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Author(s) / Submitter(s) China Maritime Safety Administration

Proposal for Refining the Draft Revision on Guidance for Dealing with Stress and Trauma in VTS Operations

# SUMMARY

Considering that "Develop guidance for dealing with stress or trauma in VTS operations" has been included in the IALA VTS Committee Work Plan 2023-2027, the purpose of this paper is to provide recommendations for refining *The Guidance for Dealing with Stress and Trauma in VTS Operations* (hereinafter referred to as such The Guidance), of which the draft revised framework was an output document of the 57th session of the IALA Meeting. Based on the framework and contents stated in the above mentioned document, this paper is aiming to propose the modifications and revisions on The Guidance.

## **Purpose of the document**

The purpose of this paper is to provide reference and recommendations for IALA’s VTS Committee in relation to Task 3.1.1 - Develop guidance for dealing with stress or trauma in VTS operations

## **Related documents**

VTS56-6.1.1 VTS Task Plan 2023-2027 - Dealing with Stress

VTS56-10.4.2 Proposal to Develop Guidance for Dealing with Stress and Trauma in VTS Operations

VTS57-10.1.4 Report of IG on Task 3.1.1

VTS57-10.1.4.1 Draft Revision Task 3.1.1 Guidance for dealing with stress and trauma in VTS operations

G1171 - Human Factors and Ergonomics in VTS Edition 1.1

G1176 - How to Promote Safety Culture in VTS

# BACKGROUND

In response to Task 3.1.1 - Develop Guidance for Dealing with Stress or Trauma in VTS Operations, CHINA MSA has submitted a proposal to the 56th session of VTS Committee, namely to develop *The Guidance for Dealing with Stress and Trauma in VTS Operations* (VTS56-10.4.2 Proposal to Develop Guidance for Dealing with Stress and Trauma in VTS Operations), providing recommendations on the framework and contents of The Guidance .

At its 57th session, the IALA Working Group, on the basis of the proposals submitted by CHINA MSA and the Finnish Transport Agency, developed after discussion the draft framework of The Guidance (VTS57-10.1.4.1 Draft Revision Task 3.1.1 Guidance for dealing with stress and trauma in VTS operations), and made preliminary determinations on the outline and related contents. The Working Group also suggested that The Guidance should focus on the practicality of the contents so that it can be easy to understand for users to be benefit. Furthermore, advice and suggestions from a wider range of psychology professionals would be considered when developing The Guidance.

CHINA MSA agreed with the IALA Working Group's comments on The Guidance and the work plan, and would like to provide suggestions for further improving of the revised version of the draft framework of The Guidance for the Working Group's consideration.

# Discussion

## **Definition of stress and trauma**

The Working Group suggested that attention should be paid to the professional definitions of stress and trauma. In psychological research, the definitions of Stress and Trauma are based on different theoretical perspectives and research needs, often differing by various focus on physiological responses, cognitive evaluation, clinical diagnosis, event-oriented perspectives. Considering the applicable scenarios of VTS work and the difficulty level of the users' understanding, we believe that Lazarus's cognitive appraisal theory (Lazarus & Folkman, 1984) on the definition of Stress, and the definition of Trauma by the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5-TR, 2022) would be used for reference:

### Definition of stress

According to Lazarus's theory, stress can be defined as a psychological tension that arises from the interaction between an individual and the environment when the individual assesses that the demands of the environment exceed his or her own coping resources. This definition has a high degree of match with the scenarios during VTS operation, in which VTS operators need to judge whether an event is threatening (e.g. the risk of ship collision) and assess their own coping ability (e.g. real-time decision-making stress or responsibility anxiety generated during the process of evaluating whether they are able to coordinate the avoidance actions of a ship in time in order to prevent safety risks), and at the same time, it is easy to understand.

### Definition of trauma

According to the DSM-5 theory of the American Psychiatric Association (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition), trauma can be defined as follows: trauma is the experience of directly encountering, witnessing, or hearing about an event involving "actual or threatened death, serious injury, or sexual violence" or repeated exposure to traumatizing details (e.g. the handling of maritime accidents), which then triggers an intense sense of fear and helplessness. This definition is a professional psychological definition of "trauma", and is also tally with VTS personnel witnessing or hearing about maritime accidents or emergencies involving actual or threatened death, and following up on repeated exposure to traumatic scenarios in the course of an accident response.

## **Description of stress and trauma**

The current outline of The Guidance issued by the Working Group indicates that Section 4, Part A of The Guidance focuses on the general influences of stress and trauma, intending to providing guidance in three aspects: a general description of stress and trauma, the difference between fatigue and stress and trauma, and the general influences of stress and trauma. For this section the following comments are proposed for reference:

### Classification and grading of stress

In section 4.1.2 of the outline of The Guidance , stress levels are categorized into different levels such as "Long-term stress, acute stress, Vicarious stress, chronic stress, Good stress, and No stress state". From the description it seems to be more of a categorization than a classification of stress, and the professionalism of the categorization needs to be further considered. Therefore, we suggest that the title of this section "Different Levels of Stress" would be revised to "Classification and Levels of Stress", and then the specific classification and grading methods might be further considered based on professional psychological theories and in light of the working scenarios and applicability of VTS.

Regarding the classification and grading of stress, the following theories are currently recognized and highly accepted in the field of professional psychology:

* Selye's General Adaptation Syndrome (GAS, 1956) theory focuses on physiological indicators and divides stress into three different stages: the Alarm Stage, the Resistance Stage, and the Exhaustion Stage, based on the physiological responses of the stressor, with the degree of stress increasing as the stage progresses.
* Lazarus' Cognitive Appraisal Theory (Lazarus & Folkman, 1984) categorizes stress into the Challenge Stress and the Threat Stress based on the stressor's appraisal of it. It believes that the Challenge Stress is controllable with a low level of stress and may facilitate performance (e.g., moderate tension); the Threat Stress represents elevated stress levels accompanied by strong negative emotions.
* In the field of clinical psychology it categorizes stress into Acute Stress Disorder (ASD), Adjustment Disorder, and Chronic Stress based on the stress level, duration, and individual response (DSM-5/ICD-11).
* In psychological practice, standardized stress-assessment instruments such as the Perceived Stress Scale (PSS) are used to classify stress levels by cut-off scores: low stress (PSS 0–13) indicates routine daily pressures with no significant functional impairment; moderate stress (PSS 14–26) denotes disturbances in sleep or mood that can still be alleviated through self-regulation; and high stress (PSS 27–40) is accompanied by anxiety and somatic symptoms, requiring professional intervention.

The above mentioned theories categorize and grade stress from different perspectives such as physiological response, cognitive psychology, subjective experience, and physical response. Considering the adaptability to VTS work scenarios, we believe that the Selye’s theory would be applied in priority and classify VTS personnel's stress into three different levels, namely, the Alarm Stage, the Resistance Stage, and the Exhaustion Stage, with the typical reactions and corresponding working scenarios as follows:

* Alarm Stage: when being at this level, the individual's sympathetic nerves are activated, releasing adrenaline/cortisol (e.g. transient tension in the event of a sudden accident encountered by VTS personnel), and a tense state emerges.
* Resistance Stage: when being at this level, the individual's body adapts to the continuous stress, but resources are gradually depleted (e.g. fatigue accumulation due to long-term shift work), and the individual mobilizes his or her own resources to cope with the situation, but there is a more pronounced sense of fatigue and a state of tension.
* Exhaustion Stage: When being at this level, the individual's physiological resources are depleted, which may lead to illnesses such as chronic insomnia and immunosuppression (e.g. physiological health problems due to long-term workloads).

The advantage of adopting this theory is that VTS personnel can more intuitively judge the stage of stress they are in according to their physical reactions and individual feelings, and further appropriate measures would be taken as soon as possible.

The above mentioned classification methods are all based on the self-perception of the personnel. The standardized scores of professional psychometric measurements would also be applied, if possible, to classify stress into low, moderate and high levels. The significant advantage of this approach is that it bypasses the need to observe or inquire about the stressor’s reactions; instead the stress level could be evaluated directly from the test results, making the process both faster and more accurate.

### Classification and grading of trauma

Regarding section 4.1.3 of The Guidance outline, which describes the categories of trauma and the various traumatic events, we believe that it would be optimized by combining the theories of the psychological profession and the practice of VTS work.

#### Classification of trauma

In professional psychology, trauma could be classified under several theoretical frameworks. The American Psychiatric Association’s DSM-5-TR distinguishes three categories on the basis of the clinical symptoms and etiology: post-traumatic stress disorder (PTSD), acute stress disorder (ASD), and adjustment disorder (AdjD). Judith Herman (Trauma and Recovery, 1992), Bessel van der Kolk (2005), Courtois (2008), and others divided trauma into Type I (single-incident trauma) and Type II (complex trauma), in accordance with the duration and interpersonal context. The World Health Organization’s ICD-11 recognizes PTSD and CPTSD (complex PTSD) as the two primary trauma-related disorders.

Therefore, it is acknowledged that trauma is usually categorized in different ways based on the nature of the event, severity of symptoms, duration, and development trajectory. The main diagnostic systems (e.g. DSM-5, ICD-11) classify trauma into four categories based on the nature of the event and combined with empirical studies: Acute Trauma, Chronic Trauma, Developmental Trauma, and Vicarious Trauma, which shares the same theoretical system as the existing trauma classification in the framework of The Guidance issued by the Working Group. However, it should be noted that the framework issued by the Working Group replaced the original concept of “Developmental Trauma” with “Complex Trauma.” We kindly invite the Working Group to reconsider whether to make this change and recommend retaining the term “Developmental Trauma” as used in the original theoretical system and amending the corresponding description “Complex Trauma” in the Guidance framework, in order to maintain the integrity of professional theories and the rigor of academic research.

#### Grading of trauma

* Regarding the grading of "trauma", reference would be made to the main diagnostic systems (DSM-5, ICD-11), classifying trauma into four different levels, namely "subclinical Trauma Response, mild PTSD,Moderate to Severe PTSD and Complex CPTSD", with the following specific reference criteria and clinical responses:
* Subclinical Trauma Response

Criteria: Transient symptoms (e.g. insomnia, nightmares) that do not reach the diagnostic threshold for PTSD, social functioning is basically preserved, and no clinical intervention is needed.

* Mild PTSD

Criteria (DSM-5): meets some of the symptoms of PTSD (e.g. avoidance, hypervigilance) but lasts <1 month or it is mildly impaired in functioning, resolves spontaneously or improves with short-term psychoeducation.

* Moderate to Severe PTSD

Criteria: Fully consistent with the diagnosis of PTSD, accompanied by significant functional impairment (e.g. inability to work, social withdrawal). Symptoms such as depression and substance abuse are often comorbid (Kessler et al., 2005).

* Complex PTSD (CPTSD, ICD-11)

Criteria: presence of affective dysregulation, negative self-concept, and interpersonal difficulties in addition to core PTSD symptoms. Highly associated with chronic trauma (Maercker et al., 2022).

The above mentioned trauma classification and grading theory and method are for the consideration of the Working Group. Further It is also suggested that the above professional reference would be appropriately transformed, while retaining the professional theory basis, in accordance with the VTS working scenarios, that is, further clarifying and elaborating the individual's feelings to make it easier for the users to understand, in order to improve the practicality of the Guidance.

#### Common traumatic events

In section 4.1.3.4 of the outline of The Guidance, the types of common traumatic events and specific scenarios are listed, which helps to increase VTS personnel's further perception of traumatic events. Considering that The Guidance is more focused on stress and trauma in VTS work, it is recommended that this section would be enriched with information about traumatic events that might be involved in VTS working scenarios, such as:

* Maritime accidents directly involving casualties (which may trigger acute trauma, or PTSD)
* Ship collisions:

Real-time monitoring of a collision between two vessels that results in personnel overboard, serious injuries, or death (e.g. a ferry colliding with a cargo ship);

Reviewing of accident footage afterwards to analyze details of the accident (e.g. last call for help from a victim).

* Shipwrecks:

Witnessing a ship sinking rapidly and the crew jumping overboard to escape but failing to rescue them in time (e.g. bad weather causing a ship to capsize);

Receiving distress signals (e.g. VHF Mayday call) but failing to provide immediate assistance.

* Fire/explosion at sea:

Monitoring an explosion on a tanker or chemical tanker with crew trapped (e.g. Sanchi tanker accident);

Hearing the last radio communication of a crew in distress (e.g. background sounds of a burning explosion).

* Long-term cumulative trauma (chronic stress that may lead to emotional numbness, anxiety or depression)
* Feelings of powerlessness after a failed search and rescue:

Coordinated Search and Rescue (SAR) operations that ended up with finding only remains or empty vessels;

Prolonged monitoring distress signals that cannot be pinpointed (e.g. EPIRB signal drift).

* Liability pressures and after-action investigations:

Encountering repeatedly inquiries about VTS instructions during accident investigations (e.g. Costa Concordia grounding);

being questioned by family members or the media about "Why couldn't the accident be avoided?"

* High frequency of exposure to distress communication:

Prolonged handling of distress calls (e.g. crew members having heart attacks, suicidal tendencies);

Listening to the last call before a ship collision (e.g. "Too late to avoid!").

* Organizational and work environment-related risk factors for trauma (may exacerbate occupational burnout or psychological detachment)
* Shift work and sleep deprivation:

Long night shifts lead to disrupted circadian rhythms and increased mood instability;

Dealing with emergencies while fatigued increases the risk of poor decision-making.

* Frustration from technological limitations:

Loss of radar/AIS signals hindering tracking of high-risk vessels (e.g. small vessels without AIS);

System failures delaying emergency response (e.g. VHF communication outages).

* Lack of psychological support:

Management may overlook psychological risks and fails to provide post-traumatic support;

Avoidance of talking about the impact of the accident among colleagues, causing a 'culture of silence'.

### Distinctions among fatigue, stress, and trauma

Section 4.2 of The Guidance outline proposes to discuss the difference between fatigue, stress, and trauma, and to address the distinction between “eustress” and “distress.” As for this part, we would like to propose as follows for the Working Group to consider:

* Distinction between fatigue, stress and trauma: In addition to clarifying the difference in terms of definition, it is recommended that the scenarios that might lead to the three different psychological responses and the different impacts on human psychology, physiology and safety, based on the VTS working scenarios, need to further clarified. For example, Fatigue results from sustained physical or cognitive exertion, leading to impaired physiological functions such as slowed reaction time and diminished attention; its effects are reversible with rest; Stress is an adaptive response to external demands (e.g. work with high load). It can be categorized into two types: acute (sudden accidents) and chronic (long-term responsibilities). For instance, short-term pressure caused by the urgency of coordination and decision-making and anxiety caused by long-term safety responsibilities.Moderate stress may enhance performance, while excessive stress might precipitate burnout. Trauma stems from extreme events (e.g. witnessing a maritime disaster) and might produce lasting psychological injury that may evolve into PTSD or complex trauma. Unlike fatigue or stress, trauma-related harm may have a long-term impact on cognition and emotions, rarely resolves spontaneously and may often require professional intervention.
* The link between fatigue , stress, and trauma: Generally speaking, the severity increases progressively from fatigue to stress, and to trauma, chronic stress plus fatigue or long-term high pressure may all reduce psychological resilience, increase the susceptibility to trauma (e.g. to deal with accidents in fatigue is more susceptible to the impact). VTS management need to distinguish the fatigue, stress and trauma, targeting to take different measures of rotating (for fatigue), stress training (for stress), psychological support (for trauma) to carry out interventions at different stages.
* Eustress and Distress: From the psychological perspective, stress can be categorized as eustress (beneficial stress) or distress (harmful stress), with the key distinction being individual assessment and adaptation (Lazarus & Folkman, 1984). Eustress promotes adaptation, while distress leads to functional impairment (APA, 2020). Eustress is typically short-term, controllable, and motivation and growth-promoting. It may inspire a healthy stress response, improve the concentration (Selye, 1976). Distress is generally characterized as long-term, uncontrollable, and exceeds an individual's coping resources (e.g. chronic anxiety, trauma), and it may lead to immunosuppression, hippocampal damage (McEwen, 1998), which can result in anxiety and depression (Maslach, 1982).

### Factors Influencing stress and trauma

Section 4.3 of The Guidance outline describes the influencing factors of stress and trauma for VTS personnel in terms of both external and internal. It is recommended that the VTS physical environment, working atmosphere, vessel traffic density, and staffing be included in consideration as external factors; while relevant personality traits involving individual stress perception and regulation abilities and personnel's mental health awareness be included in the consideration as internal factors, so that the factors that may trigger stress or trauma would be further enriched and clarified. The interface and linkage with the G1171 "Ergonomics Guidelines" would be considered to further improve the applicability of The Guidance.

## **Detection and assessment of stress and trauma**

Section 5, Part B of The Guidance outline provides the guide on the entire process of stress and trauma response in terms of identification and estimation of stress and trauma, coping methods, assessment process, available support, and preventive measures. Considering the Working Group's suggestion that the practicality of The Guidance need to be further improved, we propose the following recommendations for reference:

### Identification and assessment of stress and trauma

In this section, the Working Group suggested to focus on the description of issues in the following three aspects: the first is to note that stress and trauma must be defined and distinguished; the second is to provide examples of ways to identify stress and trauma and how to assess the level of stress and/or trauma; and the third is to make it clear that identification and assessment need to be distinguished. The definitions of stress and trauma have been discussed in section 3.1 of this paper, other comments are provided as follows:

#### Distinction between stress and trauma

* Different core definitions and manifestations
* Stress is an individual's physiological and psychological response to a perceived external challenge or threat, usually triggered by workload, time pressure, or sense of responsibility. It is essentially an adaptive response aimed at mobilizing resources to cope with demands.

Examples of VTS: high-frequency vessel scheduling, voyage monitoring in bad weather, coordinating responses to unexpected mechanical failures, etc.

Physiological manifestations: increased heart rate, elevated cortisol, short-term concentration.

Psychological manifestations: anxiety, worry, but usually eases as the event comes to an end.

* Trauma is a deep psychological injury caused by an extreme event that exceeds an individual's mental capacity, often accompanied by a sense of helplessness, loss of control, or a life-threatening experience. It is characterized by abnormalities in the nervous system and memory processing.

Examples of VTS: witnessing a collision that results in fatalities, being confronted by bereaved relatives after a failed coordination, repeatedly reviewing distressing images of the maritime disasters.

Physiological manifestations: prolonged state of alertness (e.g. insomnia), excessive arousal during flashbacks (e.g. palpitations).

Psychological signs: intrusive memories, emotional numbness, avoidance of related scenarios (e.g. refusing to be on duty).

* Temporal dimension and persistence differences
* Stress is usually short-term or cyclical, with responses fading gradually after the stressors disappear (e.g. relaxation after completing a shift).
* Trauma is long-lasting, individuals may still experience repeated distress, even after the event is over, from memory flashbacks, nightmares, or triggers (e.g. radar alarm sounds). Trauma can develop into PTSD or Complex Trauma (C-PTSD) without intervention.
* Differential impacts on cognitive functioning
* Stress may temporarily reduce the work efficiency (e.g. decision-making hesitancy) but will not affect self-perception in general.
* Trauma undermines basic feelings of safety and self-efficacy and may lead to: cognitive distortions (e.g. "I will never be able to protect the crew"); interpersonal withdrawal (avoidance of discussing the accident with colleagues ); professional identity crisis (doubting the value of the work).

In summary, stress is a routine reaction in VTS operations, while trauma is a crisis event that breaks through psychological defenses. A clear distinction between the two can help to accurately design a mental health support system and avoid misjudging trauma as the "ordinary stress".

#### Identification methods of stress and trauma

Regarding the identification of stress and trauma, it may start from the work performance and individual state of VTS personnel, which would be specifically divided into two aspects: the VTS operation organizer and the individual VTS operator:

* The VTS Operation Organizer: the initial identification would be conducted mainly considering the work performance (e.g. decreased work efficiency, decreased safety performance during duties, etc.) and behavioral performance (e.g. depressed mood, suicidal tendencies, social avoidance, etc.) of the VTS duty personnel.
* The VTS Operators: the initial identification would be carried out considering the individual psychological symptoms (e.g. anxiety, depression, emotional fluctuations, etc.), physiological and physical symptoms (e.g. fatigue, insomnia, deterioration of health, etc.).

By listing the specific manifestations associated with stress and trauma, as well as examples of methods for the initial identification of organizations and individuals, and if there is a risk of stress and trauma after the initial identification, it would be considered to proceed to the next stage of the assessment process .

### Stress and trauma assessment process

It is proposed that the assessment of stress and trauma would precede any intervention. Therefore, it is recommended to relocate “Section 5.2 Coping with Stress and Trauma” in the current version of The Guidance after “Section 5.3 Assessment Process” and adjusting the section numbering accordingly.

Since the assessment of stress and trauma is the step that follows the preliminary risk identification as mentioned above, each VTS centre is encouraged to provide convenient platforms or channels accessible at any time, so that personnel can self-initiate screening whenever they deem it necessary, conducting the initial assessment from the perspectives of both organizations and individuals as described in Section 3.3.1.2.

After the initial organization assessment or self-screening indicating a high level of stress or possible trauma, it is recommended to be referred to a qualified mental-health professional or external agency for formal assessment. Considering that most VTS centers lack in-house psychologists, it is believed that standardized psychological questionnaires or direct evaluation by licensed clinicians are the most accurate methods. It is important to note that monitoring would be carried out promptly after any serious incident or near-miss. Whenever significant stress or trauma is suspected, assessment would be arranged by qualified psychologists or specialist agencies. In cases involving significant stress and traumatic situations, it is recommended that the assessment be conducted directly by professionals.

### Coping with stress and trauma

Due to the different severity of stress and trauma, it is recommended that different coping methods are adopted: graded management and coping strategies for stress, and professional psychological support and treatment for trauma.

For stress, it is recommended that a graded response plan would be developed in advance, and the psychological risk level could be assessed based on two levels of stress risk: observation level (low and medium level stress) and intervention level (high level stress). Intervention level would trigger professional psychological intervention and treatment procedures. Observation level would be coped by promoting stress relief through resource-enhancing strategies such as relaxation exercise, task decomposition, optimization of scheduling system, and enhancement of team support. When a trauma is identified, professional psychological intervention is required. VTS operators should provide any support necessary for personnel to access special psychological treatment.

### Available support for stress and trauma response

The available support for stress and trauma response would be divided into internal and external support resources: internal support such as psychology professionals within the department, team members, the staff union or the employee welfare and security departments; external support such as professional psychological institutions, family support and social support (such as social groups or public welfare institutions). It should be noted that psychology professionals who can provide internal support should have a professional background in psychology and received specialized training. During this process, they should pay attention to the psychological ethics and the protection of personnel privacy.

### Preventive measures for stress and trauma

Regarding the prevention of stress and trauma, we suggest to consider the following：optimizing the VTS work environment, conducting the psychological training for personnel and building the stress resilience, establishing a daily monitoring and decision-making system, and strengthening the culture of psychological safety:

* Optimizing the work system and environment:

Reasonable scheduling: to avoid continuous night shifts and ensure sufficient rest;

Task load management: to set a reasonable upper limit on the number of ships to be simultaneously monitored to avoid information overload;

Work environment optimization: lighting, seating, equipment layout;

Equipment support: upgrading radar and AIS systems to reduce false alarms and operational stress;

Specific reference can be made to the relevant practices described in G1171-Human Factors and Ergonomics in VTS.

* Psychological training and stress resilience building:

Personnel psychological education: training in stress recognition, stress management techniques (e.g. diaphragmatic breathing, rapid relaxation methods);

Trauma-informed training: instruction for VTS personnel on how to recognize trauma reactions (e.g. avoidance behaviors, emotional numbness, etc.) of themselves and their colleagues, as well as the basics of trauma care;

Stress inoculation: stress scenarios are recreated through scene simulation in working place, and personnel receive stress-adaptive training in advance.

* Establish a daily support and monitoring system:

Provide appropriate stress assessment tools: to provide physiological monitoring support, such as some wearable devices to test the stress value and status; appropriate mental health scales for daily self-assessment by VTS personnel to enable preliminary risk screening, for example: Perceived Stress Scale (PSS), PTSD Checklist for DSM-5 (PCL-5), Maslach Burnout Inventory (MBI), and other standardized psychological scales;

Regular psychological screening: to identify high-risk individuals through questionnaires or interviews and provide early intervention;

Develop a psychological-crisis response plan: each VTS centre should have a clear, written protocol for handling psychological distress or critical incidents, reducing ad-hoc decisions and ensuring a scientific, systematic response;

Post-incident psychological counseling: to provide Critical Incident Stress Debriefing (CISD) or one-to-one counselling after major accidents.

* Fostering of psychological safety culture

Encourage open communication: operators are encouraged to report stress; the management would respond promptly, reinforcing a culture where psychological safety is valued;

Create peer-support groups: foster informal communication networks among colleagues to reduce isolation.

Regarding the structure of The Guidance, it is suggested to adjust the content currently listed under Part B Sections “5.4 Available Support” and “5.5 Preventive Measures” to Part C. Specifically, the content of Paragraph 3.3.4 “Available Support for Stress and Trauma Management” and 3.3.5 “Preventive Measures for Stress and Trauma” of this paper would be included into Part C Section 6 “Methods for Raising Awareness and Addressing Mental-Health Issues in VTS Operations”of The Guidance. Because Part B focuses on assessment and immediate response procedures, while available support and prevention measures do not belong to this procedure in content. Relocating these topics to Part C would improve the overall coherence and it is recommended that the Working Group would consider this adjustment.

## **Raising awareness and addressing mental well-being in VTS-operations**

Part C of Section 6 in The Guidance “Methods for Raising Awareness and Addressing Mental-Health Issues in VTS Operations”emphasizes on mental-health training. It is recommended to integrate such training into the various stages of competency training, pre-employment training and on-the-job training. VTS operation personnel are encouraged to conduct self-study with instructor lectures and expert guidance also offered.

# Recommendations

It is recommended that the Committee consider the above mentioned when developing the VTS Operational Stress and Trauma Response Guide.

# Action requested of the Committee

The Committee is invited to consider the proposals in this paper and take actions as appropriate .

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