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THE ORGANIZATION'S STRATEGY TO ADDRESS THE HUMAN ELEMENT

1 The Marine Environment Protection Committee at its fifty-third session (18 to 22 July 2005) and the Maritime Safety Committee at its eighty-first session (10 to 19 May 2006), agreed that, in order to achieve the visions, principles and goals set out in resolution A.947(23) on the Human Element Vision, Principles and Goals for the Organization, it was imperative to develop a strategy to address the human element.

2 The Committees approved the Organization's strategy to address the human element as set out in annex including its appendix, which forms a specific action plan.

3 The Committees agreed that the Organization's strategy to address the human element and, in particular, the action plan should be continuously reviewed and revised, when necessary.

ANNEX

THE ORGANIZATION'S STRATEGY TO ADDRESS THE HUMAN ELEMENT

1 Introduction

1.1 The Organization's strategy to address the human element has been developed in support of the IMO strategic plan adopted by resolution A.944(23) and the human element vision, principles and goals listed in resolution A.947(23). This strategy depends specifically on the principles and visions expressed in those resolutions. It aims to be simple, practicable and to address how human element understanding can be improved in the whole stakeholder community in maritime transport.

1.2 However, to make best use of limited resources, this strategy is directed at providing assistance to IMO, shipowners ship managers and seafarers to enhance safety, security and the protection of the marine environment. The strategy will be further developed in the future to consider other stakeholders' involvement in the human element.

2 Implementation of IMO instruments

2.1 Understanding the critical role of people within the maritime industry must underpin the development, amendment and implementation of IMO mandatory and non-mandatory instruments, and the Organization's wider role to improve maritime safety, security and environment protection. This should be done by:

- .1 providing useful, consistent and coherent guidance for the Organization to effectively incorporate the human element;
- .2 encouraging IMO Member States and international organizations to provide human element expertise in relevant sub-committees, working groups and correspondence groups to enhance the development of human element solutions; and
- .3 continuously monitoring and assessing where key risk areas associated with the human element and, in particular human error, are found in order to determine whether and how human element solutions can be applied.

3 Specific assistance to shipowners and ship managers

3.1 A critical line of defence for safety, security and protection of the marine environment is the shipowner/ship manager. Therefore, IMO should focus efforts on providing support to shipowners and ship managers by:

- .1 focusing on providing human element solutions for shipowners and ship managers, where applicable, for compliance with mandatory instruments such as the ISM Code and the ISPS Code and to enhance the concept of a maritime safety and security culture and an environmental consciousness; and

- .2 identifying and developing solutions and guidance for shipowners and ship managers to manage key risk areas that contribute to human errors (e.g., IMO Guidelines on Fatigue).

4 Specific assistance to seafarers

4.1 The seafarer plays a crucial and direct role for safety, security and protection of the marine environment. Therefore, any solutions developed by IMO will either directly or indirectly impact upon seafarers. Accordingly, IMO should consider solutions to assist seafarers in reducing incidents or accidents.

4.2 It is important to be cognizant of the significant workload which seafarers are exposed to in their daily work. In addition, the maritime industry is international and multi-lingual, which can cause communication problems. For these and other reasons, human element solutions should be particularly user-friendly for seafarers.

4.3 For seafarers, the IMO human element strategy:

- .1 considers the environment that seafarers are exposed to regularly onboard ship;
- .2 considers solutions that will have a positive impact on occupational health and reduce accidents and incidents;
- .3 takes into account workloads and necessary rest periods;
- .4 presents solutions in a form that is easily understood and can be effectively used by the seafarer; and
- .5 ensures the proper consideration of human capabilities and limitations for technological developments (e.g. Issues to be considered when introducing new technology on board ship MSC/Circ.1091).

5 Feedback and continuous improvement

5.1 Changes in technology, safety culture, environmental consciousness and operational practices influence the risk of accidents and marine pollution. Accordingly, for the emphasis on the human element to remain relevant, the Organization should periodically consider current information related to the human element and systematically update its priorities and action plans. Sources for such current information should include:

- .1 research in the field of Human Factors and Ergonomics;
- .2 maritime casualty reporting;
- .3 near-miss reporting where consideration of the human element is included; and
- .4 guidance, tools, etc., developed by the industry to address the human element.

6 Action plan

6.1 In consequence of this strategy, an action plan for the human element has been developed. The action plan is set out as an appendix to this circular.

6.2 The action plan contains a list of human element-related issues together with specific actions to be taken by various IMO bodies, under the purview of the Committees.

6.3 The action plan should be continuously reviewed and updated as and when necessary. Furthermore, the outcome of the already identified actions should be monitored on a regular basis.

APPENDIX

Human Element Action Plan

| Issue | Explanatory Note | Action | Committee(s) and/or Sub-Committee(s) | Delivery date | Relevant references |
|--|--|--|---|----------------------|----------------------------|
| 1. Maintenance of the Strategy | | Review and revision, as necessary, of the strategy and the action plan. | MSC, MEPC | Continuous | MSC/MEPC circular |
| 2. Casualty reports | Identification of human element issues when considering and analysing casualty reports. | <p>1. Identify human element issues emanating from the analysis of casualty reports.</p> <p>2. Forwarding to the Committees under their agenda item on the human element, issues identified.</p> <p>3. Consider the information received and decide on the appropriate follow-up action.</p> | <p>FSI</p> <p>FSI</p> <p>MSC, MEPC</p> | Continuous | Paragraph 5.1.2 |
| 3. Review of IMO committee and sub-committee work programmes | In order to determine where human element expertise would best be utilized within the IMO. | Review of IMO committee and sub-committee work programmes. | MSC, MEPC | Continuous | Section 2 |
| 4. Review of selected IMO instruments from the human element perspective | In order to identify and address unrecognized human element-related problems in existing instruments, a comprehensive review of the instruments is necessary. For practical reasons, one instrument should be selected to carry out a review on a trial basis. | <p>1. Select a suitable instrument.</p> <p>2. Carry out a comprehensive review of the selected instrument.</p> <p>3. Decide on appropriate follow-up action.</p> | MSC, MEPC | 2008 | Section 2 |
| 5. Safety culture | There is a need for guidance in the incorporation of a safety culture and environmental consciousness for companies. | <p>1. Develop guidance to the industry on the ISM Code.</p> <p>2. Revise resolution A.792(19) to include all types of ships.</p> | MSC, MEPC | 2006 | Paragraph 3.3.1 |

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|---|--|---|--------------------------------------|---------------|----------------------------|
| 6. Ergonomics | It is recognized that the human operator in the role as seafarer is the ship's primary protector of maritime safety and security, and the marine environment. Given the significant variations in work environment conditions (external and internal) that the seafarer is exposed to, it is imperative to ensure a safe working environment. Therefore, ergonomic guidance can be developed for on board ships to prevent against these types of accidents. | <ol style="list-style-type: none"> 1. Review and revise, as necessary, the initial framework already developed. 2. Develop further guidance on the application of ergonomics on board ships. 3. Develop a draft MSC/MEPC circular to cover the guidance | MSC, MEPC | 2006 | Paragraphs 4.3.2 and 5.1.1 |
| 7. The use of near miss information in support of the human element | Collate and analyse information on Member State and NGO systems that capture and use 'near miss' information including confidential reporting and hazardous occurrences. | <ol style="list-style-type: none"> 1. Invite Member States and international organizations to provide relevant information. 2. Collate and analyse data received. | MSC, MEPC | 2006 | Paragraph 5.1.3 |
| 8. Fatigue | Guidelines on fatigue have been issued by the Organization. Various aspects of fatigue are being addressed within the Organization. | <ol style="list-style-type: none"> 1. Invite Member States and international organizations to provide relevant information on their experience with the guidelines on fatigue. 2. Monitor and collect information on the outcome of the work carried out by the Organization on this issue. | MSC, MEPC | 2007 | Paragraph 4.3 |
| 9. Communication of information to seafarers | Ways and means of communicating essential information in a clear, concise and user-friendly way to personnel engaged in operational duties. | Develop guidance on how to present relevant information to seafarers. | MSC, MEPC | 2007 | Paragraph 4.3.4 |

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|---|--|---|--------------------------------------|---------------|---------------------|
| 10. Awareness raising on environmental issues | The importance of raising awareness of seafarers on the marine ecosystems and sustainable shipping should be recognized. One way of dealing with this issue could be through training. | Invite Member Governments and international organizations to submit information on their experience with awareness-raising on environmental issues. | MEPC | 2007 | Paragraph 4.1 |
| 11. Safety management systems | Information has been received on research into the quantification of human element influence on the safety of shipping and the methods for upgrading safety management systems within shipping companies. Information has also been received on the development of a Human Element Assessment Tool (HEAT), which would assess the effectiveness of management of the human element on board ships and within ship operating companies. | Detailed consideration of the information presented and updated information promised in order to develop suitable guidance. | MSC, MEPC | 2007 | Paragraph 3.1 |
| 12. Safety indexing of ships | Information has been received on a methodology for a comprehensive analysis of ship safety, which uses a safety numeral and takes into account analysis and forecasting of casualties, human and organizational errors, structural and design errors, environmental and Electro Magnetic Interference (EMI) problems in its analysis. | Detailed consideration of the information presented and updated information promised in order to develop suitable guidance. | MSC, MEPC | 2007 | |

The following action items have been developed during MEPC 53 for approval by the Committees.

| Issue | Explanatory Note | Action | Committee(s) and/or Sub-Committee(s) | Delivery date | Relevant references |
|---|---|---|--------------------------------------|---------------|----------------------------|
| 1. Checklist | A short and user-friendly checklist should be developed for use by committees and sub-committees as guidance to ensuring the proper consideration of the human element. | 1. Develop a simplified checklist. 2. Develop a joint MSC/MEPC circular to cover the checklist. | MSC, MEPC | 2005 | Paragraph 2.1.1 |
| 2. Participation of Human Element expertise in IMO meetings | Further encouragement is suggested for Member States and NGOs to suggest that they provide greater participation with human element experts and those with human element interest in activities other than the Joint MSC/MEPC Working Group on the Human Element | Develop a joint MSC/MEPC circular. | MSC, MEPC | 2005 | Paragraph 2.1.2 |
| 3. Ergonomics | Slips, trips and falls continue to be a significant contributor to injuries on board ship. In addition, shipboard systems aren't necessarily designed for inspection and maintenance. Therefore, ergonomic guidance can be developed for on board ships to prevent against these types of accidents | 1. Develop an initial framework on the application of ergonomics on board ships. 2. Develop a draft MSC/MEPC circular to cover the guidance. | MSC, MEPC | 2006 | Paragraphs 4.3.2 and 5.1.1 |