participating ships navigating in different VTS areas are uncertain of what is expected of them.



# 1. Role of Competent Authority/ VTS Authority

Explanation and Background

*Please write your answer using the SLIDO ([www.sli.do](http://www.sli.do))*

- Question 1: **What type of organization are you representing at this Seminar?**

Choose one of the below:

- (Contracting) Government
- Competent Authority
- Competent Authority - legally appointed with authority to regulate VTS
- VTS Authority
- VTS Authority - legally appointed by the Government or the Competent Authority to operate a VTS
- Other



# 1. Role of Competent Authority/ VTS Authority

## Explanation and Background

Purpose of the roles and responsibilities within the revised resolution:

- Assist Contracting Governments and Competent Authorities to meet their obligations under SOLAS regulation V/12
- Clarify that the Competent Authority is for VTS including the responsibilities
- VTS Authority renamed to VTS provider (responsible for VTS operations) in order not to be confused with the Competent Authority.
- Clarify what is expected of participating ships

Challenge:

- Describe the different roles and responsibilities so that it may suit every country and every type of organization structure.



# 1. Role of Competent Authority/ VTS Authority

## Explanation and Background

*Revision proposal:*

### **4.1 The Contracting Government should:**

- .1 promulgate laws and regulations to establish a legal basis for VTS that gives effect to international law and SOLAS regulation V/12;*
- .2 appoint and authorize a competent authority for VTS;*
- .3 take appropriate action against a ship flying its flag that is reported not to have complied with the provisions of a VTS; and*
- .4 take account of future technical and other developments recognized by the Organization relating to VTS.*



# 1. Role of Competent Authority/ VTS Authority

## Explanation and Background

*Revision proposal:*

### **4.2 The Competent Authority for VTS should:**

- .1 establish a regulatory framework for establishing and operating VTSs in accordance with relevant international conventions and IMO instruments, IALA standards and national law;*
- .2 authorize a VTS provider to operate a VTS within a delineated VTS area in accordance with national and international law;*
- .3 ensure that VTS training and certification is accredited and approved in accordance with the standards acceptable to the Organization; and*
- .4 establish a compliance and enforcement framework with respect to violations of VTS regulatory requirements.*





# 1. Role of Competent Authority/ VTS Authority

## Explanation and Background

*Revision proposal:*

### **4.3 The VTS provider should:**

- 1. ensure the VTS conforms with national law and the regulatory framework set by the competent authority for VTS;*
- .2 set operational objectives for the VTS that are consistent with improving the safety and efficiency of vessel traffic and protection of the environment. The objectives set should be routinely evaluated to demonstrate they are being achieved;*
- .3 ensure that appropriate equipment, systems and facilities are provided;*
- .4 ensure that VTS personnel are appropriately trained and qualified; and*
- .5 ensure that information regarding the requirements and procedures of the VTS are promulgated in appropriate nautical publications.*



# 1. Role of Competent Authority/ VTS Authority

## Explanation and Background

*Revision proposal:*

### **4.4 Participating ships in a VTS area should:**

- .1 provide information required by the VTS;*
- .2 take into account advice provided by the VTS; and*
- .3 comply with the provisions and instructions given to the ship by the VTS unless contradictory safety reasons exist. Masters may be required to report on their actions should they decide to disregard any instruction, advice or request given by a VTS.*



# 1. Role of Competent Authority/ VTS Authority

Panel discussion

Request for feedback / questions regarding the role of Competent Authority / VTS Authority (VTS provider)?

*Please write your question using the SLIDO ([www.sli.do](http://www.sli.do))*



## 2. Changing traditional boundaries

Explanation and Panel Discussion

Pieter Paap



## 2. Changing traditional boundaries

### Explanation and Background

(MSC 99-20-3)(Submission to the IMO – proposed task to rewrite Resolution A.857(20)

Coastal States are increasingly providing VTS beyond territorial seas (e.g. in the approach to ports) as a means to ensure the safety, security and efficiency of navigation and the protection of the marine environment in a domain with increasingly diverse utilization of space.

Whilst SOLAS regulation V/12 (Safety of navigation) states clearly that VTS may only be made **mandatory** within territorial waters, **the resolution is silent on the many ways that a VTS might contribute** to the safety of vessel traffic and the protection of the environment beyond territorial waters or in international straits, without being mandatory.

# Rapidly changing maritime domain (Risks and Needs)



- Increase of Maritime Transport



- Increase diversity of ships



- Larger / faster ships



- Increasing demands for alternative utilization of the seas

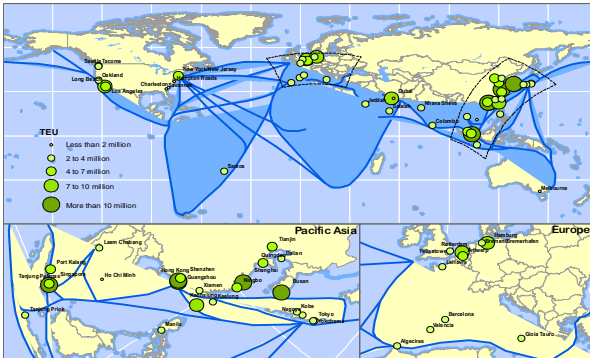


- Increasing public/political awareness after accidents with major impact



- Decrease navigable space
- Increase of safety risks
- Accessibility adjacent sea areas and ports under pressure
- Increasing risks marine environment

- Increasing demands for enhanced
  - traffic management and monitoring
  - Interaction shore/ship



- Globalization of shipping industry

- Increase demands optimizing connection to the logistic chain

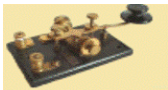
Enhance efficiency, need for:

- ☐ planning tools,
- ☐ **more reliable, timely data and information**
- ☐ **standardized reporting**
- ☐ decrease administrative burden



Increasing user needs

- ☐ **new services/applications,**
- ☐ decision-making tools,
- ☐ software and hardware

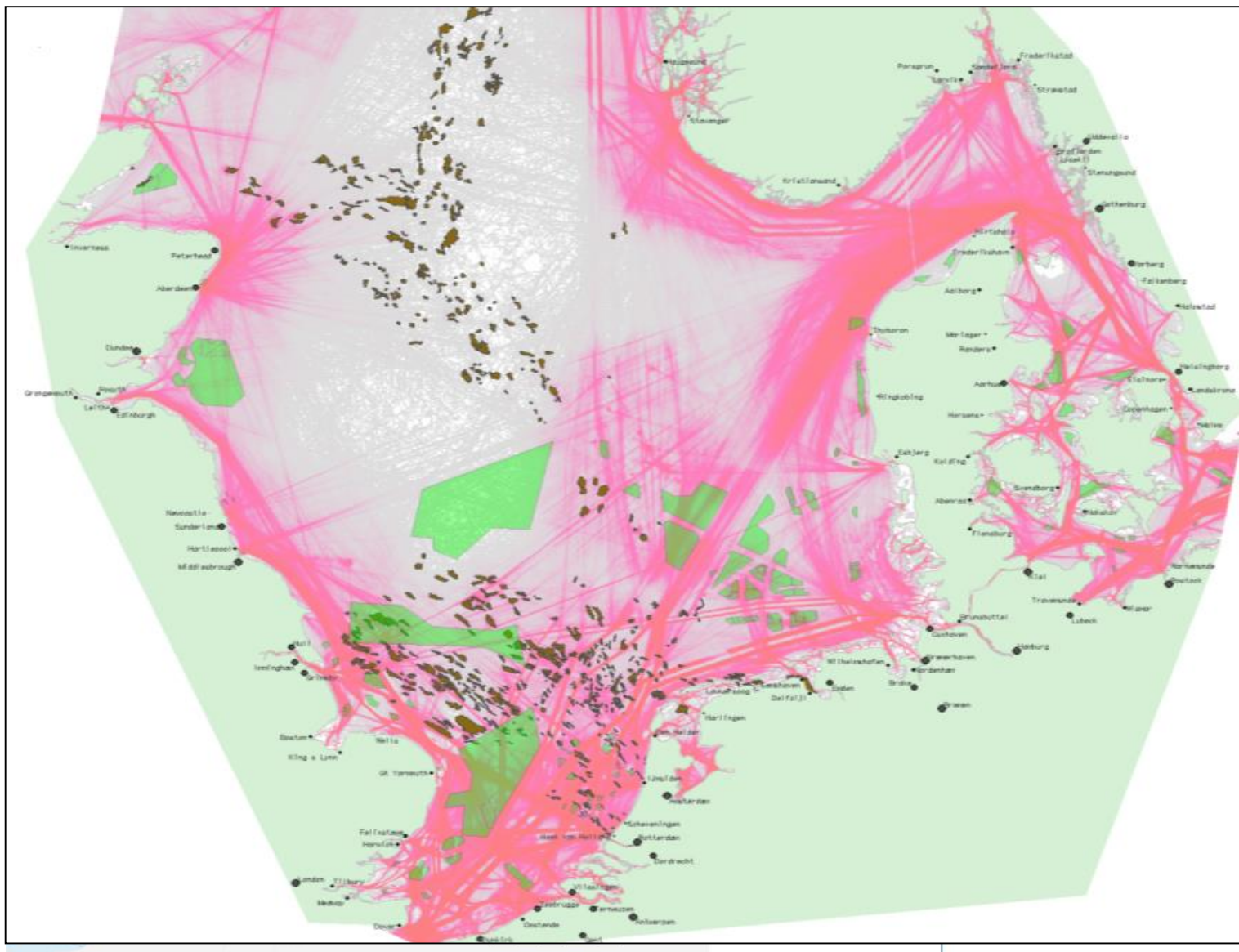


30 years



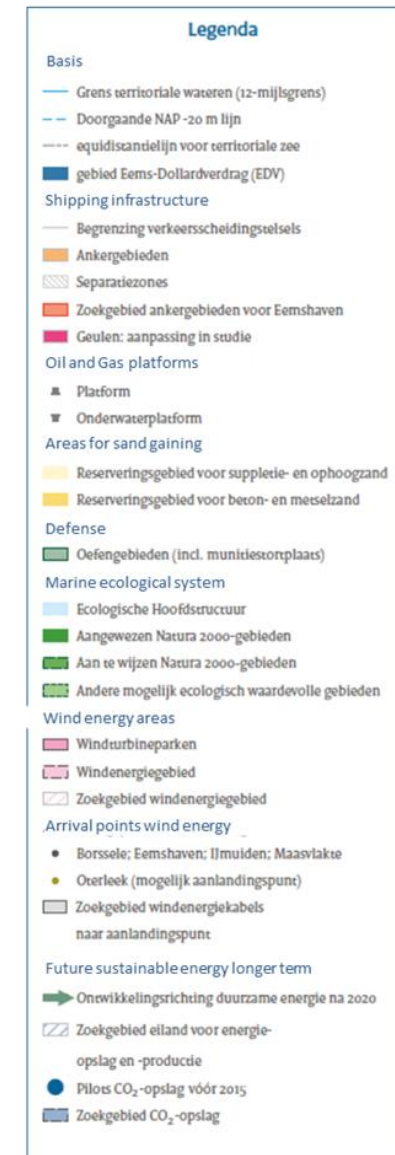
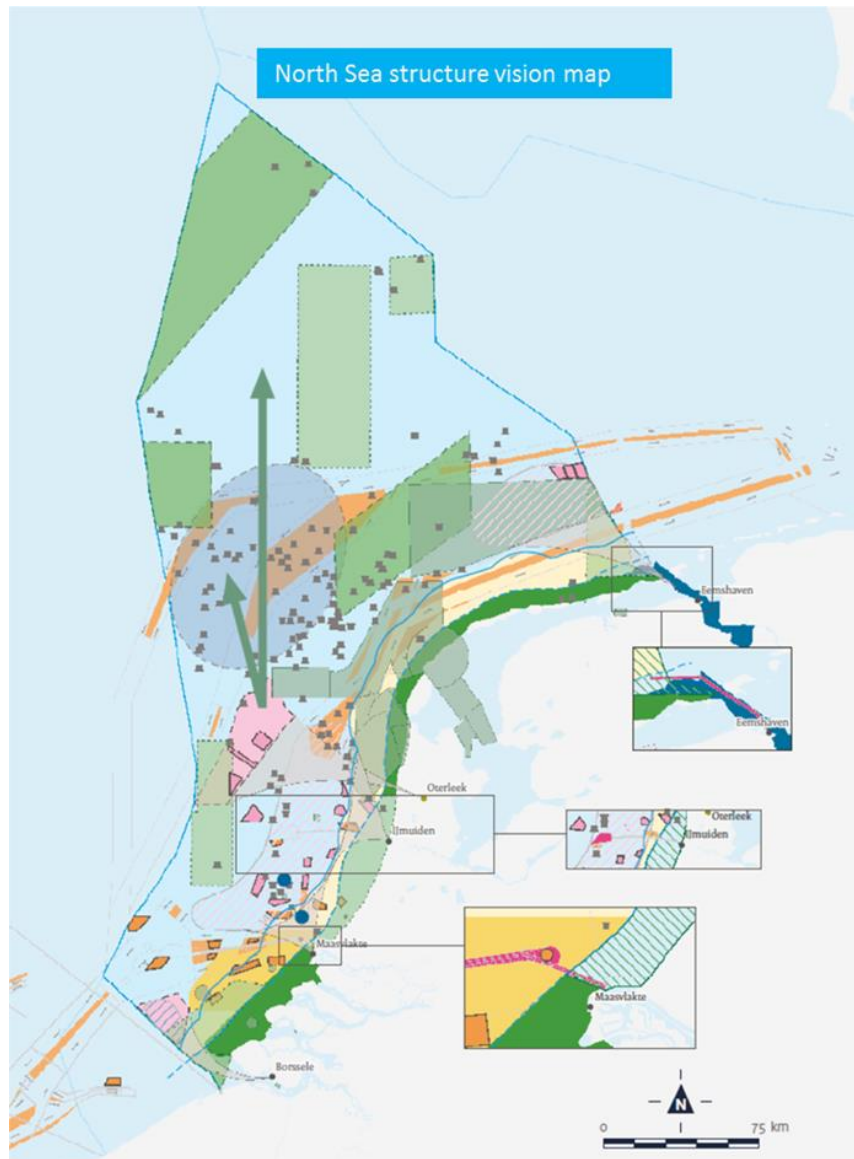
- Rapid developments of (new) technology and its potential use

Just an example of the need for VTS outside 12 miles zone





# Just an example of the need for VTS outside the 12 miles zone





## SOLAS V, Regulation 12, article 3

Contracting Governments planning and implementing VTS shall, wherever possible, follow the guidelines developed by the Organization\*.

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

No change

### Solution

## Draft text reviewed Resolution A.857(20), article 3.4

A VTS may be established beyond the territorial seas of a coastal State on **the basis of voluntary participation**.

Such a VTS may be established in association with an IMO adopted ships' routing system or mandatory ship reporting system, in accordance with SOLAS regulations V/10 and V/11, respectively.

To mitigate risks  
and  
to meet the needs



# **Ships Reporting Systems in combination with VTS worldwide**

**Based on one or several of the mentioned developments, facts and needs Governments and/or Authorities in many parts of the world,**

**with the goal to ensure the safety of navigation, the efficiency of shipping and the protection of marine life and environment,**

**have established**

**an IMO adopted ships' routing system or a mandatory Ship Reporting System (SRS)**

**in accordance with**

- SOLAS regulations V/10 and V/11, respectively,**
- the Guidelines and Criteria for SRS - MSC43(64)**
- the General Principles for SRS - A.851(20)**

**South Korea  
(KOSREP)**

**Iceland  
(TRANSREP)**

**Japan  
(JASREP)**

**Singapore  
(STRAITREP)**

**China  
(e.g. Xiamen)**

**Sweden/DK  
(SOUNDREP)**

**Norway  
(Barents SRS)**

**Australia  
(REEFREP)**

**Finland  
(GOFREP)**

**France  
(Strait of  
Bonifacio)**

**USA  
(Whales  
North/South)**

**Indonesia  
(Lombok and  
Sunda Strait)**

**UK/France  
(CALDOVREP)**

**UK/France  
(MANCHEREP)**

**UK/France  
(OUESSREP)**

**and many others (over 24).....**



## WHERE?

Partly outside territorial waters or in international waters

Highly dense traffic areas (harbour approaches, crossings, TSS, Deep water routes, environmental sensitive areas, anchorages)

The majority

- (partly) within the coverage of shore-based infrastructure or sensor systems
- operated by one or more VTS centers

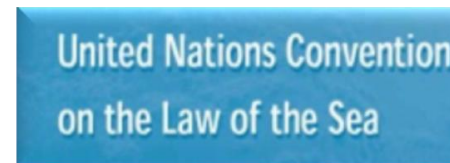
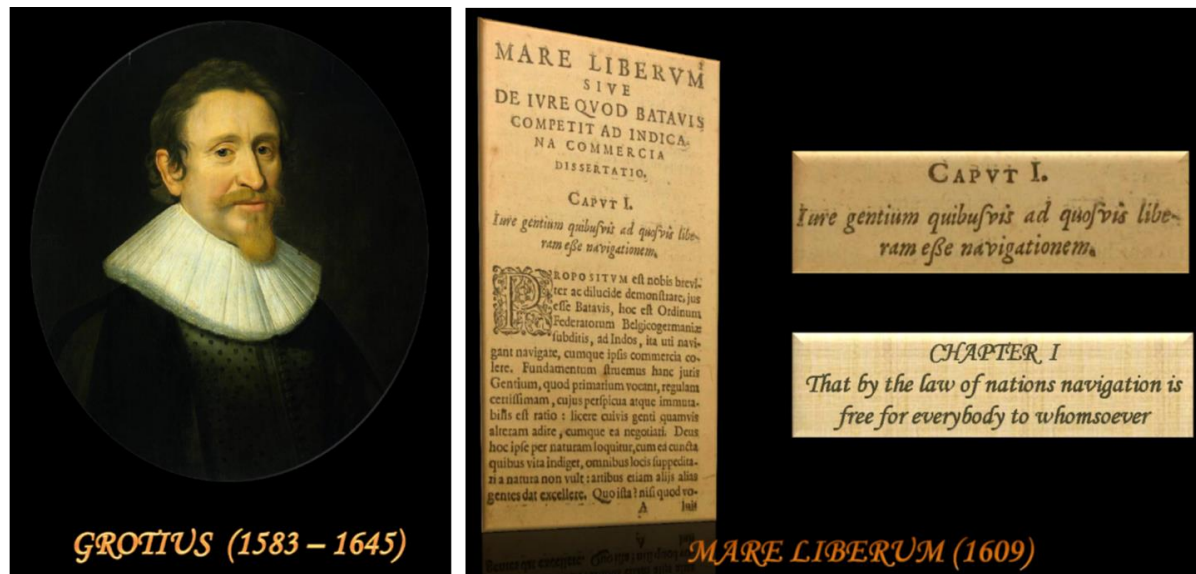
Benefits:

- Capabilities
  - to interact with participating ships in a system and a shore-based authority
  - to monitor and analyze (wider) traffic images
- Well trained and qualified personnel in accordance with IMO recognized standards
- Recognized and harmonized operating procedures and processes
- Due to the recognized increasing role and position of VTS the accessibility to data and information from numerous sources (ship-borne and shore-based stakeholders)



## Panel discussion

- Q: Does VTS outside the territorial waters have an impact on the UNCLOS principles “*Innocent Passage*” and “*Freedom of Navigation*”?
- A: No. Only one may wonder whether the “*Freedom of Navigation*” in certain areas is still realistic and contributing to safe and efficient shipping.



Principle over 400 years old! Based on infinite space and these types of ships.

27 June 2019



## Panel discussion

Q: Does VTS outside the territorial waters have an impact on the responsibilities of the ships master? More power to the VTS operator?

A: Absolutely not. The draft resolution states as general principles

*6.1 Decisions concerning the navigation and the manoeuvring of the ship remain with the master. Nothing in these Guidelines changes the master's responsibility for all aspects of the operation of the ship.*

*6.3 VTS communications should take into account bridge resource management principles.*

*6.4 VTS operates within a comprehensive environment in which ships, ports, allied services and other organizations fulfil their respective roles, as appropriate.*



# **3. Recognition of IALA Standards**

## **Explanation and Panel Discussion**

Monica Sundklev



## 3. Recognition of IALA Standards

### Explanation and Background

*While the existing resolution makes reference to the IALA VTS Manual it does not refer to the suite of IALA guidance relating to VTS (recommendations, guidelines and model courses) which are now available. The IALA VTS Manual is only updated every 4 years whereas IALA Recommendations and Guidelines are kept under continuous review. Further, the guidance and terminology contained within the existing resolution is limiting and complicating the development and modernization of IALA guidance in a range of areas. (MSC 99-20-3)*

### About IALA Standards

IALA has seven general Standards (approved by IALA General Assembly 29 May 2018):

**1010 – Marine Aids to Navigation Planning and Service Requirements**

1020 – Marine AtoN Design and Delivery

1030 – Radionavigation Services

**1040 – Vessel Traffic Services**

**1050 – Training and Certification**

1060 – Digital Communications Technologies

**1070 – Information Services**





# 3. Recognition of IALA Standards

## Explanation and Background

### About IALA Standards (cont.)

- IALA Standards cover technology and services and are non-mandatory.
- Each Standard has references to IALA Recommendations, which can be normative or informative.
  - Normative provisions are necessary to conform with in order to claim compliance to the Standard.
  - Informative provisions specify additional desirable practices but are not necessary to conform with in order to claim compliance to the Standard.
- IALA Standards are suitable for direct citation by States in the interest of an efficient and harmonized global delivery of VTS.
- IALA Standards will help to ensure a harmonized global system of marine aids to navigation, including VTS to the benefit of the safety and efficiency of all seagoing vessels.

*See reference list with IALA documentation relating to VTS (published December 2018)*

<https://www.iala-aism.org/content/uploads/2019/02/IALA-Documentation-Relating-to-VTS-December-2018.pdf>



# 3. Recognition of IALA Standards

## Explanation and Background

- Following issues have been identified (in general):
  - IALA Manual is rarely updated and is now only mirroring IALA guidance relating to VTS.
  - Continuous developments are not being available through the resolution.
  - IMO procedures not suited for continuous review of resolutions and cause high workload and administrative burden for the submitter.
- Result is that:
  - No harmonization on e.g. VTS operating procedures or VTS training although IALA VTS Committee continues to develop and review relevant VTS guidance through a 4-year work programme.
  - No recognition of IALA standards, recommendations, guidelines and model courses that have been developed since 1998, where the first IALA Rec. V-103 was approved.



# 3. Recognition of IALA Standards

## Explanation and Background

Purpose of including IALA Standards in the revised resolution:

- Provides an up-to-date framework for the international recognized IALA Standards relating to VTS.
- More effective implementation of new or revised VTS guidance.
- Recognition of IALA as the international source of standards, knowledge and expertise on VTS that will enable States to provide VTS in a harmonized way.



# 3. Recognition of IALA Standards

Explanation and Background

*Revision proposal:*

## **8 IALA STANDARDS**

*8.1 To achieve worldwide harmonization of VTS, IALA publishes standards and associated recommendations, guidelines and model courses specifically related to the establishment and operation of VTS.*

*8.2 IALA standards provide the framework for coastal States to harmonize VTS worldwide and these are suitable for direct use and citation by parties with an interest in VTS.*



# 3. Recognition of IALA Standards

Panel discussion

Request for feedback / questions regarding recognition of IALA Standards.

*Using the SLIDO ([www.sli.do](http://www.sli.do))*



## 4. Types of Service

Explanation and Panel Discussion

Trond Ski



## 4. Types of Service

### Explanation and Background

*The guidance provided in the existing resolution regarding the services rendered by a VTS is subjective and open to broad interpretation and debate. Of major concern amongst authorities is that these services are not being declared or delivered globally in a consistent manner.*

*This is causing confusion to stakeholders, most significantly to masters of vessels navigating in different VTS areas, and to VTS operators delivering the service from their respective VTS Centres.*

*As a result, there is significant potential for misunderstandings which, in turn, could reduce the intended effectiveness of VTS as an important risk mitigation measure to maritime traffic. (MSC 99-20-3)*



## 4. Types of Service

### Explanation and Background

- Following issues have been identified (in general):
  - The three types of services (INS, TOS, NAS) are not being recognized by mariners who are the primary recipients of VTS.
  - There is no common understanding among VTS experts on the interpretation and the practical use of the three types of services.
  - The word "Service" after each type of service is causing the current confusion.
- Result is that:
  - VTS Authorities are delivering navigational assistance and traffic organization without declaring the services.
  - There has been a lively and prolonged debate on the three types of services within the VTS domain.





## 4. Types of Service

### Explanation and Background

Purpose of not including VTS types of service in the revised resolution:

- Focusing on the goals and the provisions of VTS.
- Harmonizing the interpretation and provision of vessel traffic service worldwide.
- There is really only one “service” provided by a VTS.
- A vessel traffic service (with service in singular) will still provide the following:
  - Maritime information,
  - Monitoring, managing and organizing of vessel traffic, and
  - Navigational assistance.



## 4. Types of Service

### Explanation and Background

*Revision proposal:*

- 5.2 To achieve its purpose, a VTS should manage the safe and efficient transit of ships within the VTS area and mitigate the development of unsafe situations through:*
- .1 The provision of timely and relevant information on factors that may influence the ship's transit and to assist on-board decision making. This may include:*
    - 1 position, identity, intention and movements of ships;*
    - .2 Maritime Safety Information;*
    - .3 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;*
    - .4 other information such as reporting formalities and ISPS details; and*
    - .5 support to, and cooperation with, allied services.*



## 4. Types of Service

### Explanation and Background

*Revision proposal:*

5.2 (cont.)

- .2 The monitoring and management of traffic to ensure the safety and efficiency of ship movements. This may include:*
  - .1 forward planning and organizing ship movements;*
  - .2 organizing the allocation of space;*
  - .3 forward planning of ship movements;*
  - .4 establishing a system of traffic clearances or sailing plans, or both;*
  - .5 providing route advice; and*
  - .6 ensuring compliance with and enforcement of regulatory provisions for which they are empowered.*



## 4. Types of Service

### Explanation and Background

#### *Revision proposal:*

#### 5.2 (cont.)

- .3 Responding to developing unsafe situations to assist the decision-making process on board. This may include:*
  - .1 a ship unsure of its route or position;*
  - .2 a ship deviating from the route;*
  - .3 a ship requiring guidance to an anchoring position;*
  - .4 a ship that has defects or deficiencies, such as navigation or manoeuvring equipment failure;*
  - .5 severe meteorological conditions (e.g. low visibility, strong winds);*
  - .6 a ship at risk of grounding or collision; and*
  - .7 emergency response or support to emergency services.*



## 4. Types of Service

Panel discussion

Request for feedback / questions regarding the purpose of a VTS.

*Using the SLIDO ([www.sli.do](http://www.sli.do))*



# 5. Result-oriented instructions

## Explanation and Panel Discussion

Trond Ski



## 5. Result-oriented instructions

### Explanation and Background

*Experience shows that the guidance provided in the existing resolution regarding the provision of result-oriented instructions is causing confusion and is open to differing interpretation.*

*This uncertainty makes it difficult to reach agreement on training guidance. More significantly, there is clear evidence that some VTS operators feel severely restricted in their ability to provide navigational assistance to vessels standing into danger.  
(MSC 99-20-3)*



## 5. Result-oriented instructions

### Explanation and Background

- Following issues have been identified (in general):
  - The interpretation of “result-oriented instructions” differs.
  - Decisions concerning the navigation and manoeuvring always remain with the master.
- Result is that:
  - The phrase "instruction should be result-oriented" is confusing and not used in a harmonized way.
  - VTS operators feel restricted *not* to provide result-oriented advice as deemed necessary to ships at risk of grounding or collision.





## 5. Result-oriented instructions

### Explanation and Background

Purpose of deleting result-oriented instructions in the revised resolution:

- Focus on VTS communications in more general terms.
- Leaving details of VTS communications to IALA guidance.

*Revision proposal:*

*6.1 Decisions concerning the navigation and the manoeuvring of the ship remain with the master. Nothing in these Guidelines changes the master's responsibility for all aspects of the operation of the ship.*

*6.2 VTS communications should be timely, clear, concise, not open to misinterpretation and made in accordance with the standards adopted by the Organization.*

*6.3 VTS communications should take into account bridge resource management principles.*



## 5. Result-oriented instructions

Panel discussion

Request for feedback/ questions to the plenary regarding Result-oriented instructions.

*Using the SLIDO ([www.sli.do](http://www.sli.do))*



# 6. VTS qualifications, training and certification

Explanation and Panel Discussion

Stefaan Priem



## 6. VTS qualifications, training and certification

### Explanation and Background

*In the absence of any approved guidance on recruitment, qualifications and training for VTS Operators, detailed training guidance has been set out in annex 2 to the resolution. IALA has subsequently refined, developed and expanded this text to include guidance on qualification and certification at a range of levels. The structure and terminology used within annex 2 to the resolution is now either in conflict with, or constraining the necessary continued development of modern IALA training recommendations, guidelines and model courses. (MSC 99-20-3)*

- Current resolution: (1997)  
*“The standard of training necessary to achieve these levels, have never been fully defined on a world-wide basis. At present there are no internationally recognized qualifications for VTS operators, and the approach to recruitment and training varies widely from country to country.”*



## 6. VTS qualifications, training and certification

### Explanation and Background

Following issues have been identified (in general):

- Conflicts between the present resolution and the developed IALA training documentation.
- Present resolution is constraining the necessary continued development of VTS training guidance.
- Lack of uniform terminology on VTS qualifications, training and certification.

Result is that:

- IALA has developed training guidance since 1998, not reflected in the present resolution:
  - R0103 on training and certification of VTS personnel
  - GL simulation in VTS training
  - GL train the trainer
  - MCs on VTS Operator, VTS Supervisor, OJT, OJT instructor, revalidation process
  - GL on accreditation of training organizations

All fairly recent documents. Most of them have been revised, some of them multiple times.



## 6. VTS qualifications, training and certification

### Explanation and Background

Purpose of the revised resolution as regards VTS qualifications, training and certification:

- Ensure that VTS training and certification is accredited and approved in accordance with IALA Standard 1050 on Certification and Training.
- Ensure that VTS personnel are appropriately trained and qualified.



## 6. VTS qualifications, training and certification

### Explanation and Background

*Revision proposal:*

#### **4.2.1 The competent authority should**

*.3 ensure that VTS training and certification is accredited and approved in accordance with the standards acceptable to the Organization*

#### **4.3 The VTS provider should:**

*.4 ensure that VTS personnel are appropriately trained and qualified*

## **7 QUALIFICATIONS AND TRAINING**

*7.1 A major factor in the operation of a VTS is the standard of competence of its VTS personnel. IMO is responsible for the international standards for VTS qualifications and training.*

*7.2 It is recommended that Government use the standards for training and certification of VTS personnel acceptable to the Organization.*



## 6. VTS qualifications, training and certification

Panel discussion

Request for feedback/ questions regarding VTS qualifications, training and certification.

*Using the SLIDO ([www.sli.do](http://www.sli.do))*





# 7. VTS and future developments

## Explanation and Panel Discussion

Monica Sundklev



## 7. VTS and future developments

### Explanation and Background

*The current resolution does not provide a framework to accommodate new trends, such as the development, adoption and implementation of Maritime Service Portfolios, e-navigation and other evolving instruments aimed at the facilitation of safe, secure and efficient maritime traffic and trade. (MSC 99-20-3)*

- Following issues have been identified (in general):
  - The present resolution has limited content on future trends and developments.
  - The present resolution does not acknowledge the technical guidance develop by IALA.
  - Developments in maritime connectivity will influence the future delivery of VTS with respect to the increased ability to transfer data between ship and shore and v.v.
- Result is that:
  - Difficulties in harmonizing different technical solutions worldwide including ship-shore and shore-ship communication.
  - No high-level guidance on how to meet new trends and techniques.



## 7. VTS and future developments

### Explanation and Background

Purpose of the revised resolution as regards VTS and future developments:

- Provide a modernized high-level framework that does not hinder, block or conflict with any foreseeable future development.
- Develop a 'goal-based' resolution with focus on the desired end output for the effective provision of VTS and for a "future-proof" resolution, where technical expressions and definitions should be avoided.
- Leave details of VTS future developments to be referred to IALA Standards and IALA guidance relating to VTS.



## 7. VTS and future developments

Explanation and Background

*Revision proposal:*

*4.1.1 The **Contracting Government** should:*

*.4 take account of future technical and other developments recognized by the Organization relating to VTS.*



## 7. VTS and future developments

Panel discussion

Request for feedback/ questions regarding VTS and future developments.

*Using the SLIDO ([www.sli.do](http://www.sli.do))*



# 8. Administrative amendments

## Explanation and Panel Discussion

Monica Sundklev



## 8. Administrative amendments

### Explanation and Background

*The resolution refers to a number of instruments which are now incorrect, obsolete or no longer in place and require updating. The document would also benefit from overall rationalization and restructuring. (MSC 99-20-3)*

- Following issues have been identified (in general):
  - Incorrect or obsolete references.
  - Unclear that Res. A.857(20) includes two guidelines (Annex 1 and Annex 2)
  - Too detailed descriptions, e.g. Annex 2 (Guidelines on recruitment, qualifications and training of VTS operators), which IALA since then has developed to a complete set of training recommendations, guidelines and model courses.
- Revision proposal (in general):
  - Total restructuring of the resolution.
  - High-level description.
  - Leave details of VTS operations, training and future technology to be referred to IALA Standards and IALA guidance relating to VTS.



## 8. Administrative amendments

Panel discussion

Request for feedback / questions regarding Administrative amendments.

*Using the SLIDO ([www.sli.do](http://www.sli.do))*