 Input paper: [[1]](#footnote-1) VTS39-8.1.1 (VTS38-8.1.3)

Input paper for the following Committee(s): check as appropriate Purpose of paper:

**□** ARM **□** ENG **□** PAP ☑ Input

**□** ENAV☑ VTS **□** Information

Agenda item [[2]](#footnote-2) 8.1

Technical Domain / Task Number 2 operation

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Close quarter situations reporting by VTS

**SUMMARY**

This document presents the process adopted at Ushant Traffic to prevent collision and action taken following a close quarter situation.

**1. Purpose of the document:**

This input is for the new work programme 2014-2018 in particular to produce a guideline on incident/accident reporting and recording, including near miss situations as it relates to VTS. This item is in line with the 1st conclusion of the 18th IALA conference: “IALA should consider providing guidance on anomalous behaviour recognition to improve VTS operations and ship monitoring.”

**2. Related documents:**

IMO Res. A 857(20) guidance for VTS / SOLAS IX – ISM Code / MSC-MEPC.7/Circ.7 guidance on near-miss reporting

**BACKGROUND**

1. In compliance to IMO Res. A 857(20), point 2.3.3, Ushant Traffic VTS centre (in French : *Ouessant Trafic*) is dedicated to monitor the traffic in order to avoid dangerous situation. The area of Ushant VTS is a circle of 40 NM radius centre on Ushant island, including a TSS and fairways along the coastline and different islands and rocks.

2. Operators at Ushant Traffic must be aware of the limits of the different sensors they are using. The radar information is refreshed every 12 s and AIS information can be altered because AIS transceivers are not always properly fitted and set on ships. There are still direction finders (D/F) with a 0.5° precision to help operator to locate a ship-borne tranciever on VHF. Hence it is recommended to operators at Ushant Traffic to exercise a critical mind when jauging the information provided by radar, AIS or D/F.

3. In compliance to COLREG 72, rule 10, attention must be exercised at both ends of the TSS for the density of traffic and cross situations generate a lot of close quarter situations as well as turning point. The weather conditions have to be taken into consideration, in particular the visibility. As a matter of experience in Ushant Traffic, it rises up to a compromise that a call on VHF can be effective to the give-way vessel at last 10 mn before CPA.

4. When a close quarter situation is detected, the operator tries to contact first the give-way vessel on VHF 13 or 16 or with the help of a DSC at last. In compliance to IMO Res.857 A(20), the VTS centre has no manoeuvring order to summon to the ship. The task of the VTS is but to ensure that the watch-keeper on board ships have the information to decide the proper manoeuvring in order to avoid a close quarter situation. A close quarter decision tree in appendix 1 has been developed as an indication to VTS operator.

**DISCUSSION**

**Action taken in case of infringement to COLREG 72**

5. In case of infringement to COLREG 72 in the VTS, a report to the Flag State is established with all documentary evidences: radar screen prints and VHF records if necessary. The report is forwarded to the Flag State through central office and foreign affairs ministry. A related message can be allocated to the ship as well as in THETIS the data base of Paris MoU on PSC and requirement to such notification are mandatory under EC directive 2009/016 on PSC.

**Action taken in case of a close quarter situation**

6. In case of a close quarter situation detected in the VTS area, in compliance to COLREG 72, it is not obvious to demonstrate an infringement to the rules of the road for the rule 16 relative to the “action by the give-way vessel” should be balance with rule 17 relative to the “action of the stand-on vessel”; hence the following action taken are carried out:

6.1. The master of the ships involved in the close quarter situation is invited to make a sea-report to their Flag State Authority;

6.2. A “dangerous situation notice” (report to appendix 2) is established with an analysis of the situation;

6.3. A mail is sent to the ship company of the give-way vessel with documentary evidences including the dangerous situation notice and radar screen prints if necessary. A copy is sent to the Flag State Authority, the Class Society delivering the ISM certificate and to the company of the stand-on vessel in the case of this latter made any complain to Ushant Traffic following the manoeuvring of the other vessel.

As MSC-MEPC.7/Circ. 7 guidance on near-miss reporting has been included in the ISM Code since 1st January 2010, the idea of this action taken is :

7.1. To aware watch keepers of merchant ships and fishing vessels to navigate with caution in a VTS;

7.2. To aware companies of merchant ships on the management of the competency of their personnel in charge of watch-keeping;

7.3. To inform Flag State authorities and Class Society acting on behalf of them of the situation in order to exercise attention in a future audit of the company and the ship on the resources and personnel point of the ISM, in particular for personnel in charge of watch-keeping on the bridge.

**Feed-back:**

8. Ushant Traffic has received positive feed-back from companies, Flag States and Class Societies until now for 4 years this procedure is in force. Internal feed-back is also very positive for operators training and the quality system of the centre.

9. This reporting process should be considered as a declination from MSC-MEPC.7/Circ. 7 guidance on near-miss reporting in order to promote a “just culture” features and atmosphere of responsible behaviour and trust for navigators and shipping companies, as well as VTS personnel. The analysis compilation of close quarter reporting can also be used as training material for VTS.

**REFERENCES:**

Draft guidance on close-quarter situation reporting by VTS (appendix 3).

**ACTION REQUESTED TO THE COMMITTEE**

10. The Committee is invited to note the process adopted by Ushant Traffic and Member States are invited to consider the guidance presented in appendix 3 as an unplanned output to MSC at IMO or at least to produce a guideline on incident/accident reporting and recording, including near-miss situations as it relates to VTS.

**APPENDIX 1 :** close quarter situation Ushant Traffic VTS decision tree

**APPENDIX 2 :** Dangerous situation notice

**APPENDIX 3 :** draft unplanned output to MSC, « Guidance on close-quarter situation reporting by VTS »

## Appendix 1: Close quarter situation VTS decision tree

|  |  |
| --- | --- |
| Close quarter situation VTS decision tree | |
| Who | What |
| Communicate all info to vessels  (relative position of vessels, identification of vessels, course and speed)  Draft a contravention report  Indicate on monitor CPA and DCPA  Is CPA less than 0.5 NM WITHIN NEXT 10 NM ?  NO YES  Contact vessels / contact first the give-way vessel in compliance to COLREG72.  **Do the give-way vessel or both vessels answer ?**  YES NO  Try a contact with DSC or Inmarsat if possible.Do the give-way vessel or both vessels answer ?  YES NO  Ensure that watch-keeper is aware of the situation – Indicate CPA and DCPA  Do watch-keepers have all information ?  NO YES  DCPA is less than 3 minutes (\*)  YES NO  VTS  VTS  VTS  VTS | Draft a close quarter situation notice – Record vessels radar and AIS tracks |

(\*) delay to set depending of the VTS navigation conditions and sensors

**Appendix 2: Dangerous situation notice**

1- Nature of the situation Date / time :

|  |
| --- |
| dangerous situation  close quarter situation  collision |

2- Vessels involved

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Ship’s name | IMO n°  or  Registration n° | FLAG | Type of ship | LoA  (m) | Position  (longitude & latitude) | Speed  (kt) | Course |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

3- Description of the event

|  |
| --- |
| **Most critical situation :**  CPA :  TCPA :  Position relative to a mark ashore :  Visibility  Evolution of vessels |

4- Analyse

|  |
| --- |
|  |

5-Conclusion

|  |
| --- |
|  |

6-Enclosed documents

radar & AIS monitor print  vessels’ data  other :

**Conclusion on the action of the VTS :**

Does the vessel(s) change course following VTS information?

Yes  No  Vessel does not answer

**Appendix 3:** draft unplanned output to MSC

|  |  |  |
| --- | --- | --- |
|  |  | ***E*** |

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| --- | --- |
| MARITIME SAFETY COMMITTEE  Xth session  Agenda item | MSC X/  date  Original: English |

## WORK PROGRAMME

New unplanned output to provide guidance

on close quarter situation reporting by VTS

**Submitted by ...**

|  |  |  |
| --- | --- | --- |
| **SUMMARY** | | |
| *Executive summary:* | This document presents a proposal of guidance on close quarter situations reporting by VTS in order to feed near-miss report files of companies and promote a “safety culture” and a “no-blame culture” within all stakeholders of the maritime community. |
| *Strategic direction:* | 12 |
| *High-level action:* | 12.1.2, 12.3.1 & 12.4.1 |
| *Planned output:* | 12.1.2.1, 12.3.1.1, 12.3.1.3 & 12.4.1.1 |
| *Action to be taken:* | Paragraph 13 |
| *Related documents:* | IMO Res. A 857(20) guidance for VTS; SOLAS IX – ISM Code; MSC-MEPC.7/Circ. 7 guidance on near-miss reporting; MSC/Circ.1015 repoting near-misses; IALA recommendation V-103 on standards for training and certification of VTS personnel |

**Introduction**

1. This document proposes an unplanned output relative to guidance on close quarter situations reporting by Vessel Traffic Services (VTS) in order to feed near-miss report files of companies and promote a “safety culture” and a “no-blame culture” within all stakeholders of the maritime community.

2. The proposal conforms to the Guidelines on the organization and method of work of the Maritime Safety Committee and their subsidiary bodies (MSC-MEPC.1/Circ.4/Rev.2)

**IMO’s objectives**

3. The propose work item will promote a “safety culture” amongst all stakeholders and consequently contributes to Strategic Direction 12, in further enhancing the quality of shipping by : 12.2 encouraging proper management of ships; 12.3 promoting and enhancing the availability of, and access to, information – including casualty information – relating to ship safety, security and the environment (i.e. transparency); 12.4 ensuring that all stakeholders understand and accept their responsibilities regarding safe, secure and environmentally sound shipping by developing a “chain of responsibility concept” among them. It also contributes to High-level Actions 12.2.1, 12.3.1 and 12.4.1: use risk-based tools that take account of cost and the human element in the development of operational standards; promote and undertake collection and dissemination of high quality, relevant and timely information to support analyses and decisions, taking into account related issues of finance and governance and raise awareness of the “chain of responsibility concept” among all stakeholders through organizations that have consultative status.

**Compelling need**

4. Close quarter situation reporting by VTS should be considered as a declination from MSC-MEPC.7/Circ. 7 guidance on near-miss reporting in order to promote a “just culture” features and atmosphere of responsible behaviour and trust for navigator and shipping company, as well as VTS personnel. The analysis compilation of close quarter reporting can also be used as training material for VTS.

**Analysis of the issue**

5. As MSC-MEPC.7/Circ. 7 guidance on near-miss reporting has been included as an annex to the ISM Code, any reporting on close quarter situation reported from VTS should be brought to the attention of the Flag States in order to help them to monitor the certification of ISM of the ships flying their flag, in particular on point 6 of the ISM Code relative to resources and personnel. This point should cover the qualification and training of personnel in charge of watch-keeping.

6. There are many barriers related to the reporting of near-misses. In many cases, close quarter situations are only known by the VTS but not the vessels involved in the close quarter situations. The main reason is the VTS monitors in general a wider area than a single vessel can do. Moreover Vessels involved in close-quarters situations are not necessarily flying the flag of the coastal State where the VTS is located, thus there is no direct interest for the VTS to inform the companies and navigators.

**Analysis of implications**

7. This issue can be dealt with simply, with no cost impact whatsoever to the shipping industry, and with minimal to the Member States. No changes to requirements or regulation affecting the shipping industry are necessary or warranted.

**Benefits**

8. The issue will benefit not only to all shipping company safety management systems, but to the all maritime community and in particular the VTS personnel. There will be an increase of data for FSA available to IMO with the collection of reporting on close-quarters situations.

**Industry Standards**

9. There is no need of industry standard to implement the issue.

**Output**

10. This is a voluntary process to be monitored by VTS. The issue will bring out the position and importance of VTS in the safety of navigation. It will be a continuous process from VTS in order to collect reports on close quarter situations.

**Human element**

11. The proposal will help to monitor the ISM Certification, in particular on point 6 of the ISM Code relative to resources and personnel. This point should cover the qualification and training of personnel in charge of watch-keeping. It is consistent with the objectives of the Organization and is based on human element guidance and principles in resolution A.947(23). The completed human factors checklist from MSC-MEPC.7/Circ.1 is set out in annex 1.

**Priority/urgency**

12. It is recommended that the new item be added to the agenda of the NCSR Sub-Committee with sufficient priority to complete in one session.

**Action requested of the Committee**

13. The Committee is invited to add the agenda of the NCSR Sub-committee, a new item on “close quarter situation reporting by VTS” with a view to discuss and amend the proposed draft guidance in annex 3.

**ANNEX 1**

**CHEKLIST FOR CONSIDERING HUMAN ELEMENT ISSUES BY IMO BODIES**

|  |  |
| --- | --- |
| **Instructions:**  If the answer to any of the questions below is :   1. **YES**, the preparing body should provide supporting details and/or recommendation for further work. 2. **NO**, the preparing body should make proper justification as to why human element issues were not considered, 3. **NA** (Not Applicable), the preparing body should make proper justification as to why human element issues were not considered applicable. | |
| **Subject Being Assessed:** (e.g. Resolution, Instrument, Circular being considered)  **Close quarter situation reporting by VTS** | |
| **Responsible Body:** (e.g. Committee, Sub-committee, Working Group, Correspondence Group, Member State)  **Sub-Committee on Navigation, Communication and Search & Rescue (NCSR)** | |
| 1. Was the human element considered during development or amendment process related to this subject? | ☑Yes No NA |
| 2. Has input from seafarers or their proxies been solicited? | ☑Yes No NA |
| 3. Are the solutions proposed for the subject in agreement with existing instruments?  (Identify instruments considered in comments section) | ☑Yes No NA |
| 4. Have human element solutions been made as an alternative and/or in conjunction with the technical solutions? | Yes No ☑NA |
| 5. Has human element guidance on the application and/or implementation of the proposed solution been provided for the following: | |
| . Administrations? | ☑Yes No NA |
| . Ship owners/managers? | ☑Yes No NA |
| . Seafarers? | ☑Yes No NA |
| . Surveyors? | ☑Yes No NA |
| 6. At some point, before final adoption, has the solution been reviewed or considered by a relevant IMO body with relevant human element expertise? | ☑Yes No NA |
| 7. Does the solution address safeguards to avoid single person errors? | ☑Yes No NA |
| 8. Does the solution address safeguards to avoid organizational errors? | ☑Yes No NA |
| 9. If the proposal is to be directed at seafarers, is the information in a form that can be presented to and is easily understood by the seafarer? | Yes No ☑NA |
| 10. Have human element experts been consulted in development of the solution? | ☑Yes No NA |
| 11. HUMAN ELEMENT: Has the proposal been assessed against each of the factors below? | |
|  CREWING. The number of qualified personnel required and available to safely operate, maintain, support, and provide training for system. | Yes No ☑NA |
|  PERSONNEL. The necessary knowledge, skills, abilities, and experience levels that are needed to properly perform job tasks. | Yes No ☑NA |
|  TRAINING. The process and tools by which personnel acquire or improve the necessary knowledge, skills, and abilities to achieve desired job/task performance. | Yes No ☑NA |
|  OCCUPATIONAL, HEALTH AND SAFETY. The management systems, programmes, procedures, policies, training, documentation, equipment, etc to properly manage risks. | Yes No ☑NA |
|  WORKING ENVIRONMENT. Conditions that are necessary to sustain the safety, health, and comfort of those on working on board, such as noise, vibration, lighting, climate, and other factors that affect crew endurance, fatigue, alertness and morale. | Yes No ☑NA |
|  HUMAN SUIRVIVABILITY. System features that reduce the risk of illness, injury, or death in a catastrophic event such as fire, explosion, spill, collision, flooding, or intentional attack. The assessment should consider desired human performance in emergency situations for detection, response, evacuation, survival and rescue and the interface with emergency procedures, systems, facilities and equipment. | Yes No ☑NA |
|  HUMAN FACTORS ENGINEERING. Human-system interface to be consistent with the physical, cognitive, and sensory abilities of the user population. | Yes No ☑NA |
| Comments: (1) Justification if answers are NO or Not Applicable. (2) Recommendations for additional human element assessment needed. (3) Key risk management strategies employed. (4) Other comments. (5) Supporting documentation.  **The proposal is addressing the ISM Code by VTS in reporting near-misses to companies. There is no implementation by the companies, crews or flag State Administrations for the proposal is focusing a voluntary reporting by VTS.** | |

**ANNEX 2**

**CHECKLIST FOR IDENTIFYING ADMINISTRATIVE REQUIREMENTS**

**AND BURDENS**

|  |  |  |
| --- | --- | --- |
| The Checklist for Identifying Administrative Requirements and Burdens should be used when preparing the analysis of implications required of submissions of proposals for inclusion of unplanned outputs. For the purpose of this analysis, the terms “administrative requirements” and “burdens” are defined as in resolution A,1043(27),i.e. Administrative requirements are defined as an obligation arising from future IMO mandatory instruments to provide or retain information or data, and administrative burdens are defined as those administrative requirements that are or have become unnecessary, disproportionate or even obsolete.  Instructions:  (A) If the answer to any of the questions below is YES, the Member State proposing an unplanned output should provide supporting details on whether the burden are likely to involve start-up and/or ongoing cost. The Member State should also make a brief description of the requirement and, if possible, provide recommendations for further work (e.g. would it be possible to combine the activity with an existing requirement?).  (B) If the proposal for the unplanned output does not contain such an activity, answer NR (Not Required). | | |
| 1. Notification and reporting?  Reporting certain events before or after the event has taken place, e.g. notification of voyage, statistical reporting for IMO Members, etc. | NR   | Yes  Start-up  ☑Ongoing |
| Description (if the answer is yes):  Close quarter situation reporting is performed by VTS on a voluntary basis. | | |
| 2. Record keeping?  Keeping statutory documents up to date, e.g. records of accidents, records of cargo, records of inspections, records of education, etc. | NR   | Yes  Start-up  ☑Ongoing |
| Description (if the answer is yes):  Records are kept by VTS. | | |
| 3. Publication and documentation? Producing documents for third parties, e.g. warning signs, registration displays, publication of results of testing, etc. | NR   | Yes  Start-up  ☑Ongoing |
| Description (if the answer is yes):  Publication & documentation, publication of results of testing are made on a voluntary basis by VTS Authorities. | | |
| 4. Permits or application?  Applying for and maintaining permission to operate, e.g. certificates, classification society costs, etc. | **NR**  ☑ | Yes  Start-up  Ongoing |
| Description (if the answer is yes): | | |
| 5. Other identified burdens? | **NR**  ☑ | Yes  Start-up  Ongoing |
| Description (if the answer is yes):  The proposal has to be implemented by VTS on a voluntary basis in order to collect data on close quarter situations. | | |

**ANNEX 3**

**Draft Guidance on close quarter situation reporting by VTS**

**1. Introduction**

1.1. Close quarter situation reporting by VTS should be considered as a declination from MSC-MEPC.7/Circ. 7 guidance on near-miss reporting in order to promote a “just culture” features and atmosphere of responsible behaviour and trust for navigator and shipping company, as well as VTS personnel. The analysis compilation of close quarter reporting can also be used as training material for VTS.

1.2. As MSC-MEPC.7/Circ. 7 guidance on near-miss reporting has been included as an annex to the ISM Code, any reporting on close quarter situation reported from VTS should be brought to the attention of the company of the ship involved in a close quarter situation. Flag States should be informed as well in order to help them to monitor the certification of ISM of the ships flying their flag, in particular on point 6 of the ISM Code relative to resources and personnel. This point should cover the qualification and training of personnel in charge of watch-keeping.

1.3 When Class Society acts on behalf of a Flag State for the ISM certification, the close quarter situation should be reported to the Class Society as well.

**2. Defining close quarter situation**

2.1. Close quarter situation: a sequence of events and/or conditions between different vessels that could result in a collision between vessels. It should be kept in mind that a collision between vessels does not lead necessarily to a direct contact between them. In some situation, the water displaced by a vessel can generate an accident on others vessels in the vicinity, hence this is considered as a collision.

**3. Overcoming barriers to report close quarter situations**

3.1. There are many barriers related to the reporting of near-misses. In many cases, close quarter situations are only known by the VTS but not the vessels involved in the close quarter situations. The main reason is the VTS monitors in general a wider area than a single vessel can do. Moreover Vessels involved in close-quarters situations are not necessarily flying the flag of the coastal State where the VTS is located, thus there is no direct interest for the VTS to inform the companies and navigators.

3.2. These barriers can be overcome by:

1. Encouraging the direct share of information of VTS to company, Flag State and the Class Society acting on behalf of the Flag State.

2. Considering close quarter situation reporting as a key issue to monitor the personnel in charge of watch-keeping and to enhance bridge management as well as the training of merchant marine cadet officer.

3. Close-quarters situation reporting could also help to train VTS personnel and could be shared between VTS as return of experience for action taken by VTS.

**4. Close quarter situation investigation process**

4.1. The following amount of minimum information should be gathered about near-miss:

1. Identification of all vessels involved in the close quarter situation. There could be more than two vessels involved and different types of ship.

2. Summary of the chronology of the event: what happened, where, when and in what sequence?

3. What is the like-hood of a recurrence of the chain of events and/or conditions that led to the near-miss?

4. Copies of radar and AIS tracks would be useful to indicate the kinematics of the vessels involved in the close quarter situation.

5. Information on the action taken by VTS to inform ships involved.

4.2. Analyse the close-quarters situation with the help of the near-miss investigation process as indicated in MSC-MEPC.7/Circ. 7 guidance on near-miss reporting.

4.3. Report to the company of the give-way vessel involved in the close quarter situation, with a copy to:

1. The company of the stand-on vessel if the VTS has received any complaint from this one following the close quarter situation. Name and address of the company can be found in PSC data bases, EQUASIS or LMIU data base.

2. The Flag State for information in order to exercise attention in a future audit of the company and the ship on the resource and personnel point of the ISM, in particular for personnel in charge of watch-keeping on the bridge. Contact address or responsible national authorities can be found in MSC-MEPC.6/Circ.6.

3. The Class Society when acting on behalf of the Flag State for the ISM certification of the company. Name and address of the class society can be found in PSC data bases, EQUASIS or LMIU data base. It is recommended to cross-check the information with the different data bases to ascertain the class society in charge of ISM certification on behalf of the Flag State. For instance, some ship can have an ISM certification delivered by one class society and all the other certification delivered by another class society.

**5. Completing the investigation**

5.1. The ultimate objective of close-quarters situation reporting and investigating is to identify areas of concern and implement appropriate corrective actions to avoid collision at sea, at least in VTS area. To do so requires that reports are to be generated, shared, read and acted upon. VTS should be encouraged to inform companies and Flag State to consider close quarter situation reporting as a way to enhance safety of navigation in general.

5.2. It may take years for safety trends to be discerned, and so reporting must be archived and revisited on a timely basis. Near-miss reports should be considered along with actual collision or incident reports to determine trends. These should be consistent in the identification and nomenclature of causal factors across close-quarters situation and collision reports.

5.3. Archives on close-quarters situations can provide detailed knowledge of the services provided by a VTS centre and be part of practical training and experience in the tasks.

1. Input document number, to be assigned by the Committee Secretary [↑](#footnote-ref-1)
2. Leave open if uncertain [↑](#footnote-ref-2)