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WORK PROGRAMME

Proposal for a new output to initiate a scoping exercise and enhancement of the effectiveness of provisions on seafarers' hours of work and rest hours, and fatigue

Submitted by France, Spain, United Kingdom, IFSMA, ITF and WMU

SUMMARY

<i>Executive summary:</i>	This document proposes a new output to be included in the biennial agenda of the Sub-Committee on Human Element, Training and Watchkeeping (HTW), in coordination with the Sub-Committee on Implementation of IMO instruments (III) to initiate a scoping exercise and enhancement of the effectiveness of provisions on seafarers' hours of work and rest hours, and fatigue.
<i>Strategic direction, if applicable:</i>	1 and 6
<i>Output:</i>	Not applicable
<i>Action to be taken:</i>	Paragraph 33
<i>Related documents:</i>	None

1 This document is submitted in accordance with the *Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5/Rev.2) on the submission of proposals for new outputs and discusses the urgent need to enhance the implementation of the provisions relating to seafarers' hours of work and rest, their recording, and their effective enforcement.

Introduction

2 The co-sponsors note that several empirical research outcomes and casualty investigation findings show the ongoing prevalence of fatigue in shipping. This highlights the difficulties in implementing and enforcing provisions related to seafarers' hours of work and rest, and fatigue. Notably, recent research from the World Maritime University (WMU) stresses the increasing normalization of deviance in hours of work and rest record-keeping. Additional findings underline the limited detection capacity and enforcement of the current inspection regimes, in particular, of flag State inspectors and port State control Officers (PSCOs) (the full report of the WMU research is available at the URL: https://commons.wmu.se/lib_reports/66/).

3 To promote the implementation and enforcement of regulations on seafarers' hours of work and rest, the co-sponsors propose a new output to initiate a scoping exercise to identify the relevant IMO instruments that might require revision, taking into account potential implications on other international instruments. Therefore, the co-sponsors propose a new output for inclusion in the 2022-2023 biennial agenda of the HTW Sub-Committee in coordination with the III Sub-Committee.

Background

4 As recalled by the *Guidelines on Fatigue* (MSC.1/Circ.1598), "fatigue is a hazard that affects safety, health and well-being. It presents a considerable risk to safety of life, property, health, security and protection of the marine environment." Consequently, IMO and the International Labour Organization (ILO) have developed instruments to mitigate fatigue on ships.

5 Currently, chapter VIII of the International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers (STCW), 1978, and regulation 2.3, standard A2.3 and guideline B2.3 of the Maritime Labour Convention (MLC), 2006, are the core/primary instruments used to address fatigue by quantifying the minimum hours of rest and maximum hours of work for seafarers. To allow for external monitoring of compliance, seafarers are required to maintain records of hours of work/rest.

6 When confirming compliance with section A-VIII/1 (STCW Code) and regulation 2.3 of MLC, 2006, flag State inspectors and PSCOs verify, inter alia, record-keeping of hours of work and rest.

7 Despite the existing regulations, as documented in the report, research shows that fatigue persists in shipping. Furthermore, marine casualty investigations continue to reveal fatigue as a contributing factor in many accidents. Alarming, several studies have pointed out that seafarers tend to routinely under-report their hours of rest to avoid the possible repercussions of proven non-compliance.

8 To assess the problems, WMU, with the financial support of the ITF Seafarers' Trust, initiated extensive and inclusive qualitative research incorporating data collection from maritime stakeholders including seafarers, PSCOs, shipowners' organizations, industry organizations, maritime non-governmental organizations and casualty investigators.

Findings from the WMU research

9 The clear convergence of empirical findings from the WMU research confirms existing scientific literature and suggests that inaccurate recording is widespread and insufficiently addressed.

10 Except for a few shipowners' organizations, all stakeholders who participated in the study expressed their concerns regarding the principle of a 14-hour working day and the split of the 10-hour rest period, as contributing to fatigue.

11 A salient point recurrently brought up by maritime stakeholders is the chronic imbalance between workload and the number of personnel available to complete the diversity of onboard tasks including work in ports and during inspections. Almost unanimously, the stakeholders pointed out inadequacies in the determination of crewing levels.

12 Additionally, the participants questioned the current record-keeping practices on paper or software which allow pre- and post-adjustments. The design of recording software programmes often influences or facilitates adjustments. In line with previous research findings, the WMU research found a "culture of adjustment" among seafarers extending beyond hours of work and rest record-keeping, given that any record-keeping system requiring manual input is susceptible to adjustment.

13 Seafarers apparently adjust records to hide working time violations attributed to the imbalance between workload and manning levels. Adjustments are justified as responses to a lack of shore management support when additional (human) resources are required or called for. Worryingly, such practices indicate potential defective safety management systems, which, as reported by participants, may give rise to the bureaucratization of safety and ship operation, thereby widening the disconnect between the sharp (ship) and blunt (company) ends.

14 The findings from the WMU research show that the recording of hours of work and rest might be developing into a mere paper exercise to indicate compliance and, thus, to avoid deficiencies and disruptions to vessel operations in relation to inspections or vetting. As a result, records are losing their intended ability to provide the accurate and authentic feedback from actual working time on board. In short, the allegiance of seafarers to ship interests over regulations seems to predominate, trapping seafarers in cognitive dissonance and leading to deviance in hours of work and rest record-keeping becoming the norm.

15 The research suggests that the current inspection regimes (flag State and port State) are unable to capture the magnitude of the issue because, unlike for MARPOL Annex I verifications, inspectors rarely assess the accuracy of hours of work and rest record-keeping. The scope of initial inspections, as currently defined in resolution A.1138(31) on *Procedures for Port State Control, 2019* and MLC, 2006 *Guidelines for Flag State Inspections and Port State Control*, reduces the possibilities for cross-checking of hours of work and rest records to verify accuracy. Furthermore, the extent of the items to inspect, the lack of resources (in time and personnel), and difficulties in finding incontrovertibly clear grounds seem to deter inspectors from committing resources in hours of work and rest record-keeping verifications.

16 Finally, the findings suggest that inconsistencies in implementation and enforcement create a systemic normalization of deviance encompassing seafarers, companies, flag and port States. Despite the pervasiveness of the problem and its wide recognition, there is an apparent inability to enforce existing hours of work and rest regulations, which may seriously affect ship safety as well as seafarers' health and safety, cognitive performance, and retention in shipping. Moreover, the existing mechanisms, such as the International Safety Management (ISM) Code, seem defective.

Need

17 Further to the **Herald of Free Enterprise** (1987) and the **Exxon Valdez** (1989) accident investigation reports pointing to fatigue as a contributing factor to disasters, decades of research and casualty investigation findings have confirmed the depth and pervasiveness of the problem, suggesting a systemic or structural inability to address it. In short, the adequacy of existing instruments and their implementation mechanisms have been regularly called into question by research, casualty investigation findings and several papers submitted to IMO. Hence, to overcome the risks related to the cognitive, physical and behavioural consequences of fatigue, and to avoid the development and entrenching of a culture of deviance among all stakeholders that could affect other areas of ship operational safety, there is an urgent need to assess the current regulatory framework and its enforcement regime with a view to making them much more effective.

18 Consequently, the co-sponsors of the paper propose an output to initiate a scoping exercise of the relevant instruments that might require revision to enhance the effectiveness of the provisions related to the implementation of seafarers' hours of work and rest, and fatigue.

IMO objectives

19 This proposal for a new output aligns with the United Nations Sustainable Development Goals and the IMO mission "to promote safe, secure, environmentally sound, efficient and sustainable shipping through cooperation".

20 This proposal is also consistent with IMO strategic direction (SD) 1 requiring that "IMO place increased focus on implementation of IMO instruments [...]"; and SD 6 which aims at ensuring that "information should be systematically fed back into the regulatory processes of the Organization to allow it to make informed decisions on reviewing existing regulations and developing new ones", as set out in the *Strategic Plan for the Organization for the six-year period 2018 to 2023* (resolution A.1110(30)).

21 Finally, as highlighted by *the Organization's strategy to address the human element* (MSC-MEPC.7/Circ.4), feedback and continuous improvement is vital to address the human element. As required by the strategy, research, casualty investigations or other information should prompt IMO to "consider current information related to the human element and systematically update its priorities and action plans".

Analysis of the issue

22 The core of the issues relates to:

- .1 the imbalance between workload and crewing levels;
- .2 the limited effectiveness of safety management systems to implement hours of work and rest regulations, collect feedback, and respond to violations; and
- .3 the progressive establishment of a dangerous culture of adjustment and mistrust in shipping.

23 The interrelation of these issues, as reported in the research, jeopardizes the implementation as well as compliance monitoring and enforcement of numerous instruments. To redress the escalation of the situation, it is necessary to acknowledge the links between the instruments and to debate them jointly and transparently.

24 In order to identify solutions, the discourse should include current good practices in shipping as well as allow stakeholders' inputs beyond the direct context of the maritime industry (e.g. inclusion of aviation experts). From rich and open discussions focused on the human element, feasible, realistic and reasonable recommendations could be made.

Analysis of implications and benefits

25 The proposed new output may impact crewing costs at ship level while reducing the overall cost for the industry concerning human element issues that negatively impair ship safety and environmental protection. Additionally, the human costs of fatigue in terms of health, well-being and retention could be seriously curtailed.

26 The proposed new output has the potential to enhance trust within the industry and facilitate feedback loops for the benefit of individual companies and the sector as a whole. It could support the promotion of safety culture and just culture as exists in other sectors such as aviation.

27 The recommendations arising from the evaluation should give due consideration to the cognitive, physical and behavioural impacts of the long hours of work and fatigue with a view to enhancing safety at work.

Industry standards

28 The inflation in flag and company requirements as well as the bureaucratization of ship operations have not been adequately taken into consideration. Consequently, and in the absence of specific mitigation measures, seafarers' workload continues to grow. Therefore, the proposed new output would take into consideration relevant industry good practices in workload management, reduction in paperwork, and optimum and implementable feedback mechanisms that inform decision-makers.

29 Any recommendations from the proposed evaluation should be based on the current situation of the world fleet and its crew. However, technological developments and industry trends should be considered in any mid-term and long-term road map.

Output

30 The proposed new output on "Scoping exercise and enhancement of the effectiveness of provisions on seafarers' hours of work and rest, and fatigue", if approved, should be considered by the HTW Sub-Committee, at its eighth session, in coordination with the III Sub-Committee to initiate a scoping exercise of the relevant IMO instruments that might require revision to enhance the effectiveness of the provisions related to the implementation of seafarers' hours of work and rest and fatigue, taking into account potential implications on other international instruments. Work might be allocated to a joint ILO/IMO Working Group.

Human element

31 The checklist for considering "human element issues by IMO bodies" (MSC-MEPC.7/Circ.1) is set out in annex 1 to this document.

Priority/urgency

32 The co-sponsors recommend that this issue should be considered by the Organization as a matter of priority. The new output should be included in the 2022-2023 biennial agenda of the HTW Sub-Committee.

Action requested of the Committee

33 The Committee is invited to consider the above proposal and to take action, as appropriate.

ANNEX 1

CHECKLIST FOR CONSIDERING HUMAN ELEMENT ISSUES BY IMO BODIES

<p>Instructions: If the answer to any of the questions below is:</p> <p>(A) YES, the preparing body should provide supporting details and/or recommendation for further work.</p> <p>(B) NO, the preparing body should make proper justification as to why human element issues were not considered.</p> <p>(C) NA (Not Applicable) – the preparing body should make proper justification as to why human element issues were not considered applicable.</p>	
<p>Subject being assessed: (e.g. resolution, instrument, circular being considered) STCW 78 as amended A-VIII/1, SOLAS Chapter IX ISM Code, MSC.1/Circ.1598 Guidelines on Fatigue, A.1138(31) on Procedures for Port State Control, 2019, A.1047(27) Principles of Minimum Safe Manning In addition to IMO documents, the following ILO instruments has been considered MLC, 2006 Regulation 2.3 and Regulation 2.7, ILO Guidelines for port State control officers carrying out inspections under the Maritime Labour Convention, 2006 and ILO Guidelines for flag State inspections under the Maritime Labour Convention, 2006.</p>	
<p>Responsible body: (e.g. Committee, Sub-Committee, Working Group, Correspondence Group, Member State) Sub-Committee on Human Element, Training and Watchkeeping (HTW), in coordination with the Sub-Committee on Implementation of IMO instruments (III)</p>	
1. Was the human element considered during development or amendment process related to this subject?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
2. Has input from seafarers or their proxies been solicited?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
3. Are the solutions proposed for the subject in agreement with existing instruments? (Identify instruments considered in comments section)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
4. Have human element solutions been made as an alternative and/or in conjunction with technical solutions?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
5. Has human element guidance on the application and/or implementation of the proposed solution been provided for the following:	
• Administrations?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
• Ship owners/managers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
• Seafarers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
• Surveyors?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
7. Does the solution address safeguards to avoid single person errors?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
8. Does the solution address safeguards to avoid organizational errors?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
10. Have human element experts been consulted in development of the solution?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
11. HUMAN ELEMENT: Has the proposal been assessed against each of the factors below?	
<input type="checkbox"/> CREWING. The number of qualified personnel required and available to safely operate, maintain, support, and provide training for system.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
<input type="checkbox"/> PERSONNEL. The necessary knowledge, skills, abilities, and experience levels that are needed to properly perform job tasks.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA

<input type="checkbox"/> TRAINING. The process and tools by which personnel acquire or improve the necessary knowledge, skills, and abilities to achieve desired job/task performance.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
<input type="checkbox"/> OCCUPATIONAL HEALTH AND SAFETY. The management systems, programmes, procedures, policies, training, documentation, equipment, etc. to properly manage risks.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
<input type="checkbox"/> WORKING ENVIRONMENT. Conditions that are necessary to sustain the safety, health, and comfort of those working on board, such as noise, vibration, lighting, climate, and other factors that affect crew endurance, fatigue, alertness and morale.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
<input type="checkbox"/> HUMAN SURVIVABILITY. 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.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
<input type="checkbox"/> HUMAN FACTORS ENGINEERING. Human-system interface to be consistent with the physical, cognitive, and sensory abilities of the user population.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
<p>Comments: The output proposal relates the 2020 WMU research and recommendations on the implementation of rest/work hours (A Culture of Adjustment) as well as earlier pieces of research related to fatigue and the implementation of hours of work and rest and the ISM Code.</p>	

ANNEX 2

CHECKLIST FOR IDENTIFYING ADMINISTRATIVE REQUIREMENTS

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 burdens 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).
- (C) For any administrative requirement, full consideration should be given to electronic means of fulfilling the requirement in order to alleviate administrative burdens.

<p>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.</p>	<p>NR <input type="checkbox"/></p>	<p>Yes <input type="checkbox"/> Start-up <input checked="" type="checkbox"/> Ongoing</p>
<p>Description: (if the answer is yes) Reporting requirements already exist. The proposal is to enhance the quality of records.</p>		
<p>2. Record keeping? Keeping statutory documents up to date, e.g. records of accidents, records of cargo, records of inspections, records of education, etc.</p>	<p>NR <input type="checkbox"/></p>	<p>Yes <input type="checkbox"/> Start-up <input checked="" type="checkbox"/> Ongoing</p>
<p>Description: (if the answer is yes) This proposal is enhancement of the current requirements to ensure adequate record keeping.</p>		
<p>3. Publication and documentation? Producing documents for third parties, e.g. warning signs, registration displays, publication of results of testing, etc.</p>	<p>NR <input type="checkbox"/></p>	<p>Yes <input type="checkbox"/> Start-up <input checked="" type="checkbox"/> Ongoing</p>
<p>Description: (if the answer is yes) This proposal may require the enhancement of the current requirements.</p>		
<p>4. Permits or applications? Applying for and maintaining permission to operate, e.g. certificates, classification society costs, etc.</p>	<p>NR X</p>	<p>Yes <input type="checkbox"/> Start-up <input type="checkbox"/> Ongoing</p>
<p>Description: (if the answer is yes)</p>		
<p>5. Other identified burdens?</p>	<p>NR X</p>	<p>Yes <input type="checkbox"/> Start-up <input type="checkbox"/> Ongoing</p>
<p>Description: (if the answer is yes)</p>		